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Английский язык

Е.В.Синявская
Э.С.Улановская
О.И.Тынкова

УЧЕБНИК

для технических вузов



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УЧЕБНИК

Допущено
Государственным комитетом СССР
по народному образованию
в качестве учебника для студентов
высших технических учебных
заведений

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кафедра иностранных языков Московского государственного технического университета имени Н. Э. Баумана (зав. кафедрой канд. филол. наук, доц. И. В. Орловская)
профессор И. З. Новоселова (Московский институт инженеров сельскохозяйственного производства имени В. П. Горячкина)

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Синявская Е. В., Улановская Э. С., Тынкова О. И.

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Учебник рассчитан на 150—160 часов учебного времени. Цель его — развитие навыков чтения литературы по специальности для получения информации, а также навыков устной речи в пределах тем, предусмотренных программой. Активизируемая в учебнике лексика (1300 единиц) относится к разряду общенаучной. Грамматика отобрана с учетом явлений, типичных для стиля научно-технической прозы. Текстовой материал заимствован из оригинальной англоязычной литературы и лишь в отдельных случаях подвергся незначительной адаптации.

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ПРЕДИСЛОВИЕ

Настоящий учебник написан на основе «Учебника английского языка для I курса инженерно-строительных и автодорожных вузов», авторы Е. В. Синявская, О. И. Тынкова, Э. С. Улановская, М., 1982 г. и «Пособия по английскому языку для II курса инженерно-строительных и автодорожных вузов», авторы Е. В. Синявская, Э. С. Улановская, М., 1981 г.

Учебник рассчитан на 150—160 часов учебного времени и должен охватывать занятия на I—II курсах.

При конкретизации задач, которые были поставлены в учебнике, авторы ориентировались на выдвигаемую программой конечную цель обучения, предусматривающую развитие навыков чтения литературы по специальности для получения информации, а также навыков устной речи в пределах тем, предусмотренных программой.

Учебник состоит из трех частей. Первая часть (1—6 уроки; I семестр) рассматривается как переходная ступень между школьным и вузовским курсами.

Главной целью работы над первой частью учебника является формирование основных умений и навыков чтения и устной речи, которые являются базой для дальнейшего обучения.

Вторая часть (7—12 уроки) рассчитана на II семестр. Целью работы над второй частью является совершенствование навыков устной речи и чтения в целях подготовки студентов к самостоятельной работе над оригинальной литературой по специальности.

Третья часть рассчитана на второй год изучения английского языка и имеет целью дальнейшее совершенствование навыков чтения и извлечения информации, а также навыков устной речи.

При составлении учебника авторы уделили большое внимание проблеме отбора языкового материала в плане его типичности для стиля научно-технической прозы.

В первой и второй частях учебника активизируются свыше 1300 слов и словосочетаний, из которых 355 взяты из словаря-минимума средней школы. Последние представлены как «ядро школьной лексики», отбору которого предшествовала экспериментальная работа. Активизируемая в учебнике лексика относится к разряду так называемой общенаучной лексики.

При выделении активной лексики авторы основывались на словаре-минимуме по английскому языку для студентов технических вузов.

Поскольку по данным лингвостатистики значительная часть словаря, необходимого для чтения специальной литературы, представлена словами, имеющими словообразовательные элементы, а также интернациональными словами, то одной из задач в области изучения лексики является овладение словообразовательными механизмами и умением пользоваться языковой догадкой для самостоятельного раскрытия значения слов, т. е. для расширения потенциального словаря студента.

В основу отбора, организации и методической интерпретации грамматического материала положены данные лингвостатистических исследований о грамматических явлениях, типичных для стиля научно-технической прозы.

В каждом уроке-теме активизируется определенное грамматическое явление. Однако тексты урока помимо выделенного грамматического материала могут содержать грамматические явления, известные из курса средней школы, активизация которых не предусматривается в данном уроке.

При отборе текстового материала в качестве основного критерия служила информативная ценность текстов и их соответствие интересам студентов начальных курсов технических вузов. Данные о типах текстов, представляющих определенный интерес для студентов, были получены путем анкетирования.

Большинство текстов учебника взято из оригинальной английской и американской литературы. В отдельных случаях тексты подвергались адаптации и сокращению.

МЕТОДИЧЕСКИЕ РЕКОМЕНДАЦИИ К I И II ЧАСТЯМ

В I и II частях учебника содержится 12 уроков-тем. Каждая тема рассчитана на 8 часов аудиторных занятий.

В уроке-теме представлено 4 текста, каждый из которых имеет свою методическую задачу. Основной текст А предназначен для изучения выделенного лексико-грамматического материала. Выделенный для запоминания так называемый «активный словарь» представлен в виде словарной разработки к тексту А, в которой активизируемые слова даны в порядке их появления в тексте. Этот вид работы, так же как и работу с интернациональной лексикой, рекомендуется проводить в аудитории. В текстовой материал и упражнения включены слова из «ядра школьной лексики», которые рекомендуется повторить на занятиях и в дальнейшем контролировать.

Помимо активизируемых слов, текст А содержит в среднем 5—6% незнакомых слов, значение которых может быть определено из контекста или установлено с помощью словаря.

Во второй части учебника (начиная с 7-го урока) в словарных разработках предусмотрена работа со словарем.

В конце каждого урока дан «контрольный словарь», который может быть использован при текущем контроле проработанной лексики после прохождения каждого урока.

Перед каждым текстом А даются предтекстовые упражнения для проработки и закрепления включенных в урок грамматических тем. Эти упражнения составлены на базе лексики предшествующих уроков, что обеспечивает ее повторение. Послетекстовые упражнения на закрепление грамматических явлений даются на базе лексики текста А.

Текст В предназначен для развития навыка «быстрого чтения» и содержит не более 3—4% неизученных слов, перевод которых дан непосредственно после слова, чтобы не прерывать процесс чтения на отыскивание значения слова в словаре. Предусматривается нарастание темпа чтения, начиная от 70 слов в минуту в первых уроках до 100 слов в минуту в последних.

Основная задача работы над текстом В — это достижение понимания основных фактов, содержащихся в тексте, что проверяется с помощью теста типа «множественного выбора».

Основной задачей работы над текстом С является выработка умения «вычитывать» из текста определенную информацию.

Для реализации поставленной задачи текст С снабжен предвопросами в каждой части текста. Тексты В и С рекомендуются для аудиторной работы. Текст D, завершающий тему урока, предназначен, так же как и текст А, для самостоятельной проработки дома. Задачей работы над текстом D является достижение углубленного понимания читаемого, что определяет форму проверки — с помощью вопросов, направленных на выявление глубины понимания прочитанного.

При распределении числа повторений лексического материала учитывались трудности усвоения.

Дифференцированный подход в зависимости от степени трудности характерен для активизации грамматического материала. В связи с тем, что обучение на первом курсе направлено на выработку определенных автоматизмов, большое место занимает работа с различного вида упражнениями, которая должна проводиться в аудитории в высоком темпе.

Введение грамматического материала может производиться в аудитории на предтекстовых грамматических упражнениях. Дальнейшая самостоятельная работа над грамматической темой предусматривает использование материала грамматического справочника и выполнение послетекстовых упражнений.

В заданиях к упражнениям на перевод или выделение какой-либо конструкции не указывается форма их выполнения (устная или письменная), поскольку это зависит от уровня подготовки группы.

В учебнике предусмотрена специальная серия словообразовательных упражнений для отработки аффиксальных моделей. Серия упражнений заканчивается микротекстом, содержащим не изученные ранее производные слова, построенные по отработанным словообразовательным моделям, значение которых студент должен вывести из двух известных ему компонентов — значения основы и обобщенного значения самой модели.

Большое место в учебнике отводится двуцелевым упражнениям типа: вычитывание слова из ряда с целью тренировки компонентов быстрого чтения и увеличения повторяемости лексико-грамматического материала. Упражнения данного типа должны проводиться в аудитории в быстром темпе. Время, отводимое на них, не должно превышать одной минуты.

В учебнике имеется краткий грамматический справочник, иллюстрированный примерами и таблицами, который предназначен для самостоятельной работы над выделенными грамматическими темами.

Обобщение информации текстов I—II частей учебника производится с помощью кроссвордов, сетку которых рекомендуется перенести в тетрадь.

В конце учебника дан англо-русский словарь со ссылками на тексты уроков, в которых вводятся слова.

В учебнике большое внимание уделяется самостоятельной работе студентов. Под самостоятельной работой авторы подразумевают не только виды деятельности, выполняемые при отсутствии прямого контроля со стороны преподавателя, как домашнее задание, но и работу, выполняемую в условиях самостоятельности суждений, творческой активности.

На самостоятельную работу выносятся:

1. тексты A и D во всех уроках;
2. работа над словообразованием в уроках 1—6;
3. работа над словарем в уроках 7—12;
4. упражнения, предусматривающие перевод предложений с выбором подходящего слова;
5. контрольный словарь к каждому уроку;
6. работа в парах (для студентов, имеющих слабую подготовку по английскому языку);
7. обзорные грамматические упражнения;
8. упражнения и задания на извлечение информации (заполнение таблиц, ответы на вопросы обобщающего характера);
9. работа с грамматическим справочником;
10. работа со словарем-минимумом.

Материал каждого урока предполагает его интенсивную проработку в аудитории.

Примерная дозировка времени, отводимого на основные виды работы в аудитории:

1. на введение и первичное закрепление грамматического материала — 15—20 минут;
2. на введение лексики — 15 минут;
3. на работу со словарем — 10 минут;
4. на контроль и закрепление домашнего задания (тексты и упражнения) — 30 минут;
5. на чтение текста B и выполнение заданий к нему — 10—12 минут;
6. на чтение текста C и выполнение всех заданий к нему — 10—15 минут;
7. на контроль текста D в устной и письменной форме — 15—25 минут.

Данный учебник является основной книгой учебного комплекса по английскому языку для студентов технических вузов, состоящего из двух книг. В ходе учебного процесса он может быть дополнен учебным пособием «Английский в ситуациях общения» авторов Синявской Е. В., Поляковой Т. Ю., Гальпериной Л. А., Улановской Э. С., представляющим вторую книгу. В пособии предусмотрена практическая реализация навыков чтения, аудирования, устной речи и письма в ситуациях, приближенным к реальным условиям общения.

Авторы благодарят преподавателей кафедры иностранных языков МАДИ за большую помощь, оказанную авторам в процессе работы над новым вариантом учебника.

Авторы

PART I

LESSON 1 (ONE)

Грамматика: 1. Глагол **to be.**
2. Глагол **to have.**
3. Оборот **there+to be.**
4. Степени сравнения прилагательных.
5. Времена группы Indefinite Active.

Основной текст А: Education in the Soviet Union.

Глагол *to be* в Indefinite Active

Present	Past	Future
am is are	was were	shall be will be

Упражнение 1. *Скажите следующие предложения в прошедшем или будущем времени (Past, Future Indefinite), добавив соответствующие обстоятельства времени* (**at 5 o'clock, yesterday, tomorrow, next week, last month, next year** *и т. д.), если это необходимо.*

1. Victor is free in the evening. 2. John is in America. 3. I am very busy. 4. She is at the lecture. 5. The child is 10 years old. 6. This work is interesting. 7. The expedition is in Africa. 8. The new film is long. 9. My mother is at home. 10. The workers are at the factory. 11. The children are at school. 12. The students are at the Institute.

Упражнение 2. *Ответьте на все вопросы сначала утвердительно, затем отрицательно. Замените подлежащее соответствующим местоимением, если это необходимо.*

Образец: Is Kovalev present at the lesson?
Yes, he is. No, he is not.

1. Is Gorky Street long? 2. Was last winter cold? 3. Are your friend's sisters beautiful? 4. Is it hot today? 5. Is it Sunday today? 6. Is the clock on the wall? 7. Are you at the lesson? 8. Will you be at home in the evening? 9. Are the trees green now? 10. Is your house in the centre of the city? 11. Will your mother be at home at five o'clock? 12. Were you free yesterday? 13. Is his answer good? 14. Will you be in town on Sunday? 15. Is mathematics difficult? 16. Were your summer plans interesting? 17. Is your Institute large?

Глагол *to have* в Indefinite Active

Present	Past	Future
have has	had	shall have will have

Упражнение 3. *Скажите следующие предложения: а) в прошедшем времени (Past Indefinite), б) в будущем времени (Future Indefinite).*

Образец: He has a car.
a) He had a car.
b) He will have a car.

1. They have a big house in the country. 2. My friend has many interesting books. 3. His mother has a nice garden. 4. She has a good map of London. 5. We have a good dog. 6. I have a beautiful picture. 7. These students have five examinations. 8. His parents have a comfortable flat. 9. John has good work. 10. These pupils have four lessons every day.

Оборот *there + to be* в Indefinite Active

Present	Past	Future
there is there are	there was there were	there will be

Упражнение 4. *Скажите следующие предложения: а) в прошедшем времени (Past Indefinite), б) в будущем времени (Future Indefinite).*

Образец: There are many good books in the library.

a) There were many good books in the library.

b) There will be many good books in the library.

1. There is a new film on in our club. 2. There are twelve students in the group. 3. There is a beautiful garden near the house. 4. There is a big blackboard in the classroom. 5. There is a letter for him on the table. 6. There are two lifts in the house. 7. There are 300 pages in the book. 8. There is a new stadium in the town. 9. There is a table in the middle of the room. 10. There is a big hospital in the village. 11. Are there 15 sentences in this exercise? 12. Is there much work to do at home? 13. Is there only one cigarette in the box? 14. There are no pictures in the book. 15. There is no theatre in that small town. 16. There are no maps on the walls of the classroom.

Степени сравнения прилагательных

	Положительная	Сравнительная	Превосходная
I	long easy	longer easier	(the) longest (the) easiest
II	interesting	more interesting	(the) most interesting
III	good bad much, many little	better worse more less	(the) best (the) worst (the) most the least

Упражнение 5. *Переведите следующие группы слов и дайте сравнительную и превосходную степень прилагательных.*

1. a short story; 2. a large garden; 3. a beautiful flower; 4. a big table; 5. a high building; 6. a difficult exercise; 7. a new dress; 8. an old book; 9. late news; 10. a comfortable flat; 11. an easy question; 12. clean water; 13. thin ice; 14. a thick dictionary; 15. a good friend; 16. much snow; 17. bad weather; 18. little time; 19. many cars; 20. few mistakes

Упражнение 6. *Поставьте прилагательные в следующих предложениях в сравнительную или превосходную степень.*

1. Moscow is (large) than Kiev. 2. John is (short) than William. 3. Henry is (tall) of all. 4. This summer is (hot) than last summer. 5. December 22 is (short) day of the year. 6. This is (beautiful) house in the city. 7. He is (good) student in the group. 8. Which is (large) city in our country? 9. Mathematics is (difficult) for him than physics. 10. The Volga is one of the (long) rivers of the USSR. 11. January is (cold) than March. 12. Agatha Christie is one of the (famous) English writers. 13. There were (many) students at the lecture today than yesterday. 14. The Assembly Hall is (large) room in the Institute. 15. Yesterday our team played football very badly. I think it was their (bad) match. 16. Their house in the country is (little) comfortable than their flat in the town.

Упражнение 7. *Ответьте на следующие вопросы.*

1. Who is the youngest in your family? 2. Who is the oldest in your family? 3. Is your father older than your mother? 4. Are you as young as your friend? 5. Which is the most difficult subject for you? 6. Which is the easiest subject for you? 7. Is mathematics more difficult for you than English? 8. Is English easier for you than physics? 9. Is chemistry as difficult for you as physics? 10. Which is the most interesting subject for you? 11. Which is the longest day of the year? 12. Which is the shortest month of the year? 13. Is Washington bigger than New York? 14. Which is the largest city in the world? 15. Which is the highest mountain peak in the Soviet Union? 16. Who is the most famous singer now? 17. Is it warmer today than it was yesterday? 18. Have you less or more free time now than you had last year?

Времена группы Indefinite Active

Present	Past	Future
I, you, we, they — work, go he, she — works, goes	I, you, he, she, we, they — worked, went	I, we — shall work, go you, he, she, they — will work, go

Упражнение 8. *Скажите или напишите следующие предложения в единственном числе (не забудьте изменить форму сказуемого).*

Образец: My sisters work at the factory.
My sister works at the factory.

1. My friends work in summer. 2. These girls go to the theatre in the evening. 3. These apples are very green. 4. My friends do not like fish. 5. His brothers work much all day long. 6. They get new books from the library every week. 7. They have breakfast at eight o'clock. 8. The postmen bring letters three times a day. 9. They want to buy some toys, because their sons have a birthday tomorrow.

Упражнение 9. *Скажите следующие предложения: а) в прошедшем времени; б) в будущем. Предварительно повторите формы неправильных глаголов* **come, go, have, read, take, begin, leave, swim, tell, know.**

1. I come to the Institute at 9. 2. He goes to the Institute by Metro. 3. We have dinner at 3. 4. They read newspapers in the morning. 5. My friend takes books from the library. 6. I know many English words. 7. The lectures begin at 8.30. 8. My mother leaves Leningrad. 9. I play tennis in summer. 10. The boy tells us everything. 11. He swims well. 12. He helps me in my work. 13. The students repeat new words before the lesson. 14. The schoolchildren prepare their lessons in the evening. 15. The little boy skates well. 16. We listen to the radio in the morning. 17. The girl learns to dance.

Упражнение 10. *Прочтите предложения, поставив глаголы, данные в скобках, в соответствующем времени.*

1. My friend (to work) at the factory. 2. This group (to go) to the theatre next month. 3. We (to get) books from the library last week. 4. I (to come) home later than usual yesterday. 5. This student (to answer) well at the last lesson. 6. They (to translate) text 2 tomorrow. 7. He (to read) the book about Robinson Crusoe in his childhood. 8. We (to want) to live in peace. 9. Schoolchildren (to have) the longest holidays in summer. 10. The Great Russian writer A. S. Pushkin (to be born) in 1799. 11. I (to speak) with my teacher tomorrow after classes. 12. The farmer (to like) to work in his garden every day. 13. The child always (to wash) his hands before dinner. 14. The teacher (to ask) the new grammar rule at the next lesson. 15. Last Sunday his little sister (to sleep) till 10 o'clock. 16. She (to repeat) the new grammar rule again before the lesson.

VOCABULARY NOTES

Задание I. *Переведите следующие предложения.*

1. **education** — образование. He got a good education.
2. **language** — язык. What language does this man speak?
3. **to introduce** — вводить. The teacher introduced a new grammar rule at the lesson.
4. **shop** — цех, мастерская. There are many shops at this factory.
5. **state** — государство. The Soviet Union is the first socialist state in the world.
6. **primary** — 1) начальный; 2) основной, первостепенный. 1) There was only a primary school in the village. 2) This question is of primary importance.
7. **nevertheless** — все же, тем не менее. She was very tired, nevertheless she continued working.
8. **entrance** — 1) поступление; 2) вход. 1) Entrance to the Institute is by examination only. 2) There were many people before the entrance to the theatre.

to enter — 1) поступать; 2) входить. 1) He entered the Institute last year. 2) After the bell rang, the students entered the classroom.

9. **age** — 1) возраст; 2) век. 1) What is your father's age? 2) We live at the age of technical revolution.
10. **subject** — предмет. My friend failed in mathematics. He wasn't ready for this difficult subject.
11. **higher** — высший. His parents don't have a higher education.
12. **secondary education** — среднее образование. After he got his secondary education he went to work at the automobile plant.
13. **to attend** — посещать. All children of the village attend school.
14. **after** — после. After school the boys played tennis.
15. **to leave (left, left)** — оставить, уехать. They leave Moscow in summer.
16. **to pass an examination** — сдать экзамен. The pupils of the 10th form passed all their examinations well.
17. **to receive** — получать. Did you receive a letter from your friend?
18. **to fail in an examination** — не выдержать экзамен. Physics is very difficult for him. He may fail in it.
19. **to take an examination** — держать экзамен. Our students will take their examinations in January.

20. **term** — семестр. The first term of an academic year lasts 4 months.

21. **almost** — почти. She almost finished her home task.

22. **aim** — цель. The aim of the new methods was to improve the quality of teaching.

to aim — стремиться. My brother aims to become a doctor.

23. **broad** — широкий. This river is 30 metres broad.

24. **generation** — поколение. The generations of their family were the workers of the Kirov plant.

25. **course** — курс. They will have a course of lectures in construction mechanics.

26. **foreign** — иностранный. Pupils study different foreign languages at school.

27. **to take place (took, taken)** — происходить, случаться. The meeting took place after the lectures.

28. **to equip** — оборудовать, оснащать. They will equip all the laboratories with new apparatus.

29. **latest** — новейший, последний. Which is the latest book by this writer?

30. **to require** — 1) требовать; 2) нуждаться. 1) The situation there requires my presence. 2) They require our help.

31. **during** — в течение, во время. We speak English during the lesson.

32. **usually** — обычно. What do you usually do on Sunday?

33. **to last** — продолжаться, длиться. The lesson at school lasts 45 minutes.

34. **graduation** — окончание высшего учебного заведения. After graduation some of our students will work at automobile plants.

to graduate (from) — окончить высшее учебное заведение. My friend graduated from our Institute last year.

35. **to return** — возвращаться. Yesterday he returned home late.

36. **field** — 1) поле; 2) область, сфера деятельности. 1) The students helped collective farmers to work in the fields. 2) This man works in the field of mathematics.

37. **former** — прежний, предшествующий. She often wrote letters to her former teacher of literature.

38. **between** — между. Our house is between the hotel and the hospital.

39. **to realize** — 1) понимать, осознавать; 2) осуществлять. 1) She realized that her interest in foreign languages was serious. 2) Peter's friends helped him to realize his plans.

40. **to complete** — заканчивать, завершать. In what year will you complete your course of studies at the Institute?

41. **common** — общий. They were good friends because they had common interests and hobbies.

42. **kind** — род, сорт, вид. There are different kinds of books at our Institute library.

43. **wish** — желание. We have no wish to go to this concert.

44. **towards** — 1) к, по отношению к; 2) по направлению к. 1) The group felt friendly towards the new student. 2) First they were moving towards the North but then changed the direction.

45. **important** — важный. This question is very important.

Задание II. *Прочтите следующие интернациональные слова и догадайтесь об их значении.*

civilization, natural ['nætʃrəl], culture ['kʌltʃə], centre, examination, national, physical, technology, progress, economic, public, technical, humanitarian, laboratory, practical, apparatus, instruments, stadium, problem, student, political, institute, university, literature, class, industry, economist

Задание. *Прочтите и переведите текст.*

TEXT 1A

THE HISTORY OF EDUCATION IN RUSSIA

FROM THE HISTORY OF RUSSIAN CULTURE

Ancient Rus was one of the great early feudal states and held one of the leading places in World History.

The Slavonic written language was introduced in Rus in the 9th century. It came from Bulgaria. Literature in the Slavonic language, which widely represented the philosophical and natural science ideas of the Greek world, also came to Rus as early as the 9th century.

At the end of this century there started the replacement of books in Greek for those in Slavonic.

Yet the Russians developed a high civilization in the 10th-13th centuries, which was specifically Russian in nature and formed the foundation of Russian culture in the following centuries. The accumulation of cultural treasures continued

in Rus for 350 years. The many written works of the time show that the level of knowledge on most natural phenomena was as high as that of Ancient Greece.

Monasteries were the centres of theoretical knowledge. They had large libraries. Each of the big monasteries had book-making shops. They were real book factories where not only church manuscripts were copied and translated but original research works and fiction were written.

Today we know only a fraction of the cultural and scientific treasures of that period. But we can confidently say that Ancient Rus was a state of high culture and knowledge.

EDUCATION IN PREREVOLUTIONARY RUSSIA

In prerevolutionary Russia there was a network of primary schools for common people. Nevertheless, illiteracy among common people in Russia was very high. Well off people taught their children at grammar schools, [1] commercial schools, or secondary schools teaching no classics. [2]

There were also schools for nobles only. Entrance to those schools was limited. For example, at lycée [3] where A. S. Pushkin studied the number of pupils ranged from thirty to one hundred. Only boys at the age of 10 or 12 from noble families of high rank were taken to this school and studied there for six years. They were taught many different subjects, such as: French, English, German and Latin languages, Russian literature, history, geography, mathematics, physics, logics, law and rhetoric. Great attention was paid to different arts and physical training: riding, swimming, fencing, and dancing. The graduates from such educational institutions usually entered the service of their country.

The history of higher education in Russia goes back to 1755 when the first University was founded in Moscow at the initiative of M. V. Lomonosov and in accordance with his plan. Later universities were opened in other cities such as Kazan, Kharkov and Vilno. At first the universities were autonomous and were headed by the Council of Professors who elected the Rector of the University. This continued till the reign of Nicholas I who abolished the independence of the universities.

At the beginning of the Revolution 1905-1907 the autonomy of the universities was restored. The students of the universities belonged to different social classes though the tsarist government did its best to increase the number of nobles. However, the revolution quickened political differentiation

of the students. Soon the most progressive part of them together with the most liberal-minded professors began to play an important role in the revolutionary movement of the country.

EDUCATION IN THE USSR

Education is one of the basic rights guaranteed to Soviet citizens by the Constitution. All education is free, secondary education is compulsory for all young people who begin to attend school after they are six and leave it at the age of 16 or 17. There is a widely-developed network of specialized technical and higher educational institutions in the country. Students of higher educational institutions who have passed their entrance examinations are given monthly grants which they receive till the end of their studies if they don't fail in the examinations that they take at the end of each term.

Teaching at school is carried out almost in all national languages. The Soviet school aims at providing its pupils with fundamentals of knowledge, bringing up good citizens, intelligent in the broad sense of the word, morally pure and physically strong.

Nevertheless, rapid development of science, technology and social progress have demanded great changes in education. The aim is to improve the quality of teaching and to prepare the growing generation for independent life and work in conditions of rapid social, economic, scientific and technological progress of Soviet society.

The study plan should include such subjects for the primary pupils as "Acquaintance with the Surrounding World" and for the senior pupils—"Fundamentals of Information Science and Computer Engineering", "Ethics Psychology of Family Life".

There is an opinion that the school must have courses on various subjects at which the upper class students are able to study more profoundly natural technical and humanitarian sciences. Much attention should be paid to learning foreign languages.

The laboratories at schools and institutes where practical training takes place must be equipped with the latest apparatus and instruments which are required for the students' research work.

Besides problems connected with schools there are problems concerning students of higher education. Some of them face the students during their studies which usually last five

years and some occur after graduation. The problems are many and they are rather serious.

Many young people from foreign countries come to the USSR to receive a higher education and after graduating from the institutes and universities they return to their countries to work there in all fields of national economy.

One of the former foreign students wrote, "I have warm feelings when I remember your country where I studied between 1985 and 1989. Through the years spent in the USSR. I began to appreciate your country's peaceful policy. The names of Pushkin, Chekhov and Tolstoy grew very dear to me."

The interest to Russian culture, its language, literature and history has grown considerably in the recent years all over the world. A young woman from Great Britain writes that she started studying Russian at school when she was eleven years old, and at fifteen, she realized that her interest in the Russian language, literature and culture had become very serious. She came to the USSR and had an advanced studies course which she completed in six months at the Pushkin Russian Language Institute in Moscow.

She said, "I was surprised how much there is in common between Soviet and Western young people—their love for entertainments and the same kind of music and the wish to know everything new."

And here is an opinion of a young man from India. "I decided to study Russian early in life after discovering Leo Tolstoy and Maxim Gorky. I thought if I read them in the original, the faraway and mysterious Russia would become closer and more understandable to me."

A Russian language teacher and a member of the Greece-USSR Society had this to say about the Russian language learning in Greece: "The Russian language used to be studied only by humanities students interested in Russian and Soviet literature and history or by people who felt friendly towards the Soviet country. Now the classes include people from various industries, economists, businessmen and doctors".

Every person has his or her motive for learning a foreign language. However, the most important result of their effort is that: when they learn the language of another nation, international understanding grows.

361317

НТБ ВПИ
г. ВИННИЦА

NOTES TO THE TEXT

1. **grammar school** — *зд.* гимназия
2. **secondary schools teaching no classics** — реальные училища.
3. **lycée** — лицей

Упражнение 11. *Ответьте на вопросы по тексту А.*

1. What can you say about the Slavonic written language and its literature? 2. How long did the accumulation of cultural treasures continue in Rus? 3. Why can we say that Ancient Rus was a state of high culture? 4. To what country can it be compared? 5. What can you say about monasteries as cultural centres of that time? 6. How is the right to education guaranteed in the Soviet Union? 7. What education is compulsory in the USSR? 8. Where can young people receive their education? 9. What is the aim of the Soviet school? 10. What new subjects should be introduced in the study plan? 11. What can you say about the laboratories at schools and institutes? 12. What surprised the young woman from Great Britain who studied in the USSR? 13. Why do foreign people study the Russian language? 14. What is the most important result of learning a foreign language?

Упражнение 12. *Переведите следующие предложения на русский язык, выбрав одно из трех слов, подходящее по смыслу.*

1. Students get a higher (examination, education, graduation) at the institutes and universities. 2. Students receive a monthly (profession, grant, subject). 3. After the students (graduate, realize, introduce) from the institutes they go to work in all fields of national economy. 4. He did not enter the Institute because he (failed, prepared, learned) in mathematics. 5. Students must (complete, return, attend) lectures on different subjects. 6. When did you (leave, receive, complete) a letter from your parents? 7. He is a good student, he will (understand, require, pass) all the examinations well. 8. (primary, former, foreign) delegations from different countries come to visit the USSR. 9. What foreign (newspapers, language, word) can you speak? 10. What was the (latest, common, high) film that you saw? 11. Nobody could remember the details of the incident because it (equipped, took place, returned) long ago. 12. In summer they (usually, almost, quickly) leave Moscow and go to the South. 13. He had only one (term, field, aim) in life, he wanted to be a spaceman. 14. The

news which he received was very (important, foreign, difficult) for him. 15. Every lecture at the Institute (begins, lasts, completes) one hour and a half.

Упражнение 13. *Подберите пары антонимов.*

A. 1. to complete; 2. after; 3. to leave; 4. to pass an examination; 5. to ask; 6. much; 7. tomorrow; 8. here; 9. to graduate (from); 10. evening; 11. to receive; 12. south; 13. good; 14. to open; 15. black

B. 1. to return; 2. to fail in an examination; 3. to begin; 4. before; 5. yesterday; 6. little; 7. to answer; 8. to enter; 9. morning; 10. there; 11. bad; 12. north; 13. to give; 14. white; 15. to close

Упражнение 14. *Найдите в каждом ряду прилагательное в сравнительной степени.*

1. a) father, b) foreigner, c) faster
2. a) receiver, b) summer, c) richer
3. a) better, b) brother, c) farmer
4. a) word, b) worse, c) worker
5. a) colder, b) corner, c) car
6. a) door, b) daughter, c) darker
7. a) sister, b) greater, c) winter
8. a) water, b) teacher, c) higher
9. a) larger, b) mother, c) dinner
10. a) letter, b) last, c) less
11. a) their, b) longer, c) her
12. a) smaller, b) worker, c) paper
13. a) floor, b) answer, c) more
14. a) older, b) poor, c) brother
15. a) sister, b) shorter, c) summer

Упражнение 15. *Найдите в каждом ряду слово, имеющее наиболее общее значение.*

1. a) February, b) November, c) March, d) month, e) July
2. a) colour, b) brown, c) white, d) green, e) black
3. a) year, b) time, c) month, d) week, e) day
4. a) man, b) woman, c) boy, d) girl, e) person
5. a) tennis, b) football, c) sport, d) hockey, e) chess
6. a) bus, b) transport, c) plane, d) train, e) car
7. a) engineer, b) doctor, c) teacher, d) specialist, e) pilot
8. a) winter, b) summer, c) season, d) autumn, e) spring
9. a) body, b) arm, c) leg, d) head, e) hand
10. a) nose, b) mouth, c) eyes, d) head, e) hair

Упражнение 16. *Образуйте возможные словосочетания и переведите их.*

1. to pass	school		2. short	school
to attend	a letter		foreign	street
to receive	an examination		primary	language
	3. laboratory	state		
	long	equipment		
	great	letter		

Упражнение 17. *Переведите на русский язык следующие словосочетания.*

important work; his last wish; not to attend school; before and after Revolution; school age; a complete course of lectures in history; to introduce new methods of teaching; a foreign language; to leave the country; to enter the room; it takes place in the field of economy; the course of the ship; usually in time; to last longer; to graduate from Leningrad University; to return the book; in the field of physics; during the term; big shops of the factory; to equip a laboratory; the latest news; at the beginning of the term; the Soviet state; to receive a grant; to complete important work; primary and secondary education; to take an examination in literature; to realize a new plan; common interests; to require much time; the young generation; the former school teacher; between two houses; the aim of his life; to realize his mistake

Упражнение 18. *Прочтите следующие предложения, заполнив пропуски глаголами* **to be, to have** *в соответствующих формах. Переведите предложения.*

1. I know that his father ... many books in different foreign languages. 2. Usually he ... at home on Sunday. 3. Next year there ... new equipment in our school laboratory. 4. Tomorrow I ... either at the Institute or at home. 5. Now there ... a beautiful garden near the house. 6. Ten years ago there ... only a primary school in our village. 7. Now his parents ... a comfortable flat. 8. I. V. Kurchatov ... a well-known physicist and statesman. 9. There ... two terms in the academic year.

Упражнение 19. *Измените следующие предложения, используя глаголы* **has, have** *вместо оборота* **there + to be.**

О б р а з е ц: There are no books in his bag.
He has no books in bag.

1. There is no TV-set in his room. 2. There are no mistakes in his dictation. 3. There is no garden near his house. 4. There

are no pictures in her room. 5. There are no French books in her library. 6. There is no English newspaper on her table. 7. There is no coffee in my cup. 8. There is no telephone in my flat. 9. There are no maps on the walls of our classroom. 10. There is no ink in my pen.

Упражнение 20. *Переведите следующие предложения и словосочетания, обращая внимание на перевод союзов сравнения.*

as ... as — так же (такой же) ... как
not so ... as — не так (не такой) ... как
the ... the — чем ..., тем
than — чем

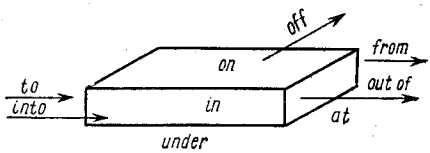
1. The day yesterday was not so fine as it is today. 2. I do not get up so early on Sunday as on week-days. 3. Lesson 1 is not so difficult as lesson 3. 4. She does not work at her English as much as she did last year. 5. Chemistry is not so interesting to him as mathematics. 6. as black as coal (уголь). 7. as heavy as lead (свинец). 8. as light as a feather (перо). 9. as wet as a fish. 10. The more we study, the more we know. The more we know, the more we forget. The more we forget, the less we know. The less we know, the less we forget. The less we forget, the more we know. So why study? 11. He knows English better than you. 12. This book is more interesting than yours. 13. English is easier than Russian. 14. This flat is less comfortable than ours.

ПРЕДЛОГИ ВРЕМЕНИ

in употребляется перед названиями месяцев — in September
» времен года — in summer
in употребляется при указании частей дня — in the morning
» года — in 1987
on употребляется перед существительным, обозначающим день — on Tuesday
at употребляется при обозначении времени — at 3 o'clock
Перед следующими сочетаниями предлоги не употребляются:

last, this, next } week, month, year

ПРЕДЛОГИ МЕСТА И НАПРАВЛЕНИЯ



Упражнение 21. *а) Повторите предлоги времени, места и направления. б) Вставьте подходящие по смыслу предлоги.*

We are students. ... the morning we go ... the Institute. Our lectures begin ... 9 o'clock. We have no lectures ... Sunday. We take examinations ... January and June. We do not study ... summer. We come ... the classroom and sit down ... the tables. We take our books and note-books ... ... the bags and put them ... the table. Our pens are ... the table too. Our bags are usually ... the tables. Sometimes they are ... the table ... the floor. During the lesson we go ... the blackboard and write sentences ... it. When the lessons are over we go ... ... the classroom and go home. We usually come back ... the Institute ... 3 o'clock ... the afternoon.

Упражнение 22. *Выразите несогласие со следующими утверждениями.*

Образец: They came to see him yesterday.
They did not come to see him yesterday.

1. This teacher asks many questions at the examination. 2. My friend often receives money from his parents. 3. My father helps me with my home-task. 4. We read newspapers in the evening. 5. I received a letter yesterday. 6. We liked the new film. 7. They left Moscow last summer. 8. These students attended lectures yesterday. 9. My mother will go to Leningrad in July. 10. We shall go to the cinema tomorrow.

Упражнение 23. *Составьте вопросы, начиная с вопросительного слова в скобках.*

1. They went to the theatre yesterday (where). 2. We begin our lessons at 9 (when). 3. I learn many subjects at the Institute (how many subjects). 4. These foreign students understand Russian well (how). 5. His mother teaches French at school (who). 6. She makes mistakes in grammar because she knows it badly (why). 7. Those students passed all examinations well (how). 8. His brother graduated from the Institute 2 years ago (when). 9. He failed in chemistry, because he was

not ready for it (why). 10. These schoolchildren will leave school next year (when). 11. They will equip the laboratory with the apparatus (what). 12. G. Sedov needed money for his expedition (what). 13. My friend will help me with the laboratory work (who). 14. The writer wrote a new book about the people of Kamaz (what). 15. They opened the library at 9 o'clock (when). 16. She bought a new English-Russian dictionary (what).

Упражнение 24. *Прочтите названия дисциплин и ответьте на вопросы, помещенные ниже.*

1. Mathematics (Maths), Physics, Chemistry, History, Literature, Drawing, Painting, English or another foreign language, History of the CPSU, Philosophy, Economics, Computation, Typing, Sport.
2. 1. Which are you best at? 2. Which did you enjoy most? Why? 3. Which are you still studying or interested in? 4. Which found practical application in your everyday life? How? 5. Which do you regret (сожалеете) not studying? Why?

Упражнение 25. *Расскажите о себе, используя следующие слова и словосочетания.*

to finish a secondary school; to take examinations; to pass examinations; to enter the Institute; to be a first-year student; to receive a grant; to attend lectures; to have practical hours; to study different subjects (chemistry, physics, mathematics); to become an engineer

Упражнение 26. *Сделайте сообщения на следующие темы:*

1. Your first day at the Institute. 2. The educational system in the USSR.

РАБОТА НАД СЛОВООБРАЗОВАНИЕМ

Упражнение 27. *Переведите следующие производные слова согласно моделям.*

Модель 1: *основа глагола* + **-tion, -sion, -ion** → *существительное*

to include — включать	inclusion — включение
to continue — продолжать	continuation
to produce — производить	production
to absorb — поглощать	absorption

to consider — рассматривать	consideration

Модель 2: *основа глагола* + **-er/-or** → *существительное со значением лица, производящего действия, или орудия действия*

to generate — генерировать	generator — генератор
to distribute — распределять	distributor
to cool — охлаждать	cooler
to operate — оперировать	operator
to consume — потреблять	consumer

Упражнение 28. *Найдите в тексте слова, имеющие общий корень со словами, данными перед текстом, определите части речи, к которым они относятся, переведите их, затем переведите текст.*

to converse — разговаривать	to speak — говорить
to hear — слышать	to pronounce — произносить

When you speak the sound waves (звуковые волны) travel through the air at the rate of 1200 feet per second. In a normal conversation the hearer really hears only about 50% of the sounds produced by the speaker. That explains why foreign languages are often easier to speak than to understand. Recording instruments show that no two native speakers of a language pronounce any word or sound of that language alike (одинаково). There is always some difference between your pronunciation and that of another speaker and this enables (давать возможность) us to recognize (узнавать) a person by his pronunciation.

ТЕХТ 1В

Задание I. *Прочтите текст, стараясь понять основное содержание. (Заметьте время начала и окончания чтения. Этот текст нужно прочесть за 6 минут из расчета 70 слов в минуту.)*

HISTORY REPEATS ITSELF

If you go on an excursion to the Pavlov Biological Station at Pavlovo near Leningrad, you will see a very interesting monument there. It is a monument to the dog. The dog, as

you know, played a very important part (роль) in all Pavlov's experiments. Pavlov wanted to thank the dog, so this monument was set up (установлен).

Then, if you go to see Pavlov's room in which the great scientist worked for so many years, you will see another dog, a toy one, standing on the bookcase. This toy dog has a very interesting history. It comes from Cambridge, one of the oldest universities in the world.

Once a group of students stopped before the window of a toyshop (игрушечный магазин) in Cambridge and looked at the toy dogs there. "There's the thing we want," said one of them, and he pointed to a white dog in the shop window. They entered the shop and soon came out with the big white dog they had seen in the window. Then laughing (смеясь) and talking they went to their professor and showed the dog to him.

The professor did not understand what it was all about until one of the students told him about their plan to give Pavlov the present (подарок) of the toy dog.

"Where did you get the idea from?" asked the professor, "I think it's an excellent (отличная) one."

"We got it from the grandson of Charles Darwin, who is now a student here," they answered, "when Darwin got his doctor's degree (степень) at Cambridge, the students gave him a toy monkey (обезьянка). That was how they showed that they supported (поддерживать) his theory of the origin of man."

The next day was a great holiday at Cambridge. Thousands of students came to the University to see the foreign scientists receive their diplomas. The students watched the ceremony from the gallery.

It was Pavlov's turn (очередь) to receive his diploma. As he was going forward under the gallery, the students let the dog right down into his arms. He looked up, saw all the young smiling faces above him and understood that they wanted to show him that they supported his theory.

As this was taking place, an old professor on the other side of the hall said to his friend: "Look, the students are giving Pavlov a toy dog. Did you see Darwin get his diploma? So you remember (помнить) him standing there with a toy monkey in his hands nearly forty years ago? History repeats itself, doesn't it?"

Задание II. *Выберите утверждение, соответствующее содержанию текста.*

1. There is a monument to the dog:
   1) in Leningrad; 2) in Pavlovo; 3) in Cambridge.
2. The toy dog comes from:
   1) Leningrad; 2) Cambridge; 3) London.
3. Charles Darwin was given:
   1) a toy dog; 2) a toy monkey; 3) nothing.
4. The students gave Pavlov a toy dog:
   1) in the shop; 2) at the ceremony; 3) at the lecture.
5. The students gave Pavlov a toy dog:
   1) because they liked him; 2) as a birthday present;
   3) because they supported his theory.

TEXT 1C

Задание I. *Прочтите текст, отыскивая в нем ответы на поставленные вопросы.*

SCHOOLING IN ENGLAND

How many days a week is school open?

1. Every child in Great Britain between the ages of five and sixteen years must attend school. There are three main types of educational institutions: primary schools, secondary schools, and universities. State schools are free (бесплатный) and attendance is compulsory. Morning school begins at nine o'clock and lasts for three hours until twelve o'clock noon. Afternoon school begins at two o'clock and lasts for two and a half hours until half-past four. School is open five days a week. On Saturdays and Sundays there are no lessons.

What subjects do children learn in the Junior school?

2. In the primary schools, where children study from five to eleven years, the first two years are mainly taken up with learning to read, write and do simple arithmetic. In addition the children draw, paint, model, and sing. The first two years of the primary school are called the Infant school (школа для малышей).

At seven the pupils are transferred to the Junior school (начальная школа для детей от 7 до 11 лет) which is usually situated in another section of the same building. At this age level the following subjects appear in the study programme: English, history, geography, nature study, music and others. At the age of eleven the pupils finish the primary school and continue their education at one of the secondary schools.

What kind of secondary schools are there in England?

3. There are different types of secondary schools in England. This system of secondary education has developed since the Act of 1944 according to which on leaving the primary school a pupil may go either to a secondary Modern, Technical, Grammar or Comprehensive school.

The Secondary Modern School (средняя современная школа) is attended by pupils between the ages of eleven and sixteen. It is a state school which has a practical trend. Such courses as secretarial, trade and commerce, agriculture, gardening, cooking are taught there. These schools are usually well equipped with workshops for woodwork, metalwork, cooking, etc.

On leaving this school the pupils who wish to continue their education may attend evening classes which prepare them for entering a college or a university.

In what fields of national economy do the leavers of the Secondary Technical school work?

4. The Secondary Technical School gives a general technical education. It is attended by those pupils who are more mechanically inclined (склонный). The pupils have the opportunity to try their hand at the machines in the workshops. More time is given to such subjects as mathematics and science (естественные науки). In other words, this school gives a good foundation to work in fields of industry and agriculture.

What do the pupils receive on finishing the Grammar School?

5. The Secondary Grammar school (классическая школа) is attended by the pupils between the ages of eleven and sixteen or eighteen. Some of them are state schools and some are private or independent schools. Most of them have two sides: a classical side, specializing in ancient languages (Greek and Latin), history and philosophy; and a modern side, specializing in modern languages, natural science and geography. The leavers of this school receive the General Certificate of Education (аттестат зрелости). On receiving this certificate a pupil may either leave the school or continue his studies for another 2 years in what is called the "Sixth Form" to receive the same certificate but at the advanced level (продвинутый уровень). In order to enter a university a boy or a girl must pass examinations in five subjects, two of which must at least be at the advanced level.

Among the private schools there are some very old and famous ones, such as Eton, Harrow, Rugby, etc. The fees at these schools are rather high, so usually rich parents send their children there.

Till what age do the pupils study according to the general programme?

6. Comprehensive schools (единая средняя школа) are state schools which combine three types of schools: grammar school, secondary modern school and technical school. The pupils study there according to the general programme till the age of thirteen or fifteen, after that they have special courses depending on their inclinations. The number of comprehensive schools is rather great and it is constantly growing.

Задание II. *Прочтите текст С еще раз и выделите в каждой части текста интересные для вас факты.*

Задание III. *Сделайте сообщения на следующие темы:*

1. Primary schools in Great Britain. 2. Secondary schools: a) modern, b) grammar, c) comprehensive.

TEXT 1D

A DAY IN THE LIFE OF SIMON CARROT

1. First of all, I must tell you about myself. I am fourteen and I am in the third form at a Grammar School in Manchester. I have a young sister, called Rosemary, who is very stupid, and I have a dog, called Pal, who is very intelligent.

What a bad day. I got up late and didn't have time to eat my breakfast. I couldn't find my books or my cap. At last, I found my books — in the bathroom; and at last, I found my cap — my dog, Pal, was playing with it. I had to wait ages for a bus and I was almost late for school. (Wiggy, my form master, told me, on Friday, that he would give me five hundred lines to write as a punishment if I was late again.)

2. But one nice thing took place today. In the Assembly Hall the Headmaster was reading out some news about the girls' hockey team. I was standing next to Jones (he's in my form) who is a very stupid boy, and much bigger than I am. He pulled my hair, so I kicked him and he said "OW" very loudly. Wiggy walked over to him and gave him a hundred

lines. "But, sir," said Jones, "Carrot kicked me." "You can write out two hundred lines — for telling tales," said Wiggy. Then we all went to our classroom.

3. The first lesson on Monday morning is maths. What a terrible way to start the week. Mr. Bailey, the maths teacher, collected our homework. Then, he gave us some sums to do. I was sitting next to Jane, who is fat and stupid — but very good at maths. I asked her what the answers were, but she didn't tell me. The next lesson was French. I like French. It's nice to be able to talk to somebody in another language. At last it was eleven o'clock: time for a break. Susan gave me a piece of cake to eat with my milk. She also gave me her Latin homework to copy, because I hadn't done it. I think she likes me, and she's pretty, too.

4. After the break, we had two lessons of Latin. They are always the worst two lessons of the week. I do not like Latin. Mr. Williams gave me a hundred lines for talking to Susan, but I wrote them out in class instead of reading a Latin book. At half past twelve, it was time for lunch. I sat down at the table very happy because the Latin lessons were over. I ate a little and then I went into the playground with my friends, Pete Sharp and John Ford, and we played football. Jones wanted to play with us, but I told him I'd kick him again, so he went away. After lunch we had a history lesson. I don't usually like history, but I liked this lesson very much. We learned about William the Conqueror and the Battle of Hastings, in 1066. We were on holiday in Hastings last summer, and I had seen all the places that the history teacher told us about. I said I'd bring some photographs of our holiday to school next week. At three o'clock it was time for the best "lesson" of the week: games. We played a game of football and I scored three goals.

5. After school, at four o'clock, Pete and I bought some sweets and I went to his house to listen to his Beatles record. It's a good record. I want to buy it but I haven't got enough money. Pete's parents give him ten shillings a week: I only have five shillings a week. I came home at half past seven and had my supper. I did my French homework — it was easy — but I didn't do my history homework. There was an interesting programme on television. I can do it tomorrow, during the break ...

Задание I. *Ответьте на вопросы по тексту. Правильность ответов проверьте в соответствующих частях текста D.*

1. Where does Simon Carrot live? (1) 2. How old is he? (1) 3. What school does he go to? (1) 4. Did he get up late or early? (1) 5. Where did he find his books and cap? (1) 6. What took place in the Assembly Hall? (2) 7. What did Simon Carrot do during mathematics? (3) 8. What foreign language does Simon Carrot like? (3) 9. What did he eat during the break? (3) 10. How many lessons of Latin did he have? (4) 11. At what time did he have lunch? (4) 12. Where did he spend his holiday last summer? (4) 13. What game did he play with his friends? (4) 14. What record did he listen to? (5) 15. What did he do in the evening? (5)

Задание II. *Выскажите свое мнение по следующим вопросам.*

1. What kind of pupil was Simon Carrot? (capable, good, bad, lazy, backward ...)
2. What will he do after finishing school? (to enter a University, to learn languages, history or mathematics; to go in for sports; to work as a clerk; to work at a factory ...)
3. Do you like such kind of boys as Simon Carrot? Why?

КОНТРОЛЬНЫЙ СЛОВАРЬ

1. after *(prp)*; 2. age *(n)*; 3. aim *(n, v)*; 4. before *(prp)*; 5. attend *(v)*; 6. between *(prp)*; 7. broad *(a)*; 8. common *(a)*; 9. complete *(a, v)*; 10. course *(n)*; 11. during *(prp)*; 12. education *(n)*; 13. entrance *(n)*; 14. equip *(v)*; 15. fail *(v)*; 16. field *(n)*; 17. foreign *(a)*; 18. former *(a)*; 19. generation *(n)*; 20. graduate *(v)*; 21. higher *(a)*; 22. important *(a)*; 23. introduce *(v)*; 24. kind *(n)*; 25. language *(n)*; 26. last *(v)*; 27. latest *(a)*; 28. leave *(v)*; 29. nevertheless *(adv)*; 30. pass an examination; 31. primary *(a)*; 32. realize *(v)*; 33. receive *(v)*; 34. require *(v)*; 35. return *(v)*; 36. secondary education; 37. shop *(n)*; 38. state *(n)*; 39. subject *(n)*; 40. take an examination; 41. take place; 42. term *(n)*; 43. towards *(prp)*; 44. usually *(adv)*; 45. wish *(n)*

LESSON 2 (TWO)

Грамматика: 1. Времена группы Indefinite Passive.
2. Модальные глаголы **can, may, must** и их эквиваленты.

Основной текст A: History of Education.

Времена группы Indefinite Passive

To be + Participle II	
Infinitive	to be written
Present	The letter is written.
Past	The letter was written.
Future	The letter will be written.

Упражнение 1. *Переведите следующие предложения на русский язык, обращая внимание на перевод сказуемого в страдательном залоге.*

1. The books were taken from the central library. 2. An interesting problem was discussed at the lecture. 3. The newspapers are usually brought in the morning. 4. When was the Moscow University founded? 5. All the work will be done by automatic machinery. 6. New houses are built everywhere: in cities, towns, and villages. 7. The experiments will be completed by the end of the week. 8. The young workers are trained at the factory how to use the new equipment. 9. Much time is given to the study of the new methods of work. 10. The lectures on mathematics are attended by many students. 11. He was asked many questions at the examination. 12. English sportsmen will be met by the students of the Institute of Physical Culture.

Упражнение 2. *Сравните следующие пары предложений и переведите их на русский язык.*

1. The teacher asks the students many questions. The students are asked many questions. 2. He told them an interesting story. He was told an interesting story. 3. She visited her friends. She was visited by her friends. 4. I shall give you a good book. I shall be given a good book. 5. The rector will receive you at 3 o'clock. You will be received on Wednesday. 6. They will show us a new film tomorrow. They will be shown a new film tomorrow.

Модальные глаголы и их эквиваленты

долженствование	—must, should, to have to, to be to
физическая возможность	—can, to be able to
разрешение	—may, to be allowed to

Упражнение 3. *Скажите или напишите следующие предложения: а) в Past Indefinite; б) в Future Indefinite.*

Образец: He must learn the new words regularly.
He had to learn the new words regularly.
He will have to learn the new words regularly.

A. 1. We must pass the examination in physics. 2. He must leave in the morning. 3. You must read the text again. 4. They must begin their work at 9 o'clock. 5. She must go there at once.

Образец: He can skate well.
He could skate well.
He will be able to skate well.

B. 1. He can continue his studies at the evening department. 2. I can meet you at the Metro station. 3. His father can help him in his studies. 4. I can translate this text without a dictionary. 5. She can play tennis after work.

Образец: You may smoke in the corridor.
You were allowed to smoke in the corridor.
You will be allowed to smoke in the corridor.

C. 1. You may go home after classes. 2. They may continue the experiment. 3. The students may use dictionaries at the translation test. 4. He may take books from his father's library. 5. The tourists may attend the sitting of the Parliament.

VOCABULARY NOTES

Задание I. *Переведите следующие предложения.*

1. **as long as** — пока; до тех пор, пока. You may have this book as long as you want it. We shall stay in the country as long as the weather is fine.
2. **to teach (taught, taught)** — преподавать, обучать, учить. This young woman teaches mathematics at our Institute.
3. **essential** — существенный, важный, необходимый. At every lecture students learn some essential facts from this or that field of science.
4. **to show (showed, shown)** — показывать. The teacher showed a map of England to the first-year students.
5. **so that** — чтобы; для того чтобы. Take the book home so that you could read it in the evening.

6. **to find (found, found)** — находить. She can't find her book, help her, please.

7. **to find out** — выяснять, обнаруживать. I can't find out his new address, nobody knows it.

8. **other** — другой. She bought interesting books, pictures and many other things for her little children.

9. **early** — рано. In summer people usually get up early.

10. **to think (thought, thought)** — думать. First think and then say.

11. **invention** — изобретение. Television is one of the greatest inventions of our age.

12. **necessary** — необходимый, нужный. The secretary will give you all the necessary information.

13. **quite** — вполне, совсем, совершенно. It is quite dark at 5 o'clock in winter.

14. **to use** — пользоваться, применять. If you don't know some words, you may use a dictionary.

15. **possible** — возможный. It is possible to go there by Metro.

16. **knowledge** — знание, знания. He has a good knowledge of English.

17. **to grow (grew, grown)** — 1) расти, выращивать; 2) становиться. 1) Many beautiful flowers grow in our garden. 2) It grew cold.

18. **each** — каждый. The teacher gave each student a dictionary.

19. **therefore** — поэтому. It's very late, therefore I must go home.

20. **to need** — нуждаться в чем-л. I need two more days to finish my work.

21. **only** — 1) только; 2) **the only** — единственный. 1) He came only yesterday. 2) She is the only child in the family.

22. **behaviour** — поведение. The teacher did not like the behaviour of his two pupils — they talked with each other at the lesson.

23. **to decide** — решать. I can't decide which book to take.

24. **until** — 1) до тех пор пока (не), пока (не); 2) до. 1) Wait here until I come. 2) The holiday lasts until September.

25. **according to** — согласно, соответственно. According to the program we shall have this subject next year.

26. **to consist (of)** — состоять (из). Water (H_2O) consists of hydrogen and oxygen.

27. **way** — 1) путь; 2) способ; 3) образ. 1) Which is the shortest way to the Univesity? 2) This is the best way to do it. 3) He didn't like their way of living.

28. **even** — даже. It is hot in India even in winter.

29. **to produce** — производить. This factory produces apparatus for our laboratories.

30. **hard** — 1) твердый; 2) трудный, суровый; 3) упорно, много. 1) Glass is harder than wood. 2) Mathematics is a hard subject for him. 2) He had hard times in his childhood. 3) He worked hard at his English.

31. **to send (sent, sent)** — посылать. The child was ill, and his mother sent for the doctor.

32. **to keep (kept, kept)** — держать, сохранять. Where do you keep your books? Can you keep a secret?

33. **to build (built, built)** — строить, создавать. They will build a new school here.

34. **to develop** — развивать. After the Great October Socialist Revolution our country began to develop its industry.

35. **side** — сторона. One side of this box is black.

36. **as well as** — так же как, также. Peter as well as his friend came late for the lecture.

37. **to throw (threw, thrown)** — бросать. The boy threw the ball up in the air.

38. **to pay (paid, paid) attention (to)** — обращать внимание на что-либо или на кого-либо. You must pay attention to what the teacher tells you.

39. **always** — всегда. I always come to the Institute in time.

40. **to try** — стараться, пытаться. I don't think I can do it, but I'll try.

41. **to include** — включать. The program includes many theoretical subjects.

42. **to influence** — влиять. Bernard Shaw was greatly influenced by Russian literature.

43. **especially** — особенно, в особенности. It is very pleasant to be near the river especially when it is hot.

44. **to provide (for)** — обеспечивать, снабжать. Everybody in our country is provided for in his old age.

45. **free** — свободный. I have very little free time.

free (of charge) — бесплатный. Education is free in our country.

Задание II. *Прочтите следующие интернациональные слова и догадайтесь об их значении.*

history, fact, sort, start, special, physical, to organize, social, military, group, discipline, liberal, nature, to discuss, arithmetic, politics, service, rhetoric, public

TEXT 2A

Задание. *Прочтите и переведите текст.*

HISTORY OF EDUCATION

EDUCATION

1. As long as we live we continue to learn, and the education we receive when we are young helps us to continue learning. We are taught to read and write, and are taught many of the essential facts about the world and shown how to sort them out [1] so that later in life, we shall be able to find out things ourselves and not to ask other people.

The first teachers were fathers and mothers, but very early in the history of man children began to be taught by people other than their fathers and mothers. It is thought that schools first started in Egypt 5,000 to 6,000 years ago, and that it was the invention of writing which made them necessary. Reading and writing were quite different from the skills used in everyday life, and writing made it possible to store up knowledge which grew with each generation. Specially trained people were therefore needed to teach it.

EDUCATION IN ANCIENT WORLD

2. Only the sons of nobles [2] attended the first Egyptian schools, which taught reading, physical education and good behaviour. In ancient India the priestly caste [3] decided what should be taught to each of the four castes, or groups, into which people were divided.

Only the priestly caste was allowed to learn the Hindu scriptures. In China, until the 19th century, education was organized according to social classes, and consisted largely of learning the scriptures by heart.

3. A clear example of the way in which even neighbouring peoples produce different types of education comes from ancient Greece. Sparta and Athens were two Greek states. The Spartans, a hard and warlike people, gave a purely military education. At the age of seven all boys of noble families were taken from their homes and were sent to live in groups. They were kept under a very strict discipline and were taught hunting, military scouting, swimming and the use of weapons. The Spartans despised literature, and some people think they could not even read.

At the very same time, also for the nobles only, the Athenians were building what we call a liberal education [4] — one that helps a man to develop all sides of his nature, helps him to make and appreciate beautiful things and helps him to find the best way of life. They thought it important to educate the body as well as the mind, and had a programme of physical training which consisted of running, jumping, wrestling and throwing the discus. As time went on Athenian education paid special attention to reading, writing and literature and these were taught by a special teacher, known as the "grammatist". Common people were not educated, they were trained in craftsmanship, workmanship, trades.

Greek philosophers, or thinkers, always discussed what education should try to do and what it should include. Plato wrote a book called *The Republic*, which is one of the best books ever written on education, and since those days Greek ideas have influenced European education, especially secondary and university education.

4. The Romans were very good at organizing, and they were the first people to have schools run by the government [5] free of charge. Throughout their great empire there was a network of these schools which provided for three stages of education.

At six or seven all boys (and some girls) went to the primary school, where they learned "three R's": reading, writing, and arithmetic. Most children were not taught more than this, but at 12 or 13 boys of the rich families went on to the "grammar" school to study the Greek and Latin languages and their literatures, that is, what had been written in those languages. At 16, young nobles who wanted to enter politics or the service of their country went to the schools of rhetoric to be trained in rhetoric, or public speaking.

5. In Great Britain the first teachers we read about were craftsmen. They taught children to read, write and count, to cook and mend their own shoes. In the early 19th century the

main system of teaching was the "Monitor" system. [6] The teacher could manage a class of 100 or more by using older pupils or "monitors" to help him. The schools had long desks which were sometimes arranged in tiers so that the teacher could see every child in a large class.

NOTES TO THE TEXT

1. **to sort out** — отбирать, распределять (по сортам)
2. **nobles** — знать
3. **the priestly caste** ['pri:stlɪ 'ka:st] — привилегированная каста духовенства
4. **a liberal education** — гуманитарное образование
5. **schools run by the government** — школы, находящиеся в ведении государства.
6. **the "Monitor" system of teaching** — Ланкастерская система образования, при которой старшие ученики следят за младшими

Упражнение 4. *Ответьте на вопросы по тексту 2А.*

1. Who were the first teachers? 2. When did the first schools start? 3. What made the first schools necessary? 4. Who began to teach children after writing was invented? 5. Who attended the first Egyptian schools? 6. What did the Egyptian schools teach? 7. How was education organized in China? 8. What kind of people were the Spartans? 9. What were the Spartans taught? 10. What did the programme of physical training in Athens consist of? 11. What did the grammatist teach? 12. What did Greek philosophers discuss? 13. What were the Romans good at? 14. What were the children taught at the primary school? 15. What were the boys taught at the grammar school? 16. How could the teachers in Great Britain manage classes of 100 pupils?

Упражнение 5. *Перечертите данную таблицу в тетрадь и заполните графы, пользуясь информацией, полученной из текста (первая графа дана как образец).*

The name of the country	Who was taught	What was taught
Egypt	The Sons of Nobles	Reading, physical education, good behaviour
Ancient India		
China		
Sparta		
Athens		
Roman State		
Great Britain		

Упражнение 6. *Переведите следующие предложения на русский язык, выбрав одно из трех слов, подходящее по смыслу.*

1. You may keep this book (therefore, as well as, as long as) you need it. 2. Experiment is not (beautiful, essential, different) for this work. 3. The students were (divided, called, taught) into smaller groups. 4. They (showed, decided, developed) to complete the experiment in time. 5. He was taught foreign languages when he was (quite, well, always) a child. 6. They are quite (difficult, different, important). She is clever and beautiful but he is not. 7. The new building is on the right (side, river, country) of the street. 8. He (was given, was shown, was called) the shortest way to the river. 9. Her family is small, it (finds, shows, consists of) two persons. 10. He could not (show, find out, throw) the discus at a long distance. 11. They produced different models of cars (according to, so that, as well as) the new plan. 12. He says that (early, even, therefore) children helped them. 13. I like her and do it (quite, early, only) for her. 14. What (other, right, hard) books do you need? 15. He will work (into, until, against) you come.

Упражнение 7. *Подберите пары синонимов.*

A. 1. to complete; 2. to take an examination; 3. to attend a lecture; 4. important; 5. to receive; 6. to return; 7. usually; 8. wish; 9. to leave; 10. to grow; 11. to need; 12. each; 13. to consist of; 14. way; 15. to make; 16. hard; 17. to build; 18. state

B. 1. will; 2. to go out; 3. to become; 4. to require; 5. every; 6. always; 7. to include; 8. to come back; 9. to get; 10. road; 11. essential; 12. to come to the lecture; 13. to produce; 14. difficult; 15. to construct; 16. to have an examination; 17. to finish; 18. country

Упражнение 8. *Найдите в каждом ряду слово, противоположное по значению первому слову ряда.*

1. **always** a) because, b) never, c) almost, d) again
2. **early** a) complete, b) finally, c) late, d) quite
3. **free** a) young, b) fail, c) rich, d) busy
4. **hard** a) light, b) warm, c) easy, d) soft
5. **to fail** a) to require, b) to pass, c) to thank, d) to study
6. **possible** a) special, b) necessary, c) free, d) impossible
7. **to send** a) to try, b) to think, c) to receive, d) to use
8. **to return** a) to stand, b) to live, c) to repeat, d) to leave
9. **to graduate** a) to enter, b) to take, c) to last, d) to return
10. **after** a) between, b) before, c) next, d) almost

Упражнение 9. *Найдите правильный перевод каждого слова.*

A. 1. as long as; 2. therefore; 3. always; 4. but; 5. according to; 6. as well as; 7. again; 8. until; 9. here; 10. only; 11. against; 12. around; 13. or

B. 1. против; 2. вокруг; 3. поэтому; 4. снова; 5. или; 6. до тех пор пока (не); 7. здесь; 8. только; 9. пока; 10. но; 11. согласно; 12. всегда; 13. также

Упражнение 10. *Переведите на русский язык следующие словосочетания.*

an essential part of his work; a free of charge education; to divide into parts; to decide where to go; necessary knowledge; to produce different things; hard day; hard work; hard material; to work hard; the best way of life; to build a new road; to develop national economy; the other side of the street; the shortest way to the centre of the city; to grow fruits; other inventions; quite a child; each day; early in the morning; always ready; to make it possible; according to the plan; to send for a doctor; to show a new film; to teach English; to find an old dictionary; to grow warm; to use my father's library; good behaviour; to keep one's word; to build a factory; to need money; to pay attention to your mistakes; to try for the second time; to include many details; especially important; to be provided with good material; free time

Упражнение 11. *А. Переведите следующие предложения на русский язык, обращая внимание на время и залог сказуемого.*

1. Usually the students are examined in room 41. 2. At the Institute the students are taught many different subjects. 3. The academic year is divided into two terms. 4. The children of Sparta were given a military education. 5. In Athens special attention was paid to reading, writing and literature. 6. The boy was told to be back at home at 6 o'clock. 7. This road was built last year. 8. The electric lamp was invented by Yablochkov. 9. The telegram will be sent tomorrow. 10. This building will be completed very soon. 11. A new library will be opened in our district next week. 12. The new grammar rule will be asked at the next lesson.

Б. Переведите следующие предложения на русский язык, обращая внимание на глаголы, требующие после себя определенных предлогов.

to look at — смотреть на
to look for — искать что-л., кого-л.
to look after — присматривать
to look through — просматривать
to work at — работать над
to wait for — ждать кого-л.
to pay attention to — обращать внимание на
to listen to — слушать что-л.
to speak to smb about smth — говорить с кем-л. о чем-л.
to take care of — заботиться о ком-л.
to send for — посылать за
to refer to — ссылаться на

1. He was listened to with great pleasure. 2. The documents were sent for a week ago. 3. This poet is much spoken about. 4. The child was looked for everywhere. 5. Her children will be taken care of. 6. You are always waited for. 7. The picture was attentively looked at. 8. This book is often referred to. 9. The work of this student was paid attention to. 10. This plan was carefully worked at. 11. She looked after her little sister, when her mother was at work. 12. He looked through the morning newspapers at breakfast.

Упражнение 12. *Переведите следующие предложения, обращая внимание на перевод модальных глаголов и их эквивалентов.*

1. Who can translate this sentence? 2. You can go to Leningrad by train or by airplane. 3. Could you speak Eng-

lish a year ago? 4. I hope they will be able to reach the village before it is dark. 5. You may go away now, I shall finish the work myself. 6. Every engineer must know at least one foreign language. 7. Your son must stay in bed because he is still ill. 8. You should take a taxi if you don't want to be late for the concert. 9. Students are not allowed to smoke in the classrooms. 10. He was not allowed to enter the concert hall after the third bell. 11. As he received a bad mark, he had to go over the material again. 12. We were to meet at the station at six. 13. He was to stay at the office until the report was ready. 14. You will have to repeat the material of the lectures before the examination. 15. We were to send his letter of recommendation by air mail. 16. You should try to find out all the essential facts connected with his work in the Antarctic. 17. The team of experts is to study the present situation in the country. 18. Do you know the student who is to make a report at our next meeting? 19. You should influence your friend. He is not studying the way he should. 20. All the students of our group should be present at the meeting.

Упражнение 13. *Заполните пропуски модальными глаголами* **can, may, must, should.**

1. Nina is ill. She ... stay in bed. 2. Drivers ... stop when they see the red light. 3. Betty asked: "... I open the window?" 4. Betty asked her father: "... I go to the concert tonight?" Her father said, "Yes, you ... go." 5. Mary is free tonight. She ... go to the dance. 6. Alec will have an English lesson tomorrow. He ... study tonight. 7. Mark is a good student. He ... speak English well. 8. There is no ink in my pen. ... I write with a pencil? 9. My friend gave me an interesting book to read. She said, "You ... keep it for seven days." 10. You ... do what the doctor says. 11. You ... study much if you want to pass the examination well. 12. You ... not smoke in the dining-room. 13. Little children ... go to bed early. 14. If you are ill, you ... consult a doctor.

Упражнение 14. *Переведите следующие предложения на русский язык.*

1. In this lesson special attention is paid to the translation of passive construction. 2. I am often helped by my younger brother. 3. The letter will be answered at once. 4. If I am not mistaken, this book is often referred to. 5. The secretary was sent for. 6. The students will be shown a new film on the development of automobile industry in our

country. 7. They had to wait for the rector. 8. He had much work to do yesterday. 9. You must not cross the street on the red light. 10. The new words should be repeated as often as possible. 11. I shall have to tell him everything. 12. He is to come at 5. 13. You may open the window, it is hot here. 14. They were to meet at the station. 15. The experiment should be finished today. 16. Children under 16 are not allowed to see this film. 17. Can you tell me where she lives? 18. He could not show me the way to the nearest Metro station.

Упражнение 15. *Прочтите предложения, поставив глаголы, данные в скобках, в соответствующих формах. Переведите предложения.*

1. At the Institute the students (to be taught) many different subjects. 2. The children of Sparta (to be given) military education. 3. In Athens special attention (to be paid) to reading, writing and literature. 4. Next year a new school (to be built) near our house. 5. Everybody in our country (to be provided for) getting education. 6. Jack will be free tomorrow, therefore we (to be able) to play football as long as we want. 7. Mother didn't like Pete's behaviour and (not to allow) him to go to the yard. 8. Yesterday we (have to) come to school at 8 o'clock but Nina came only at 9. 9. At the factory the young workers (to be trained) how to use the new equipment. 10. Take the book home so that you (to be able) to read it in the evening.

Упражнение 16. *Заполните пропуски конструкцией* **there is/are** *в нужном времени.*

1. ... an interesting lecture on political economy yesterday. 2. ... many people in the park yesterday. 3. ... a meeting at our Institute tomorrow. 4. ... an old friend of mine at the concert last night. 5. ... much work to do tomorrow. 6. ... three types of educational institutions in the Soviet Union. 7. ... no mistakes in your last exercise. 8. ... many visitors in the museum yesterday. 9. ... 15 students in the group now. 10. ... a new club in the village next year. 11. ... a beautiful park near my home. 12. ... no one at home when I came.

Упражнение 17. *Поставьте специальные вопросы к числительным.*

Образец: There are thirteen boys in their group.
How many boys are there in their group?

1. There are two tables in the room. 2. There are four windows in the room. 3. There are thirteen chairs in the room. 4. There are six diagrams on the wall. 5. There are eleven pens on the table. 6. There are five pencils on the desk. 7. There were three men in the library. 8. There will be fourteen students in our group. 9. There were two interesting lectures at the club last week. 10. There will be one new student in their group. 11. There were two hundred people at the meeting. 12. There was only one lecture yesterday. 13. There are thirty-five laboratories at our Institute.

Упражнение 18. *Переведите следующие предложения на русский язык, обращая внимание на степени сравнения прилагательных.*

1. It is better to go there by plane, it is much quicker than by train. 2. The physics laboratory of this Institute has the best apparatus for the experiment. 3. The road became worse as we went along. 4. The more you experiment, the better. 5. He begins to work much earlier than I do. 6. He was given the most difficult task. 7. The last report at the conference was the most interesting. 8. Edison could work at his experiments for days and weeks. Sometimes he slept less than five hours a day. 9. The work has to be done in the least possible time. 10. It is the least you could do for her.

РАБОТА НАД СЛОВООБРАЗОВАНИЕМ

Упражнение 19. *Переведите следующие производные слова согласно моделям.*

Модель 3: *основа прилагательного* + **-ly** → *наречие*

free — свободный	**freely** — свободно
possible — возможный	possibly
deep — глубокий	deeply
safe — безопасный	safely
easy — легкий	easily
simple — простой	simply

Модель 4: *основа существительного* + **-ic** → *прилагательное*

cube — куб	**cubic** — кубический
atmosphere — атмосфера	atmospheric
history — история	historic

metal — металл	metallic
base — основа	basic

Модель 5: *основа глагола* + **-ment** → *существительное*

to attach — прикреплять	**attachment** — прикрепление
to assess — оценивать	assessment
to move — двигать	movement
to establish — устанавливать	establishment
to replace — заменять	replacement
to develop — развивать	development
to punish — наказывать	punishment

Упражнение 20. *Переведите следующие словосочетания.*

to engage — зацеплять	engagement of parts
to manage — руководить	good management
to invest — вносить вклад	large investments
to improve — улучшать	great improvement
to embellish — приукрашивать	embellishment of facts
to displace — смещать	displacement of parts
to align — выравнивать	alignment of machine elements
considerable — значительный	to change considerably
correct — правильный	to speak correctly
successful — успешный	to pass an examination successfully
easy — легкий	to find easily
exact — точный	to know exactly
real — реальный	realistic approach (подход)
system — система	systematic work
loud — громкий	to speak loudly
to cut — резать	metal cutter

Упражнение 21. *Найдите в тексте слова, имеющие общий корень со словами, данными перед текстом, определите части речи, к которым они относятся, переведите их, затем переведите текст.*

to sleep — спать; **particular** — особенный; **energy** — энергия

The data (данные) show that just as too little sleep is detrimental (вредный) to human organism, too much sleep is detrimental as well, particularly if one sleeps two hours more. People who sleep six hours or less a day are more energetic. Those who require 9 hours are slow movers. The long sleepers are passive. Long sleepers and short sleepers spend about equal amounts of time (равное количество времени) in deep sleep, but the long sleepers dream (видеть сны) much more.

TEXT 2B

Задание I. *Прочтите текст, стараясь понять основное содержание. (Заметьте время начала и окончания чтения. Этот текст нужно прочесть за 5 минут из расчета 70 слов в минуту.)*

THE OXFORD AND CAMBRIDGE BOAT RACE

Sporting activities at Oxford and Cambridge are varied and numerous. There are different competitions (соревнование) between the colleges. One of the most popular sports is rowing (гребля). At the end of the term long, narrow, light boats, rowed by eight men, compete in the races. Boats start at short intervals one after another and try to knock the boat in front. Those who are able to do it move one place in a table (таблица) and the college at the top of the table is known as the "Head of the River".

Rowing has a long history in England. Rowing a boat with eight oars (весло) or with four oars was first started in England in the 18th century. At that time the boats took part in festivals and processions on the River Thames.

In the 19th century people started to use the boats for racing, not only in London on the Thames but also in the universities of Oxford and Cambridge. The first Boat Race between Oxford and Cambridge was held in 1829.

Nearly every year since then there has been a Boat Race between these two Universities. It is held in London on the Thames, during the Easter vacation, at the end of March or the beginning of April.

The course, from Putney to Mortlake, is 4 1/4 miles long. It has many turns, and the crews usually row the 4 1/4 miles in 20 minutes.

The crews of the boats, chosen from the members of the college Boat Clubs, train together for twelve weeks before

the race, first in Oxford or Cambridge and finally in London. In each boat there are eight oarsmen and a coxswain (рулевой), usually called a "cox". The cox, who is much lighter than the others, sets the speed and the rhythm, and steers.

On Boat Race Saturday the banks and bridges of the Thames are thick with people who have come to watch. Some wear dark blue ribbons (лента) for Oxford, and some wear pale blue ones for Cambridge.

Задание II. *Выберите утверждение, соответствующее содержанию текста.*

1. The first Boat Race between Oxford and Cambridge was held:
   1) in the 16th century; 2) in the 19th century; 3) in the 20th century.
2. The Boat Race between these Universities is held:
   1) in Oxford; 2) in Cambridge; 3) in London.
3. It is held:
   1) in spring; 2) in summer; 3) in autumn.
4. In each boat there are:
   1) eight men; 2) nine men; 3) ten men.
5. The "cox" must be:
   1) lighter than the others; 2) heavier than the others; 3) of the same weight (вес) as the others.

Задание III. *Прочтите текст еще раз и обратите внимание на интересные детали. Ответьте на поставленные вопросы.*

1. In what country was rowing first started? 2. How many minutes do the crews usually row the 4 1/4 miles? 3. What colour are the ribbons of Oxford fans (болельщик)?

TEXT 2C

Задание I. *Прочтите текст, отыскивая в нем ответы на поставленные вопросы.*

STUDENTS' LIFE

What tradition is popular among the students at Cambridge?

1. In two weeks I shall finish my first year at Cambridge. Let me tell you something about students' life and my impressions of it.

The students are mainly English, but there are many others, particularly so in the block of rooms in which I live, for my neighbours include a Chinese studying law, an Indian studying English, a Canadian studying history and a Frenchman studying science.

The rooms have a pleasant outlook over the College gardens. There is a very small gas-stove on which we make coffee or tea. It is a popular tradition here to invite friends in the afternoon for tea and hot buttered toast [1] and jam. To each room there is a man-servant who with a woman-servant, known as a "bedder",[2] keep it clean.

What are students "sconced" (штрафоваться) for?

2. In the old days when Colleges were religious institutions the students were clergymen (священник), and their life was much more strict and disciplined than now. Friendship with young ladies was not allowed and the only women inside the college were washerwomen. The legend is that these had to be "old and ugly" (уродливый).

The students eat their meals in the College dining-hall. At some Colleges there is an interesting tradition. It is known as "sconcing".[3] If a student comes late to dinner or he is not correctly dressed, or if he breaks one of the laws (закон) of behaviour, then the senior student orders him to be "sconced".

A large silver cup, known as "sconce cup", filled with beer is brought and placed in front of him and he must drink it in one attempt without taking the cup from his lips (it holds two and a half pints, or 1.5 litres). If he can do it, then the senior student pays for it, if not, the cup is passed round and the student who has been "sconced" must pay for it. In general the discipline is not strict.

What do the so-called "Bulldogs" do if a student whom they come up to runs away?

3. The students can stay out till twelve o'clock. Each evening a Proctor [4] with two assistants, called "Bulldogs", walks about the town keeping an eye on the students' behaviour. If he sees a student breaking a rule he will come up to him and say, "Are you a member of the University, sir?", and if a student runs away, then the "Bulldogs" run after him, and if they catch him (they are chosen, it is said, because they are good runners), fine (штрафовать) him.

Apart from fines a student may be dismissed (исключать) from the University for one term.

What students' societies are there at Cambridge and which is the most popular one?

4. We attend our lectures in the morning and in the afternoon we are free. I usually work in my room or take part in some sport. The most popular sport is rowing.

There are over a hundred societies and clubs. There are religious societies and society for those who don't believe, political, sporting and dramatic societies. There is even one for people with beards. Perhaps the most popular is the Debating Society at which students debate political and other questions with famous politicians and writers.

The walks into the country, the talks, the games and the work, the traditions and the customs — all are part of the students' life which would be poorer if any of them was lost.

NOTES TO THE TEXT

1. **hot buttered toast** — нарезанный ломтиками и подрумяненный хлеб с маслом
2. **a bedder** — горничная в университетских общежитиях
3. **sconcing** — штраф, налагаемый на студентов за нарушение правил
4. **a Proctor** — административное лицо в университете, в чьи обязанности входит надзор за поведением студентов и наложение дисциплинарных взысканий

Задание II. *Прочтите текст еще раз и выделите в каждой части текста интересные для вас факты.*

TEXT 2D

WHY WE CHOSE THE LUMUMBA FRIENDSHIP UNIVERSITY

The Way I See It...

1. "... I pledge[1] to dedicate myself whole heartedly to study, to be faithful to the traditions of the University, and to be a true internationalist. I pledge to consolidate friendship among the progressively-minded young people of the world!" These are the lines from the Solemn pledge [2] made by first-year students of the Peoples' Friendship University on September 1, during the enrolment ceremony.

The Peoples' Friendship University brings together young people of different countries. The University started functioning with a handful of students from Asia, Africa, Latin America and also from the Soviet Union. But each academic year brought new entrants. The number of boys and girls who wish to enter the University is very high and it grows from year to year. This shows the University's popularity and prestige. Why do so many men wish to enter this University? Let us try and analyse the reasons and we shall see clearly that this University fully deserves its popularity.

2. I believe everybody knows that education is free in the Soviet Union. Foreign students, too, receive free education here. They pay nothing. Furthermore, every student gets a monthly grant.

The University is staffed by highly qualified teachers. Professors and lecturers are always ready to give all sort of help not only in the classroom but also outside it. A student may come up to them whenever he is in difficulties. Groups are small. This raises the quality of teaching. Relations between teachers and students are friendly. Students may use the University library. Books are given without charge, and students may keep them till they pass their examinations. The students don't have to buy books, the library has practically all the books they need. It gets magazines and journals from many different countries. It is really a pleasure to see boys and girls from different countries studying together in the comfortable reading-room.

3. Studying science is meaningless without experimental work. For this every department at the University has its own laboratory where students can do their experiments and in this way develop a scientific outlook and initiative.

Students are given practical training at factories and plants. During practical training students learn to do things themselves. For example, a petroleum engineering student went last year with a group of students to the oilfields. He had a month's training there and learnt things that he shall never forget.

4. To help students keep physically fit time is given for outdoor games, sport and physical training. In short, the international institution provides for students' all-round development.

Debates and seminars are arranged. At our University club young people from different countries often perform

their native songs and dances. By this means we all learn of each other's customs and culture.

5. The University certainly has a bright future. Here we, the boys and girls of different cultures, races, faith and colour study and live together in a friendly homely atmosphere. Here we learn to become internationalists. After graduation we return home to work in different fields of our countries' economy taking with us a warm feeling to all those with whom we studied and were friends. It would be fine if there were more such Universities in different parts of the world.

NOTES TO THE TEXT

1. **to pledge** — давать клятву
2. **Solemn pledge** — торжественная клятва

Задание I. *Ответьте на вопросы. Правильность ответов проверьте в соответствующих частях текста.*

1. What shows the growing popularity of the University? (1) 2. From what countries do students come to study there? (1) 3. Do foreign students receive free education in the Soviet Union? (2) 4. What raises the quality of teaching? (2) 5. What are the relations between teachers and students? (2) 6. Where do students receive practical training? (3) 7. What do students learn to do during practical training? (3) 8. What helps students to be physically strong? (4) 9. What do the young people do at the University club? (5) 10. What do young people do after graduation? (5)

КОНТРОЛЬНЫЙ СЛОВАРЬ

1. according to *(prp)*; 2. always *(adv)*; 3. as long as *(cj)*; 4. as well as *(cj)*; 5. behaviour *(n)*; 6. build *(v)*; 7. consist (of) *(v)*; 8. decide *(v)*; 9. develop *(v)*; 10. each *(pron)*; 11. early *(adv)*; 12. especially *(adv)*; 13. essential *(a)*; 14. even *(adv)*; 15. find *(v)*; 16. find out *(v)*; 17. free *(a)*; 18. grow *(v)*; 19. hard *(a)*; 20. include *(v)*; 21. influence *(n)*; 22. invention *(n)*; 23. keep *(v)*; 24. knowledge *(n)*; 25. necessary *(a)*; 26. need *(v)*; 27. only *(adv)*; 28. other *(a)*; 29. to pay attention; 30. possible *(a)*; 31. produce *(v)*; 32. provide *(v)*; 33. quite *(adv)*; 34. send *(v)*; 35. show *(v)*; 36. side *(n)*; 37. so that *(cj)*; 38. teach *(v)*; 39. therefore *(adv)*; 40. think *(v)*; 41. throw *(v)*; 42. try *(v)*; 43. until *(prp, cj)*; 44. use *(v)*; 45. way *(n)*

LESSON 3 (THREE)

Грамматика: 1. Времена группы Continuous Active and Passive.

2. Усилительная конструкция **It is (was) ... who / that / when**

3. Числительные.

Основной текст А: London's Underground.

Времена группы Continuous

	Active	Passive
	to be + Participle I	**to be + being + Participle II**
Present	1. They **are discussing** a new plan now.	1. A new plan **is being discussed** now.
Past	2. They **were discussing** a new plan when we came.	2. A new plan **was being discussed** when we came.
Future	3. They **will be discussing** a new plan tomorrow at five o'clock.	3. *Время не употребляется.*

Упражнение 1. *Переведите следующие предложения на русский язык, обращая внимание на время сказуемого.*

She **prepares** her lessons in the evening every day.

She **prepared** her lessons well yesterday.

She is tired, she **will prepare** her lessons tomorrow.

The work **is done** well every day.

She **is preparing** her lessons now.

She **was preparing** her lessons when we came to see her.

She **will be preparing** her lessons all the evening tomorrow.

The work **is being done** now and soon it will be finished.

The work **was done** two days ago.	The work **was being done** all the day yesterday.
The work **will be done** next week.	*Время не употребляется.*

Упражнение 2. *Замените времена группы Indefinite временами группы Continuous, дополнив предложения обстоятельствами времени* **now, at five o'clock, from . . . to, when you came,** *где необходимо.*

1. The car went along the street at high speed. 2. We had dinner at home. 3. She prepares her lessons in the library. 4. They will listen to the records tomorrow. 5. My father smokes a pipe. 6. Tomorrow we shall have a practical hour on mathematics. 7. The student worked in the chemical laboratory the day before yesterday. 8. They will show a very interesting football match. 9. They read your book.

Упражнение 3. *Ответьте на следующие вопросы.*

1. Are you sitting in the laboratory? 2. Are you looking at the blackboard? 3. Are you writing notes? 4. Are you thinking about your lesson? 5. What are you thinking about? 6. What are you looking at? 7. Who is sitting to the right of you? 8. Who is sitting to the left of you? 9. What are they writing? 10. Is your friend speaking or writing? 11. Is he reading an English or a Russian book? 12. What are you doing now? 13. Are you taking your exam or having a lesson? 14. What lesson are you having now?

Упражнение 4. *Переведите на русский язык следующие предложения.*

1. When I came to Baku in 1962 the first metro line was being built there. 2. What questions are being discussed now? 3. They are organizing this kind of work at their laboratory. 4. He was being told the news when I entered the room. 5. I can't understand what he is saying. 6. Professor N. was being listened to with great attention. 7. Who is being examined now? 8. I don't know what book he is reading. 9. The experiments were still being made in some laboratories when the new term began. 10. Can you tell me who is sitting next to you? 11. All the way home he was being followed by a strange-looking man. 12. A new deep-level tunnel was being completed in London. 13. At the end of May the students will be preparing for their examinations. 14. For a year foreign specialists were studying Soviet experience in chemical industry. 15. The famous Egyptian

pyramids at Giza were being built for more than forty years. 16. The driver was going by his car very fast when he saw an accident on the opposite side of the street.

Усилительная конструкция

It is (was) . . .	who / that / when

Упражнение 5. *Переведите следующие предложения на русский язык.*

Образец: It was Popov who invented the radio.
Именно Попов изобрел радио.

1. It is with the help of the radio that we receive most of the information from the satellites. 2. It was in 1869 that Mendeleyev published his Periodic Table. 3. It was the Russian scientist Lodygin who invented the electric lamp. 4. It was the Soviet Union that liberated the peoples of Europe from fascism during World War II. 5. It was in April when the equipment was brought to the laboratory. 6. It was yesterday when we discussed the plan of work at the International Club. 7. It was Yury Gagarin, a citizen of the Soviet Union, who started the era of cosmic flights. 8. It is the gravitation that makes the satellites move round the Earth.

Числительные

Числа	23—twenty-three 247—two hundred and forty-seven 3,200—three thousand two hundred 2,045,328—two million forty-five thousand three hundred and twenty-eight
Даты	in 1972—in nineteen seventy-two May 9, 1945—May the ninth, nineteen forty-five in 1905—in nineteen o [ou] five
Дроби	1/2 kilometre—half a kilometre 1/3 ton—one third of a ton 0.5—point five 3.152—three point one five two

Упражнение 6. *Прочтите по-английски.*

а) 5; 15; 3; 13; 30; 51; 18; 11; 12; 20; 74; 112; 201; 946; 698; 10,575; 576,276; 7,000,000; 1.022; 0.85; 5.3; 1/2; 1/4; 2/3; 1 1/2; 2 5/6

б) 1,005 magazines; 506 students; 4,790 specialists; 5,400,000 books; 675 miles; 1,431 kilometres; 627 roubles; on page 733; by bus 9; by tram 27; in room 218; on the 12th day

в) on the 1st of May; on January 18th, 1967; on November 7th, 1947; at the end of 1789; October 25, 1917; 1903; at the beginning of 1970

г) 5.4 tons; 2/3 of a kilometre; 0.2 mile; 2.75 tons

VOCABULARY NOTES

Задание I. *Переведите следующие предложения.*

1. **achievement** — достижение, успешное выполнение. Television is one of the greatest achievements of our time. He spoke about the achievements in the national economy of our country.

2. **railway** — железная дорога. There is a railway between the two cities.

3. **world** — мир, вселенная. All the world knows about Popov's great invention.

4. **to carry** — 1) нести; 2) перевозить. 1) Schoolchildren and students carry their books and copy-books in bags. 2) In the Metro people are carried up and down by escalators.

5. **total** — 1) общее количество; 2) целый, полный. 1) There was a total of 30,000 books in the school library. 2) The total sum was very small.

6. **to drive (drove, driven)** — 1) приводить в движение; 2) водить автомобиль. 1) Electricity is used to drive machinery. 2) He drives the car well.

7. **steam** — пар. Steam can be used to drive machinery.

8. **to burn (burnt, burnt)** — гореть, сжигать. Wood burns easily.

9. **coal** — уголь. Coal is burnt to warm the houses.

10. **to consider** — 1) считать, полагать; 2) рассматривать. 1) Everybody considers this book interesting. 2) They had to consider a very important problem.

11. **outside** — снаружи. The box is red inside and black outside.

12. **dry** — сухой. That summer was dry and hot.

13. **air** — воздух. In summer he always sleeps in the open air.

14. **deep** — глубокий. Lake Baikal is the deepest lake in the world.

15. **level** — уровень. This city is 1.500 metres above the sea level.

16. **tube** — 1) труба; 2) метро в Лондоне. 1) They had to use a metal tube to complete the experiments. 2) The London's tube was built in 1863.

17. **to tunnel** — прокладывать туннель. They tunnelled a tube under the river.

18. **through** — 1) вследствие, из-за; 2) через, сквозь. 1) It was all through you that he came so late. 2) They were constructing a tunnel through the mountain.

19. **clay** — глина. Bricks (кирпичи) are made of clay.

20. **sand** — песок. Never build anything on sand.

21. **easy** — легкий. He says that the task was easy.

22. **experience** — опыт (жизненный). We know much by experience.

23. **to bring (brought, brought)** — приносить, привозить. Bring me a cup of tea, please. Father brought me a very interesting book from Leningrad.

24. **another** — другой, еще один. Give me another book, I don't like books about animals.

25. **numerous** — многочисленный. There are numerous ways of doing it.

26. **traffic** — движение, транспорт. Street traffic was stopped.

27. **to move** — двигать(ся), передвигаться. The Moon moves around the Earth.

28. **to install** — устанавливать. A new apparatus was installed in our laboratory last month.

29. **foot** (*pl.* **feet**) — 1) фут; 2) нога. 1) One foot is about 30.5 centimetres. 2) The shoes were large for his feet.

30. **speed** — скорость. The speed of the car is very high.

31. **to change** — менять(ся). The plan must be completely changed.

changeable — переменный. The weather is changeable in autumn.

32. **full** — полный. The garden is full of flowers.

33. **empty** — пустой. The box is empty, there is nothing in it.

34. **safety** — безопасность. Road safety is very important for traffic.

35. **main** — основной, главный. What is the main problem of road safety?

36. **in spite of** — несмотря на. In spite of the bad weather we went for a walk.

37. **often** — часто. He often returns home late.

38. **to follow** — следовать за, идти за. I'll go first and you'll follow me. Lesson one is followed by lesson two.

39. **accident** — несчастный случай, катастрофа. There was an accident in our street — a taxi ran into a trolley-bus.

40. **to happen** — происходить, случаться. It happened ten years ago.

41. **weakness** — слабость. He has a weakness for detective stories.

42. **entirely** — всецело, совершенно. Entirely new machinery was installed at the factory.

43. **to test** — испытывать. Automatic driving will be tested.

44. **to maintain** — 1) поддерживать; 2) осуществлять техническое обслуживание. 1) This road is well maintained. 2) Where is your car maintained?

45. **degree** — 1) градус; 2) степень. 1) Water boils at 100 degrees C. 2) The degree of safety is high.

Задание II. *Прочтите следующие интернациональные слова и догадайтесь об их значении.*

flag, gentleman, second *(n)*, distance, mile, historic, million, locomotive, atmosphere ['ætməsfɪə], electric, method, escalator ['eskəleɪtə], maximum, transport, signal, automatic, programme, machine [mə'ʃi:n], control, impulse, temperature, platform

TEXT 3A

LONDON'S UNDERGROUND

1. Bands were playing and the gentlemen in hats were preparing to make speeches about their great achievement. They made the first underground railway travel in the world — a distance of almost four miles.

It was the year 1863 and on that first historic day 30,000 Londoners used this new and strange way of travel. Now more than a hundred years later the London Underground carries more than a million passengers every day. The total

number of passengers carried by the London Underground each year is enormous, and it is constantly growing.

2. In the early days the trains were driven by steam locomotives which burnt coal.

It is said that the train staff and porters asked permission to grow beards and moustaches — as an early form of smog mask.

Now the atmosphere "underground" is considered even better than that outside as germs cannot grow in the dry air — and the trains, of course, are electric.

3. The deep tunnelling came later, in 1890. Tunnelling a tube through miles of clay, and sometimes sand and gravel is no easy task, and it was James Henry Greathead who developed the method which was to make most of London's tube tunnels possible.

London transport's experience with tunnels brought them another record. One of the longest continuous railway tunnel in the world is the 17 1/2 mile tunnel on the Northern line.

4. There are numerous escalators which help to keep the traffic moving. The first was installed in 1911. One of them at Leicester Square is over 80 feet in length. On long escalators the speed is changeable. The "up" escalator runs at full speed when carrying passengers, but when empty it runs at half speed. Many of the new escalators have automatic control making a more frequent service throughout the day possible.

5. Safety was always one of the main concerns of London transport. In spite of the fact that trains often follow each other within seconds, it is said that the London Underground is the safest form of transport in the world. Automatic signalling is operated by the trains themselves. A programme machine controls routes: if changes are necessary, they are made automatically and with lighting speed. No accidents can happen through human weakness.

New automatic driving systems are now being used. The air in the Underground is changed every quarter of an hour, and the temperature all year round is maintained at 69-79 degrees Fahrenheit.

6. Though the quality of service is high there is still significant overcrowding on certain lines at peak periods. This problem is being discussed and additional improvement of service is planned for the future.

A number of station modernization schemes are being completed. The aim is to provide a more attractive environ-

ment for the passengers. The usage of modern materials makes maintenance easier. This modernization is coordinated with the renewal of lifts and escalators and the introduction of new ticketing machines. The fare in the Underground depends on the distance, but the lowest is 50 pence.

The Underground is becoming much cleaner and brighter and therefore more pleasant to use, carrying more passengers than at any time in its long history.

Crime levels in London are generally reflected by crime levels on London's transport. According to the statistics the crime level in the Underground is rather high. To ensure safety of passengers and the staff the transport authorities added more police officers to the Underground System to guarantee as much protection as possible.

Упражнение 7. *Выразите свое согласие или несогласие со следующими утверждениями, основываясь на информации, полученной из текста 3А. Свое согласие выразите, начиная предложения словами* **That's right ...,** *а несогласие, начиная словами* **That's wrong ... .**

Образец: a) If changes are necessary, they are made automatically with lighting speed.
That's right, according to the text if changes are necessary they are made automatically with lighting speed.

b) Safety signalling will be controlled by the drivers themselves.
That's wrong, according to the text safety signalling will be controlled by coded electrical impulses.

1. It was fifty years ago that Londoners used a new way of travel. 2. The first underground travel in the world took place in 1863 in London. 3. The London Underground is not a very safe form of transport. 4. People who made the first underground travel did not consider it a great achievement. 5. In the early days the trains were driven by electricity. 6. The first escalator was installed 30 years ago. 7. The first trains were driven by steam locomotives. 8. The first escalator was installed in 1911. 9. The temperature in the Underground is very changeable. 10. The deep-level tubes came in 1890. 11. On long escalators the speed is not changeable. 12. The trains follow each other within seconds. 13. The temperature is maintained at 40 degrees by Fahrenheit.

14. The air in the Underground is changed every two hours. 15. The air in the Underground is changed every quarter of an hour.

Упражнение 8. *Переведите следующие предложения на русский язык, выбрав одно из трех слов, подходящее по смыслу.*

1. The underground (field, river, railway) in Moscow is called the Metro. 2. It is (complete, easy, secondary) for me to do it. 3. This student is (often, here, near) late for his lessons. 4. It is (different, complete, safe) to cross the street here. 5. We can use this (sea, sand, wind) for construction. 6. The world is (final, important, full) of changes. 7. He can (divide, drive, decide) a car well. 8. This is an old railway but it is well (maintained, received, produced). 9. There were (higher, numerous, free) changes in the plan of the building. 10. In spite of all the difficulties the people were (influenced, thrown, saved). 11. The shortest way there is (through, therefore, quite) the forest. 12. Many (sides, tubes, houses) of a different diameter will be necessary for the building of this factory. 13. (according to, as well as, in spite of) the rain the people continued their work. 14. A car (follows, carries, moves) faster than a tractor. 15. After the (accident, achievement, movement) in the skating-rink the boy had to stay in bed as his foot was broken. 16. Is this room (easy, empty, deep)? No, there are many students there. 17. It is cold (inside, outside, around). You must put on warm things if you want to go for a walk. 18. In this part of our country the weather is (changeable, considerable, possible).

Упражнение 9. *Найдите русский эквивалент каждого английского слова.*

A. 1. numerous; 2. steam; 3. empty; 4. clay; 5. to follow; 6. to happen; 7. achievement; 8. degree; 9. to maintain; 10. weakness; 11. outside; 12. sand

B. 1. достижение; 2. слабость; 3. пар; 4. снаружи; 5. глина; 6. песок; 7. многочисленный; 8. градус; 9. происходить; 10. пустой; 11. поддерживать, сохранять; 12. следовать за

Упражнение 10. *Найдите в каждом ряду слово, перевод которого дан в начале ряда.*

1. **главный** a) empty, b) main, c) often, d) weak
2. **слабость** a) way, b) steam, c) weakness, d) influence

3. **испытывать** a) to maintain, b) to test, c) to happen, d) to carry
4. **транспорт** a) weakness, b) experience, c) level, d) traffic
5. **часто** a) often, b) entirely, c) outside, d) always
6. **происходить** a) to test, b) to maintain, c) to happen, d) to follow
7. **опыт** a) weakness, b) exercise, c) degree, d) experience
8. **несмотря на** a) until, b) in spite of, c) as well as, d) according to
9. **всецело** a) entirely, b) often, c) mainly, d) quite
10. **безопасность** a) accident, b) weakness, c) safety, d) influence
11. **пустой** a) main, b) empty, c) deep, d) total
12. **следовать за** a) to leave, b) to follow, c) to happen, d) to bring

Упражнение 11. *Переведите на русский язык следующие группы слов.*

underground railway; in a different way; through the forest; the tube under the river; according to a total sum; youth of the world; steam and electricity; dry sand; great achievement; to achieve better results; in the open air; cold air; high level; inside the house; outside the college; to burn coal; to drive a car; dry air; to use clay and sand; deep knowledge; to carry a child; to carry passengers; to consider a problem; a distance of almost 25 miles; three thousand two hundred and twenty; a total of four million roubles; three hundred and fifty-six passengers; almost seven thousand five hundred kilometers; to use numerous ways; at full speed; in spite of the fact; essential changes; to maintain the railway; an easy examination; traffic safety; a car accident; two feet long; to install new equipment; ten degrees above zero; an empty box; an entirely automatic signal; changeable speed; no accident can happen; to test a system; to change the plan; to bring another record; to move at a maximum speed; to consider a question; to tunnel through the mountain; to follow the boy; to maintain the road; to maintain a car; 20 degrees of cold

Упражнение 12. *Найдите в каждом ряду глагол во времени группы Continuous.*

1. a) was burning, b) burnt, c) are burnt
2. a) brings, b) was brought, c) are going to bring
3. a) were being carried, b) carried, c) will be carried
4. a) were driven, b) is driving, c) drives

5. a) considers, b) will be considered, c) is going to consider
6. a) was being shown, b) were shown, c) showed
7. a) tunnelled, b) were tunnelling, c) have tunnelled
8. a) develops b) are developed, c) is being developed
9. a) are taught, b) are teaching, c) teaches
10. a) are being built, b) will be built, c) was built

Упражнение 13. *Выберите верный перевод выделенных слов.*

1. It was his brother who **brought** me the letter yesterday.
   a) приносит; b) принес; c) был принесен
2. Numerous questions **were being discussed** by the commission yesterday from ten to twelve.
   a) обсуждались; b) были обсуждены; c) обсудили
3. The new equipment **will be tested** on Monday.
   a) было испытано; b) будет испытываться; c) испытывали
4. They **burnt** coal to warm the house.
   a) сжигали; b) сожгут; c) был сожжен
5. In spite of all the difficulties the people **were saved.**
   a) спаслись; b) будут спасены; c) были спасены
6. The tube **will be tunnelled** through the mountain.
   a) будут проложены; b) будет проложена; c) прокладывается
7. Passenger transport **becomes** quite a problem in all large cities of the world.
   a) становится; b) станет; c) стал

Упражнение 14. *Переведите следующие предложения на русский язык, обращая внимание на время и залог сказуемого.*

1. a) The work on the apparatus is almost finished.
   b) The work on the apparatus is being finished.
   c) The staff of the laboratory is finishing the work on the apparatus.
2. a) The plans are usually discussed at the beginning of the year.
   b) They are discussing the plans of the next year.
   c) The plans of the next year are being discussed at the meeting.
3. a) While he was having dinner, his car was being cleaned (to clean — чистить).
   b) Do you know who was cleaning the car?
   c) Was your car cleaned well?
4. a) The problems were worked at.
   b) The groups of experts were working at the problems.

c) These important problems are being worked at in numerous research institutes.

Упражнение 15. *Переведите следующие предложения на русский язык.*

1. New metro lines are being built in Moscow in different parts of the city. 2. The article will be translated at the lesson. 3. You mustn't cross the street on the red light. 4. They were studying the subject when I joined them. 5. I am given English magazines every week. 6. You will have to find out where he is now. 7. They were to prepare all necessary information by Friday. 8. The document was looked for everywhere. 9. John had to drive all the time at the speed of 90 km per hour. 10. Ted doesn't like when he is asked about his work. 11. On Thursday the foreign students were being shown lecture halls and laboratories of Moscow University. 12. You can keep the book as long as you need it. 13. He couldn't bring me the magazine on Monday. 14. The report will be followed by a discussion. 15. The temperature in the Underground is maintained at 70°F. 16. A totally new safety system is being installed. 17. You will be able to get a grant if you pass all your exams well. 18. It was on April 26, 1755 that the opening of Moscow University took place.

Упражнение 16. *Прочтите предложения, поставив глаголы, данные в скобках, в соответствующих временах группы Continuous. Переведите предложения.*

1. Now a new railway (to be built) between the two cities. 2. Last year in June they (to construct) a tunnel through the mountain. 3. Now they (to organize) another kind of work at their laboratory. 4. When I came the problem (to be discussed). 5. When Sedov was in London a new deep-level tunnel (to be completed) there. 6. The director (to be told) the news when I entered the room. 7. Yesterday at the meeting this man (to sit) next to me. 8. The day before yesterday from ten to half past eleven the students (to work) in the chemical laboratory.

Упражнение 17. *Переведите на английский язык.*

а) 9 мая 1945 года; 23 февраля 1917 года; 12 февраля 1962; к 31 января 1971; в ноябре 1957; к 7 ноября 1947; 9 января 1905; в 1812; 1941

б) 25 км; 175 тыс. рублей; 20 миллионов людей; 3 500 студентов; 8 750 книг; 375 285 машин; 17 слов; 75 портфе-

лей; 13 лошадей; 30 часов; 19 комнат; 90 страниц; 3,5 мили; 3/4 пути; 0,5 кг

Упражнение 18. *Расскажите, что вы видите на улице, используя следующие слова и словосочетания.*

cars	to move
trams	to carry passengers
buses	to go at full speed
trolley-buses	not to go at full speed
	to go at maximum speed

Упражнение 19. *Дайте характеристику следующим средствам передвижения; используйте данные ниже слова.*

Образец: The underground is the safest.

the tram, the bus, the trolley-bus, the underground, the car, the bicycle, the train, the airplane, the helicopter

the oldest	the most widely used
the fastest	the most popular
the most modern	the least comfortable
the most comfortable	

Упражнение 20. *Сравните скорость следующих средств передвижения.*

Образец: An airplane is faster than a ship.
A ship is not so fast as an airplane.

1. an airplane and a train; 2. a ship and a train; 3. a bus and a tram; 4. a trolley-bus and a car; 5. a bicycle and a car

РАБОТА НАД СЛОВООБРАЗОВАНИЕМ

Упражнение 21. *Переведите следующие производные слова согласно моделям.*

Модель 6: *основа прилагательного* + **-(i)ty** → *существительное*

regular — регулярный	**regularity** — регулярность
similar — сходный	similarity
popular — популярный	popularity
viscose — вязкий	viscosity
stable — устойчивый	stability

Модель 7: *основа глагола* + **-ive** → *прилагательное*

to communicate — общаться	**communicative** — общительный
to imitate — подражать	imitative
to regulate — регулировать	regulative
to illustrate — иллюстрировать	illustrative
to demonstrate — демонстрировать	demonstrative
to attract — привлекать	attractive

Упражнение 22. *Переведите следующие словосочетания.*

necessity of education; to leave no possibility; complete safety; decisive influence; productive forces; progressive people; preparative work

to prevent — предотвращать	preventive measure
cruel — жестокий	cruelty of war
curious — любопытный	to show no curiosity
to defend — обороняться	defensive forces
region — область, район	regional centre
to use — пользоваться	users of the road
to lecture — читать лекцию	lecture on mathematics

Упражнение 23. *Найдите в тексте слова, имеющие общий корень со словами, данными перед текстом, определите части речи, к которым они относятся, переведите их, затем переведите текст.*

evidence — очевидность
distinctly — явно
possible — возможный
entire — целый
automation — автоматизация
probable — возможный
to operate — работать
to act — действовать
to drive — водить поезд, машину

It is evident that trains without drivers are a distinct possibility. For some period a railway deep down under London was working entirely without drivers. Above ground London transport was experimenting with a train which had a driver but made its stops by automatic control. The success of the experiment proved that in all probability the trains on many lines would have the same automatic operation without active drivers.

TEXT 3B

Задание I. *Прочтите текст, стараясь понять основное содержание. (Заметьте время начала и окончания чтения. Этот текст нужно прочесть за 6 минут, из расчета 70 слов в минуту.)*

MOSCOW'S METRO

The capital is a city of quick tempo, and of people with tight time schedules (точно рассчитанное время). A hurrying Muscovite wants a fast and reliable (надежный) means of transport. In our days the Metro is the answer. The construction of Moscow's Metro began in 1932. The first Metro line was opened in May 1935. It was 11.6 km long and had 13 stations. At that time the Metro trains carried 117.000 passengers a day. The construction of the Metro did not stop, not even during the Great Patriotic War, when the enemy was at Moscow's walls. The Novokuznetskaya, Paveletskaya, and Avtozavodskaya stations were opened in 1943.

Today Moscow's Metro has more than 140 stations. The total length of the underground lines is 226,9 km and it will reach 320 km by the end of the century. According to the plan for the capital's development in many cases the lines will reach the city limits and in some they will even extend as far as water reservoirs and recreation zones. New lines, called expressways, will appear. The first will run from north to south-west. Four such lines are planned to be built by the year 2000. The trains on them will have 10-12 carriages which will be able to carry 1.5 million Muscovites to the centre in double-quick time daily.

The intensity of traffic and volume (*зд.* количество) of passengers carried by the Metro in Moscow holds the first place in the world. Every day its trains carry more than 7.000.000 passengers, and on holidays and during summer vacations the volume of the passenger flow reaches 8.000.000 people a day. Maximum train speeds are 90 km/hr. And the shortest time interval between the trains is only 80 seconds. Some lines use a computerized traffic control system which provides for (обеспечивать) train driving by one operator, without an assistant-driver.

Electric diagrams of the Metro lines help the passengers select (выбрать) the shortest route, there are automatic coin-changing machines, automatic stiles (турникет) and esca-

lators with a total length of about 45 km. The air in the Metro is completely changed three or four times an hour. The ventilation system changes 400 million cubic metres of air daily. This helps maintain a winter-time temperature of not below +5°C, and a temperature not above 25°C in summer.

According to the "Metro of the World" reference book (справочник) the Moscow Metro fare is the lowest in the world and is the same for any distance and in any direction.

A passenger of the Metro in Moscow does not feel that he is underground. Soviet engineers building new and reconstruct old Metro lines think first of all of passenger comfort. Great attention is also paid to the architecture and artistic design of the stations which look more like palaces. No wonder that Moscow Metro stations won many prizes at international exhibitions, including the Grand Prix in Paris and the gold medal in New York.

Задание II. *Выберите утверждение, соответствующее содержанию текста.*

1. The first line of Moscow's Metro was opened:
   1) in 1932; 2) in 1935; 3) during the Great Patriotic War.
2. The total length of Underground lines is:
   1) 130 km; 2) 200 km; 3) 226,9 km.
3. The intensity of traffic and the volume of passengers carried by the Metro in Moscow is:
   1) low; 2) as high as in other capitals; 3) the highest in the world.
4. The maximum speed of the trains reaches:
   1) 75 km per hour; 2) 90 km per hour; 3) 100 km per hour.
5. The climatic conditions in the station are maintained by:
   1) ventilation system; 2) heating system; 3) automatic machines.

Задание III. *Прочтите текст еще раз, обратите внимание на интересные для вас факты и сделайте краткое сообщение о московском метро.*

TEXT 3C

Задание I. *Прочтите текст, отыскивая в нем ответы на поставленные вопросы.*

Will the strips move at the same or at different speeds?

1. What will cities of the future look like? Town planners are thinking of new methods of construction and transportation.

What will city transport be like in 20 or 30 years? The moving pavement is one possibility. It consists of several strips (полоса) moving along at different speeds. These escalators are moving in both directions along all streets. On reaching his destination (место назначения) the passenger steps over the slower strip and there to terra firma (неподвижная земля).

For convenience these moving pavements may be supplied with chairs, benches, vending machines selling soft drinks, ice-cream, candy and so on.

What kind of transport will be forced out?

2. The first lines of such moving pavements should appear in the streets which have the heaviest traffic and are the most dangerous for pedestrians (пешеходы). In the beginning they will replace the older forms of city traffic only in certain streets, but then they will appear in a single system serving the centre of the city. Buses, trolley-buses and motor-cars will be forced out as the trams are forced out of the centre of many cities now.

What kind of cars shall we have in future?

3. What will the car of the future be like? It probably won't be red. Our response to colours isn't always the same. If you want people to stop when they see a car in front of them, yellow is probably the best. When you go for a drive in the car of tomorrow you will certainly know more about the road in front of you. Your car radio will tell you about the next corner before you can see it. It will pick this up from a wire under the road. When you stop quickly, the light that tells the man behind you to be careful will spread across the car. At the same time a bag in front of you will fill up with air to stop you hitting your head on the window. What will the car of the future run on? Not petrol, which is dirty and noisy. In future we'll probably have electric cars. As a rule the electric car can only make a short journey before going back to the garage. Or steam cars. That too would be quiet and clean. But in England there is

a farmer who has invented a car that runs on manure (навоз) and he drives to London in it every week.

What are the advantages (преимущества) **of a tube system?**

4. Trains of the Future. What about long-distance travel? Consider the "tube-train" suspended (подвешенный) and propelled by compressed air. It may carry passengers on trips at 350 miles an hour. This idea is materialised in a 12 foot long model of a strange new aluminium torpedo train. The full-size train will run through an 18 foot-diameter metal tube, while big propellers pump the air from the front to the rear. A tube system has many advantages: a tube train makes little noise (шум); the tube can be suspended, buried (*зд.* подземный) or even run through buildings; maintenance cost of this train will be low and passengers will be protected from bad weather.

Задание II. *Прочтите текст еще раз и выделите в каждой части текста интересные для вас факты.*

Задание III. *Расскажите о городском транспорте наших дней и будущего, используя следующие слова и словосочетания.*

city transport; buses; trolley-buses; trams; motor cars; moving pavements; electric cars; steam cars; quiet; clean; to plan; construction; to consist of; several; strips; to move; at a speed of; different; passenger; to reach destination; to step over; heavy traffic; to force out; tube-trains; to make little noise; to run through buildings; to carry passengers at 350 miles an hour

TEXT 3D

ROAD SAFETY

1. According to police records at least one person is killed daily on Delhi roads in India. Every year several thousand people are killed on the roads in Great Britain. Every year between one and two hundred thousand people are injured. These people are killed or injured in road accidents.

2. If you are in England and if you listen to the 8 o'clock news from the radio, you will often hear news of road accidents. You may hear something like this:

"On Monday evening, at about twenty minutes to ten a cyclist was knocked down by a car in High Street. The cyclist has since died from his injuries. Will anyone who saw the accident please telephone New Scotland Yard."

3. Great attention is being paid to the problem of road safety in all countries. Accidents often happen if people don't obey the rules that help to make the road safe. If everybody obeys the rules, the roads will be much safer. How can we make the roads safer? Here are some examples of how accidents happened.

4. The young woman was out shopping. She had a shopping basket on her left arm. She was ready to go home. She saw her bus stopping on the other side of the street. She forgot the safety rules. She was in a hurry, so she ran out into the street. She wanted to get across quickly and catch her bus. At that moment the car hit her and knocked her down. The woman was taken to hospital. The doctors did everything that was possible, but she died three hours later. It was the woman's fault. She did not obey the traffic rules.

5. The next story is about the boy who was riding a bicycle. Today he has only one leg and he will never ride a bicycle again. This accident took place in a busy shopping centre. The boy was riding a bicycle carrying a heavy box under his right arm. It was wrong thing to do. The boy had only one hand to control his bicycle. The boy was not killed, he was taken to hospital and the doctors had to cut his right leg off. It was the boy's fault. It was not the fault of the driver of the car.

6. In Great Britain traffic keeps to the left: cars, motor-vans, buses and cyclists must all keep to the left side of the road. In the USSR as well as in most countries traffic keeps to the right.

7. Before crossing the road, stop and look both ways. Then if you consider that the road is clear, that there is nothing coming it is safe to cross the road. If you see that small children or very old people are waiting to cross the road, you are to help them to cross the road in safety. We must teach children to cross the road safely. We must always give them a good example. Small children must not play in the streets.

8. There are many things that drivers can do to make the road safe. But unfortunately they do not always obey the traffic rules. For example, in Delhi it is quite normal for a driver at night to see a car going along the wrong side of a divided road straight at him. The taxi-drivers often

horrify people passing at full speed turning into another road seconds before an oncoming bus. Most cyclists in Delhi do not obey the traffic rules. Very often they pass the red traffic lights as if they did not see them at all.

9. The drivers must obey traffic rules. They must be careful at crossroads. They must drive slowly when turning into another road. A driver must not drive if he is tired or ill. A man who drives after drinking beer or wine is usually a dangerous driver. His own and the life of others may be in danger. So if you are a driver or going to become one, do not forget about all these things.

Задание I. *Ответьте на вопросы по тексту D. Правильность ответов проверьте в соответствующих частях текста.*

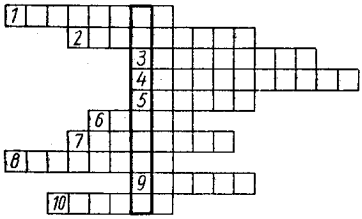
1. Are many or few people killed in road accidents? (1) 2. What news will you often hear over the English radio at 8 o'clock? (2) 3. What problem is paid great attention to in many countries? (3) 4. Why do so many accidents happen? (3) 5. Whose fault was it that the woman was knocked down? (4) 6. Why was it difficult for the boy to control his bicycle? (5) 7. What happened to the boy? (5) 8. To which side of the road does the traffic keep in Great Britain and to which in the USSR? (6) 9. What must you do before crossing the road? (7) 10. Who must you help to cross the road? (7) 11. What must the driver do to make the roads safe? (8) 12. Where must the drivers be especially careful? (9)

КОНТРОЛЬНЫЙ СЛОВАРЬ

1. accident (*n*); 2. achievement (*n*); 3. air (*n*); 4. another (*pron*); 5. bring (*v*); 6. burn (*v*); 7. carry (*v*); 8. change (*v*); 9. clay (*n*); 10. coal (*n*); 11. consider (*v*); 12. deep (*a*); 13. degree (*n*); 14. drive (*v*); 15. dry (*a*); 16. easy (*a*); 17. empty (*a*); 18. entirely (*adv*); 19. experience (*n*); 20. follow (*v*); 21. foot (feet) (*n*); 22. full (*a*); 23. happen (*v*); 24. install (*v*); 25. level (*n*); 26. main (*a*); 27. maintain (*v*); 28. move (*v*); 29. numerous (*a*); 30. often (*adv*); 31. outside (*adv*); 32. railway (*n*); 33. safety (*n*); 34. sand (*n*); 35. speed (*n*); 36. in spite of; 37. steam (*n*); 38. test (*v*); 39. through (*prp*); 40. total (*a*); 41. tube (*n*); 42. traffic (*n*); 43. tunnel (*v*); 44. weakness (*n*); 45. world (*n*)

QUIZ

Lessons 1-3



Fill in all the horizontal blanks correctly, and in the vertical blank you will get the name of the special teacher in Athens.

1. The Proctor's assistants at Cambridge. (2C)
2. What were the students who studied at the old colleges which were religious institutes at that time? (2C)
3. The people who organized a literal education for the nobles only. (2A)
4. The centres for theoretical knowledge in Ancient Rus. (1A)
5. The toy-animal presented to Ch. Darwin by the students at Cambridge. (1B)
6. The author of the "Republic". (2A)
7. The subject which the young nobles who wanted to enter politics studied at the grammar schools. (2A)
8. The country the written Slavonic languages came from. (1A)
9. The Greek state where the boys were taught to use weapons. (2A)
10. One of the main concerns of transport. (3A)

LESSON 4 (FOUR)

Грамматика: Времена группы Perfect Active and Passive.
Основной текст А: Marie Curie and the Discovery of Radium.

Времена группы Perfect

	Active	Passive
	to have + Participle II	**to have + been + Participle II**
Present	He has received a letter.	The letter has been received.
Past	He had received a letter by the evening yesterday.	The letter had been received by the evening yesterday.
Future	He will have received a letter by the evening tomorrow.	The letter will have been received by the evening tomorrow.

Упражнение 1. *Переведите следующие предложения на русский язык, обращая внимание на употребление времен.*

He came by car yesterday.	He has just come by car.
They did not go to Kiev last year.	They have never been to Kiev.
I knew him in 1970.	I have known him since 1970.
They were learning the new English words when I came into the room.	They had already learnt the new English words when I came into the room.
We shall finish the work tomorrow.	We shall have finished the work tomorrow by 5 o'clock.
The experiment was completed two days ago.	The experiment had been completed by the end of last month.
Her plans are changed every day.	Her plans have been already changed.

Упражнение 2. *а) Повторите основные формы следующих глаголов.*

to write, wrote, written	to give, gave, given
to speak, spoke, spoken	to leave, left, left
to go, went, gone	to read, read, read
to see, saw, seen	to meet, met, met
to be, was (were), been	

б) Поставьте следующие предложения в Present Perfect Tense, употребив соответствующие обстоятельства времени.

Образец: I am writing a letter. (*already*)
I have already written a letter.

1. John spoke to me. (*already*) 2. He was reading a book. (*already*) 3. They will go home. (*just*) 4. I saw him. (*just*)

Образец: I was in Kiev last year. (*never*)
I have never been to Kiev.

5. He is in Leningrad. (*never*) 6. They gave me the book. (*never*) 7. I saw this film. (*never*) 8. She was in Siberia. (*never*)

Образец: I lived in Moscow in 1972. (*since*)
I have lived in Moscow since 1972.

9. I did not meet you in Moscow in 1976. (*since*) 10. They did not speak English last year. (*since*) 11. I did not see her

there in September. (*since*) 12. She did not read this book in her childhood. (*since*)

Образец: Nick is trying to learn driving. (*this year*)
Nick has tried to learn driving this year.

13. Your friends are writing a letter to you. (*this week*) 14. He is leaving for Minsk. (*this month*) 15. I am learning grammar rule. (*today*) 16. They are finishing their work. (*this year*)

Упражнение 3. *Переведите следующие предложения на русский язык, обращая внимание на время, в котором стоит сказуемое.*

1. I have attended lectures on history since May. 2. I attended lectures on history in May. 3. He has entered the Institute this year. 4. He entered the Institute last year. 5. Have you passed your examination? 6. Did you pass your examination on Friday well? 7. He has already returned to Moscow. 8. He returned to Moscow five days ago. 9. They haven't received any good results. 10. They didn't receive any good results when they worked with this type of equipment. 11. The temperature has been maintained at the point of 20 degrees since the beginning of the experiment. 12. During the experiment the temperature was maintained at the point of 20 degrees. 13. Has the new apparatus been already installed in the laboratory? 14. When was the new apparatus installed in the laboratory? 15. The new apparatus had already been installed when the delegation arrived.

Упражнение 4. *Ответьте на следующие вопросы.*

1. Have you ever got a bad mark at the examination? 2. Have you ever been to Siberia? 3. Have you ever drunk coca-cola? 4. Have you ever gone travelling? 5. Have you ever read an English book in the original? 6. Have you ever failed in an examination? 7. Have you ever heard Paul Robson singing? 8. Have you ever skated? 9. Have you ever studied French? 10. How many times have you used the laboratory this week? 11. Have you seen your friend today? 12. What cities of our country have you visited? 13. What films have you seen this month? 14. How many times have you travelled outside Moscow?

VOCABULARY NOTES

Задание I. *Переведите следующие предложения.*

1. **science** — наука. Lomonosov gave all his life to the development of Russian science.

2. **land** — земля, страна. He visited many lands and saw different peoples.

3. **simple** — простой. The book is written in simple English.

4. **to determine** — 1) определять; 2) решать. 1) He had to determine the temperature of the air in the container. 2) They determined to continue their work.

5. **twice** — 1) два раза, дважды; 2) вдвое. 1) Read this story twice. 2) I am twice as old as you are.

6. **ordinary** — обычный. It was an ordinary experiment.

7. **scarcely** — едва, с трудом. He is ten, but he can scarcely read.

8. **enough** — достаточно, достаточное количество. I have not enough time to do this work. Sedov had scarcely enough money to organize the expedition.

9. **to get (got, got)** — 1) приходить, добираться; 2) становиться; 3) получать. 1) We got to the village very late. 2) It was getting dark when he finished our work. 3) He got a letter from his sister.

10. **to furnish** — 1) обставлять мебелью; 2) снабжать. 1) At the hotel they were given two rooms which were furnished well. 2) The expedition was furnished with all the necessary equipment.

11. **steadily** — непрерывно. He worked steadily for hours.

12. **though** — хотя. Though he tried to enter the Institute again, he could not do it because he failed in chemistry.

13. **to turn** — повернуть(ся). He turned his head and looked back.

14. **among** — среди, между. He knew that he was among friends. They spoke French among themselves.

15. **to meet (met, mĕt)** — встречать. I met him in the street.

16. **throughout** — повсюду, везде. Tolstoy's books are read throughout the world.

17. **discovery** — открытие. 1492 is the date of the discovery of America.

to discover — открывать. Who discovered America?

18. **to refuse** — отказывать(ся). He refused to help her.

19. **research** — исследование. He did his research with the help of electronic machines.

20. **both** — оба. They are both good engineers.
21. **else** — еще. What else can you say?
22. **soon** — скоро, вскоре. Soon we shall have to take examinations.
23. **close** — близкий, тесный. He is a close friend of mine. They worked in a close contact.
24. **to obtain** — получать, доставлять. He obtained his knowledge studying hard.
25. **to offer** — предлагать. They are offered help.
26. **to add** — прибавлять, добавлять. If you add ten to twenty you get thirty. Add some milk to your coffee.
27. **to be interested in** — интересоваться чем-л. He is interested in mathematics.
28. **ray** — луч. The rays of the sun come in through the window.
29. **mark** — 1) отметка; 2) оценка. 1) Who made those pencil marks in your new book? 2) What mark have you got in physics?
30. **to cause** — вызывать, являться причиной. What caused his death?
31. **strong** — сильный, прочный. A strong wind was blowing all day yesterday.
32. **to carry out** — выполнять. The research has been carried out by the engineers of the factory.
33. **to store** — хранить, запасать. Some animals store food for the winter.

a store-room — кладовая. They kept many things in the store-room.

34. **proper** — надлежащий, правильный. The roads must be maintained in a proper way.
35. **space** — пространство, место. The piano takes up too much space.
36. **substance** — вещество. The new substance was produced in the laboratory after many years of hard work.
37. **similar** — подобный, похожий. They obtained similar results in all the experiments.
38. **once** — однажды, один раз. We have the lecture on physics once a week.
39. **powerful** — мощный. Ancient Greece was a powerful state.
40. **so far as** — насколько. So far as I know he attended the specialized English school.
41. **to split (split, split)** — расщеплять. This kind of wood splits easily.

42. **to contain** — содержать, вмещать. What does this book contain?

43. **to point out** — указывать. The teacher pointed out our mistakes in the test.

44. **explanation** — объяснение. Can you understand this rule without explanation?

45. **property** — свойство. The chemical and physical properties of uranium are well known now.

Задание II. *Прочтите следующие интернациональные слова и догадайтесь об их значении.*

doctor, magnetism, France, constant, problem, metal, uranium, photographic [ˌfoutə'græfɪk], apparatus, chemical ['kemɪkəl], experiment, mineral, element, radioactivity, radium, tragical

TEXT 4A

Задание. *Прочтите и переведите текст.*

MARIE CURIE AND THE DISCOVERY OF RADIUM

1. Marie Curie was born in Warsaw on 7 November, 1867. Her father was a teacher of science and mathematics in a school in the town, and from him little Maria Skłodowska—which was her Polish name—learned her first lessons in science.[1] Maria's wish was to study at the Sorbonne in Paris, and after many years of waiting she finally left her native land in 1891.

2. In Paris Maria began a course of hard study and simple living. She determined to work for two Master's degrees—one in Physics, the other in Mathematics. Thus she had to work twice as hard as the ordinary student. Yet she had scarcely enough money to live on. She lived in the poorest quarter of Paris. Night after night, after her hard day's work at the University, she got to her poorly furnished room and worked at her books steadily for hours. Sometimes she had no more than a bag of cherries. Though she was often weak and ill, she worked in this way for four years. She had chosen her course and nothing could turn her from it.

3. Among the many scientists Maria met and worked with in Paris was Pierre Curie. Pierre Curie, born in 1859

in Paris, was the son of a doctor, and from early childhood he had been fascinated by science.

At sixteen he was a Bachelor of Science, and he took his Master's degree in Physics when he was eighteen. When he met Maria Skłodowska he was thirty-five years old and was famous throughout Europe for his discoveries in magnetism. But in spite of the honour he had brought to France by his discoveries, French Government could only give him a very little salary as a reward, and the University of Paris refused him a laboratory of his own for his researches.

4. Pierre Curie and Maria Skłodowska, both of whom loved science more than anything else, very soon became the closest friends. They worked together constantly and discussed many problems of their researches. After little more than a year they fell in love with each other, and in 1895 Maria Skłodowska became Mme. Curie. Theirs was not only to be a very happy marriage but also one of the greatest scientific partnerships.

Marie had been the greatest woman-scientist of her day but she was a mother too, a very loving one. There were their two little girls, Irene and Eve.

5. By this time Mme. Curie had obtained her Master's degree in Physics and Mathematics, and was busy with researches on steel. She now wished to obtain a Doctor's degree. For this it was necessary to offer to the examiners a special study, called a thesis.

6. For some time Pierre Curie had been interested in the work of a French scientist named Becquerel. There is a rare metal called uranium which, as Becquerel discovered, emits rays very much like X-rays. These rays made marks on a photographic plate when it was wrapped in black paper. The Curies got interested in these rays of uranium. What caused them? How strong were they? There were many such questions that puzzled Marie Curie and her husband. Here, they decided, was the very subject for Marie's Doctor's thesis.

7. The research was carried out under great difficulty. Mme. Curie had to use an old store-room at the University as her laboratory — she was refused a better room. It was cold, there was no proper apparatus and very little space for research work. Soon she discovered that the rays of uranium were like no other known rays.

8. Marie Curie wanted to find out if other chemical substances might emit similar rays. So she began to examine every known chemical substance. Once after repeating her

experiments time after time she found that a mineral called pitchblende [2] emitted much more powerful rays than any she had already found.

9. Now, an element is a chemical substance which so far as is known cannot be split up into other substances. As Mme. Curie had examined every known chemical element and none of them had emitted such powerful rays as pitchblende she could only decide that this mineral must contain some new element.

Scientists had declared that every element was already known to them. But all Mme. Curie's experiments pointed that it was not so. Pitchblende must contain some new and unknown element. There was no other explanation for the powerful rays which it emitted. At that moment Pierre Curie stopped his own investigations on the physics of crystals and joined his wife in her effort to find those more active unknown chemical elements.

Scientists call the property of giving out such rays "radioactivity", and Mme. Curie decided to call the new element "radium", because it was more strongly radioactive than any known metal.

It is known now that Mme. Curie has given the real basis for the industrial methods of separating radium and other elements from the pitchblende and from other minerals.

In 1903 Marie and Pierre together with Henry Becquerel were awarded the Nobel Prize in Physics.

In 1911 Marie received the Nobel Prize in Chemistry. But the second prize went to her alone for in 1906 Pierre had died tragically in a traffic accident.

Mme. Skłodowska-Curie, the leading woman-scientist, the greatest woman of her generation, has become the first person to receive a Nobel Prize twice.

NOTES TO THE TEXT

1. **science** — *зд.* естественные науки
2. **pitchblende** — уранит (урановая смолка)

Упражнение 5. *Ответьте на вопросы по тексту 4А.*

1. In what country was Marie Curie born? 2. Who was her first teacher in science? 3. How old was Marie when she left her native land? 4. In what country did she study when a student? 5. How did she work? 6. How old was Marie when she met Pierre Curie? 7. How many years was Pierre older? 8. What can you say about Pierre's youth? 9. What was he

famous for? 10. What was Marie interested in? 11. What did Becquerel discover? 12. What was the subject for Marie's Doctor's thesis? 13. What did the scientists declare? 14. Why did Marie Curie call the new element "radium"? 15. How old was Pierre Curie when he tragically died? 16. How many children did the Curies have?

Упражнение 6. *Переведите следующие предложения на русский язык, выбрав одно из трех слов, подходящее по смыслу.*

1. He was so (absent, interested, essential) in the TV programme that nothing could turn him from it. 2. He (met, got, split) home late as he was at the cinema. 3. (though, usually, especially) it is very late I shall be able to stay a few minutes. 4. There are numerous similar (rays, properties, sides) of these metals. 5. Can you understand this word without (education, invention, explanation)? 6. Steel is a (easy, safe, strong) metal. 7. We saw a horse with a white (map, mark, cap). 8. Sometimes it's easy to make plans but difficult (to find, to show, to carry out) them. 9. Molecules can be (kept, split, got) into atoms. 10. Could you (throw, cause, point out) the most beautiful pictures of your collection? 11. We didn't know which way (to leave, to divide, to turn) to the railway. 12. What (built, caused, consisted) this accident? 13. It was like a (side, ray, field) of hope. 14. A new (subject, invention, substance) is usually much worked at in the laboratories until its properties are well studied. 15. The atlas (found, contained, translated) forty maps, including three of the USSR. 16. This factory will be equipped with new (possible, difficult, powerful) machinery. 17. Do you know the (difficult, proper, bad) use of the apparatus? 18. Young Marie Curie wanted to study in Paris, therefore she left her native (duty, wish, land).

Упражнение 7. *Найдите соответствующий русский эквивалент каждого английского слова.*

A. 1. among; 2. to store; 3. space; 4. similar; 5. scarcely; 6. to furnish; 7. once; 8. to offer; 9. to determine; 10. proper; 11. enough; 12. property

B. 1. пространство; 2. обставлять, снабжать; 3. свойство; 4. предлагать; 5. среди; 6. надлежащий, правильный; 7. запасать; 8. едва; 9. достаточно; 10. однажды; 11. определять; 12. подобный

Упражнение 8. *а) Найдите в каждом ряду слово, противоположное по значению первому слову ряда.*

1. **free** a) each, b) busy, c) essential, d) complete
2. **similar** a) different, b) simple, c) both, d) according
3. **to offer** a) to cause, b) to mark, c) to require, d) to split
4. **ordinary** a) proper, b) another, c) total, d) unusual
5. **strong** a) weak, b) far, c) total, d) close
6. **easy** a) dry, b) proper, c) hard, d) final
7. **empty** a) strong, b) full, c) deep, d) higher
8. **outside** a) once, b) throughout, c) quite, d) inside
9. **always** a) among, b) else, c) never, d) almost
10. **early** a) late, b) scarcely, c) entirely, d) once

б) Найдите в каждом ряду слово, перевод которого дан в начале ряда.

1. **запасать** a) to cause, b) to store, c) to install, d) to use
2. **пространство** a) property, b) substance, c) level, d) space
3. **насколько** a) so far as, b) as long as, c) as well as, d) according to
4. **хотя** a) through, b) though, c) to think, d) turn
5. **дважды** a) once, b) else, c) close, d) twice
6. **указывать** a) to be interested, b) to contain, c) to point out, d) to follow
7. **едва** a) scarcely, b) steadily, c) among, d) only
8. **расщеплять(ся)** a) to obtain, b) to maintain, c) to split, d) to store
9. **подобный** a) strong, b) similar, c) both, d) ordinary
10. **непрерывно** a) entirely, b) therefore, c) even, d) steadily

Упражнение 9. *Переведите на русский язык следующие словосочетания.*

to carry out research; to have proper knowledge for research work; a famous scientist; Russian science; scientific achievement; scientific discovery; twice a week; throughout the country; to obtain worse results; to refuse help; to offer help; to return soon; to be close friends; among friends; ordinary work; simple question; in simple English; both ends; to have enough money; to have more than enough; he could scarcely read; what else; add ten to twenty; to meet each other friendly; to cause powerful radiation; chemical substance; to split into parts; powerful state; similar elements; to find explanation; a space of ten feet; spaceman; to determine to come; to discover a new element; similar properties; to furnish with; to store food; to get bad marks; to get to the Institute

Упражнение 10. *Найдите в каждом ряду глагол во времени группы Perfect.*

1. a) are determining, b) determined, c) has been determined
2. a) have furnished, b) is being furnished, c) furnish
3. a) turn, b) were turning, c) has turned
4. a) is meeting, b) will have met, c) are being met
5. a) had refused, b) refused, c) refuse
6. a) obtains, b) have been obtained, c) is being obtained
7. a) had been offered, b) offered, c) shall offer
8. a) will be added, b) are added, c) has added
9. a) was discovered, b) has been discovered, c) discovers
10. a) are following, b) will follow, c) had been followed

Упражнение 11. *Переведите следующие предложения, обращая внимание на различные функции глаголов* **to be** *и* **to have.**

1. The plan **has been carried out.** 2. The plan **has to be carried out.** 3. Your group **will have to carry out** the plan. 4. The group **will have carried out** the plan by the 1st of November. 5. The plan **will be carried out** on the 1st of December. 6. According to the information we have the plan **is being carried out** successfully. 7. The plan **was to be carried out** by a group of specially trained men. 8. I think that the group of specially trained men **will be able to carry out** the plan. 9. The plan **is to be carried out** in June. 10. They **have carried out** the plan successfully.

Упражнение 12. *Переведите следующие предложения.*

1. He has been interested in history since his childhood. 2. The positive results hadn't been obtained until a more powerful apparatus was installed. 3. They have already determined the main properties of the substance. 4. The explanation of these strange facts hasn't been given yet. 5. He has been offered a very interesting job at that Institute. 6. I was very busy with my work, so I had to refuse to take part in the expedition. 7. All necessary information is being stored in the computer. 8. What substance must be added to the solution? 9. The discovery of these rays may cause great changes in modern technology. 10. After careful consideration of your report we shall be able to point out to you all the defects it contains. 11. The problem of the future of human civilization on the Earth is being steadily researched by the scientists throughout the world.

Упражнение 13. *Прочитайте предложения, поставив глаголы в скобках в нужное время группы Perfect. Переведите предложения.*

1. He (to refuse) to do this work because he has no time now. 2. They (to furnish) just their new flat. 3. The tourists (to walk) a long way before they reached the sea. 4. She said she (to change) her plans. 5. By this time tomorrow I (to bring) you the magazine. 6. "What (to happen) here?" the man asked. 7. You (to travel) in the North? — No, I (to be) never there. 8. The rain (to stop) and the sun was shining brightly. 9. The engineer (to be offered) interesting work at the research institute. 10. "You (to meet) your friend at the railway station?"

Упражнение 14. *Расскажите: а) биографию Марии Кюри; б) биографию Пьера Кюри; в) биографию известного ученого, писателя.*

Используйте следующие слова и словосочетания.

to be born; to wish to study; to leave for; to work steadily; to be interested in; to enter the University; to graduate from the University; to research; to be busy with; a special study; to carry out research with great difficulty; to be famous for

РАБОТА НАД СЛОВООБРАЗОВАНИЕМ

Упражнение 15. *Переведите следующие производные слова согласно моделям.*

Модель 8: **un-, in-, ir-, il-, im-** + *основа прилагательного* → *прилагательное с отрицательным значением*

known — известный	**unknown** — неизвестный
common — обычный	uncommon
dependent — зависимый	independent
accessible — доступный	inaccessible
regular — регулярный	irregular

Модель 9: *основа глагола* + **-able, -ible** → *прилагательное со значением возможности совершения действия, обозначаемого глаголом.*

to reproduce — воспроизводить	**reproducible** — то, что можно воспроизвести, воспроизводимый
to permit — разрешать	permissible

to interchange — заменять	interchangeable
to break — ломать	breakable
to bear — терпеть	bearable
to profit — приносить выгоду	profitable

Упражнение 16. *Переведите следующие словосочетания.*

to accept — принимать	acceptable conditions
	inacceptable conditions
to eat	eatable fruit
to drink	drinkable water
to recommend	recommendable methods
to change	changeable conditions
to solve	solvable problem

incomplete group, unimportant problem, unnecessary work, impossible task, unordinary person, improper behaviour, irresponsible person

Упражнение 17. *Найдите в тексте слова, имеющие общий корень со словами, данными перед текстом, определите части речи, к которым они относятся, переведите их, затем переведите текст.*

to foresee — предвидеть
to research — исследовать
to achieve — достигать
to profit — приносить пользу
orbit — орбита

In the foreseeable future we may have long term (долгосрочный) orbital stations and laboratories with researchers. Passenger rockets will be different from present-day spaceships (космические корабли). At present passenger rockets carrying people to the other side of the globe are still a dream (мечта). It might happen that the achievement of supersonic (сверхзвуковой) aviation will make the passenger rocket unprofitable and only mail and cargo rockets will be used on the Earth routes but these rockets will be used when travelling to orbital laboratories and stations on other planets.

TEXT 4B

Задание I. *Прочтите текст, стараясь понять основное содержание. (Заметьте время начала и окончания чтения. Этот текст нужно прочесть за 3 минуты, из расчета 80 слов в минуту.)*

THE TWO GENERATIONS OF THE CURIES

More than 100 years have passed since the birth of Marie Skłodowska-Curie, the outstanding Polish scientist whose discoveries in physics and chemistry began the era of the utilization of atomic energy ...

Marie lived to see her story repeated. Her daughter Irene grew into a woman with the same interests as her mother's and she was deeply interested in her mother's work. From Marie she learned all about radiology and chose science for her career. At twenty-nine she married Frederic Joliot, a brilliant scientist at the Institute of Radium, which her parents had founded. Frederic Joliot was born in Paris on March 1900 and first studied engineering and then chemistry. In his experiments on artificial (искусственный) radioactive elements, there were obtained three more radioactive elements that did not occur naturally.

Together the Joliot-Curie carried on the research work that Irene's mother had begun. In 1935 Irene and her husband won the Nobel Prize for their discovery of artificial radioactivity.

So, Marie lived to see the completion of the great work, but she died on the eve (накануне) of the award.

In 1946 Joliot was appointed scientific adviser to the International Atomic Energy Commission of the United Nations.

Our respect for the two generations of the Curies is all the greater because of their moral courage. Marie and Pierre provided an example of deep dedication (посвящение) to science. Marie, her daughter Irene and Irene's husband Frederic all died from radiation sickness, the result of long years of work with radioactive substances. Finally, Frederic Joliot-Curie was not only a famous scientist, but also a famous leader of the progressive movement.

There is no parallel in the records of science to the dynasty of the Curies.

Задание II. *Выберите утверждение, соответствующее содержанию текста.*

1. On November 7, 1967 it was 100 years since:
   1) the discovery of radioactivity; 2) Marie Curie's birth; 3) Marie Curie's death.
2. Frederic Joliot:

1) founded the Institute of Radium; 2) worked at the Institute of Radium; 3) graduated from the Institute of Radium.

3. In 1935 the Nobel Prize was awarded to:
   1) Marie Curie; 2) Frederic alone; 3) Irene and Frederic.
4. Marie, Irene and Frederic died:
   1) from radiation; 2) from the epidemic; 3) in a road accident.
5. Frederic Joliot was also:
   1) a progressive writer; 2) a famous journalist; 3) a leader of the progressive movement.

TEXT 4C

Задание I. *Прочтите текст, отыскивая в нем ответы на поставленные вопросы.*

ERNEST RUTHERFORD

How did Ernest Rutherford's father earn his living?

1. Earnest Rutherford was born on August 30, 1871, in New Zealand, in the family of English settlers.

In 1861 gold was found in New Zealand and many foreigners came to live there. Industry began to develop, the country began to increase its export.

Ernest's father earned his living by bridge-building and other constitution work required in the country at that period. At the same time he carried on small-scale farming.

In what subjects did Ernest distinguished himself (отличиться)?

2. Little Ernest was the fourth child in the family. When the boy was five he was sent to primary school. After finishing primary school he went to the secondary school. He liked to read at school very much. His favourite writer was Charles Dickens. He also liked to make models of different machines. Especially he was interested in watches and cameras, he even constructed a camera himself.

At school he was good at physics, mathematics, English, French and Latin. He paid much attention to chemistry too. Ernest became the best pupil at school. At the age of 19 he finished school and entered the New Zealand University.

In what activities did Rutherford take part when he was a student?

3. At the University Ernest Rutherford was one of the most talented students. He studied much and took an active part in the work of the Scientific Society of the University. But he was also fond of sports and took part in the students sport competitions.

At one of the meetings of the Scientific Society he made his scientific report "The Evolution of Elements". At the same time he began his research work. For his talented scientific research he got a prize. After graduation Rutherford went to Cambridge where he continued his investigations (исследования).

What did Rutherford do besides research work?

4. Some years later Rutherford moved to Canada to continue his research work at the University in Montreal. Besides his successful researches he also lectured a lot at the leading Universities of the United States and England.

Rutherford's famous work "The Scattering (распространение) of Alpha and Beta Particles of Matter and the Structure of the Atom" proved that the atom could be bombarded so that the electrons could be thrown off, and the nucleus (ядро) itself could be broken. In the process of splitting the nucleus matter was converted into energy which for the scientists of the 19th century seemed to be impossible.

In what fields of economy can atomic energy find its peaceful application?

5. The splitting of atom has opened to man a new and enormous source of energy. The most important results have been obtained by splitting the atom of uranium.

At present we are only at the beginning of the application of atomic energy and all its possible uses for peaceful purposes in power engineering, medicine and agriculture.

Ernest Rutherford paid much attention to his young pupils. After 1920 he did not make great discoveries in science, but taught young scientists who worked in the field of atomic research work. Among his favourite pupils was Pyotr Kapitsa, a famous Soviet physicist.

Ernest Rutherford died in the autumn of 1937 at the age of 66, and was buried at Westminster Abbey not far

from the graves of Isaac Newton, Charles Darwin and Michael Faraday.

Задание II. *Прочтите текст еще раз и выделите в каждой части интересные для вас факты.*

TEXT 4D

PYOTR KAPITSA

1. Pyotr Leonidovich Kapitsa made his appearance in physics at the turn of the century. In those years, Russia had a total of no more than a hundred professional physicists.

Petya Kapitsa — the son of a general, a prominent military engineer who had built the Kronstadt fortress — was keenly interested in physics while still at a technical high school (he had been expelled from the Kronstadt classic school for poor academic progress). The expulsion from the classic school may have been a stroke of good luck for Kapitsa. Technical high school graduates had no right to enter the University. As a result, Kapitsa became a student of the electromechanical faculty of Petersburg's Peter the Great Polytechnical Institute — perhaps the best technical educational establishment in Russia at the time.

One of the most prominent features of Kapitsa's creative method, as L. D. Landau pointed out many years later, was his "inexhaustible curiosity plus boundless ingenuity".

2. In 1921, three of our most prominent scientists were sent abroad, on Lenin's instructions, to renew scientific contacts. These scientists were Ioffe, Academician Krylov and Kapitsa who was then only twenty-seven.

In those times, the wildest rumours had been spread in Britain about Soviet Russia, and the young Russian physicist drew universal attention at the world-famous Cavendish Laboratory headed by Ernest Rutherford, the founder of experimental nuclear physics. Very soon this attention was richly rewarded. Kapitsa established an unusual, almost incredible record — he completed the laboratory course in two weeks instead of the usual two years. After that, Rutherford took personal interest in him and Kapitsa became his favourite pupil.

3. In 1934 Pyotr Kapitsa returned home. The house of the Institute of Physical Problems was built in a Moscow suburb, according to a plan which had been drawn by Kapitsa himself. He was appointed Director of the Institute.

In the war years, Kapitsa devoted all his talent of a scientist and an engineer to the cause of the country's defence.

4. After the war, Kapitsa began to work in an entirely new field of science and technology — high-power electronics.[1]

It is common knowledge nowadays that electronics means small currents. Electronic devices — radio-valves,[2] for instance,— operate on electrons, particles having a very small mass and a very high mobility. It was believed that to transmit great amounts of power over great distances by means of electronics was impossible. This was not the only "axiomatic truth" which Kapitsa disproved.[3] He gave a convincing mathematical substantiation of the fact that the electrons are capable of transmitting millions of kilowatts over long distances.

Today Kapitsa's high-power electronics has already become firmly established. It has a fantastic future ahead of it, when electric power will flow, practically without any loss, across the country along waveguides.[4] Using the waveguides it will be possible to send electric power directly into blast furnaces,[5] boreholes for melting rock, to Earth satellites and orbital stations in space.

It is not necessary to list all Pyotr Kapitsa's academic titles, because his name speaks for itself. In the history of physics there are few names that can be placed next to his.

NOTES TO THE TEXT

1. **high-power electronics** — высоковольтная электроника
2. **radio-valve** — радиоэлектронная лампа
3. **to disprove** — опровергать
4. **waveguide** — волновод
5. **blast furnace** — домна

Задание I. *Ответьте на вопросы. Правильность ответов проверьте в соответствующих частях текста.*

1. How many professional physicists were there in Russia at the turn of the century? (I) 2. What was young Kapitsa interested in? (I) 3. Why did not Pyotr Kapitsa enter the University? (1) 4. What was one of Kapitsa's most promi-

nent features? (1) 5. How long did it take Kapitsa to complete his laboratory course at Cavendish Laboratory? (2) 6. Who took a personal interest in the young Russian student? (2) 7. How did the war influence Kapitsa's work? (3) 8. What did he prove electrons capable of doing? (4) 9. What "axiomatic truth" did the scientist disprove? (4)

Задание II. *Соотнесите наиболее важные открытия в области физики с именами их авторов.*

1. F. Joliot — I. Curie	1. The discovery of radium
2. P. Kapitsa	2. The discovery of magnetism
3. Marie Curie	3. The discovery of artificial radioactivity
4. Pierre Curie	4. The discovery of the splitting of atom
5. E. Rutherford	5. The discovery of high-power electronics

КОНТРОЛЬНЫЙ СЛОВАРЬ

1. add (*v*); 2. among (*prp*); 3. be interested (*v*); 4. both (*pron*); 5. carry out (*v*); 6. cause (*v, n*); 7. close (*a*); 8. contain (*v*); 9. determine (*v*); 10. discovery (*n*); 11. else (*adv*); 12. enough (*adv*); 13. explanation (*n*); 14. furnish (*v*); 15. get (*v*); 16. land (*n*); 17. mark (*n*); 18. meet (*v*); 19. obtain (*v*); 20. offer (*v*); 21. once (*adv*); 22. ordinary (*a*); 23. point out (*v*); 24. powerful (*a*); 25. proper (*a*); 26. property (*n*); 27. ray (*n*); 28. refuse (*v*); 29. research (*n*); 30. scarcely (*adv*); 31. science (*n*); 32. similar (*a*); 33. simple (*a*); 34. so far as (*cj*); 35. soon (*adv*); 36. space (*n*); 37. split (*v*); 38. steadily (*adv*); 39. store (*v*); 40. strong (*a*); 41. substance (*n*); 42. though (*cj*); 43. throughout (*adv*); 44. turn (*v, n*); 45. twice (*adv*)

LESSON 5 (FIVE)

Грамматика: 1. Согласование времен (Sequence of Tenses).
2. Неопределенные местоимения **some, any,** отрицательное местоимение **no** и их производные.

Основной текст А: Alfred Nobel — a Man of Contrasts.

Согласование времен

He says 1) that he **works** hard. 2) that he **worked** hard. 3) that he **will work** hard.	He said 1) that he **worked** hard. 2) that he **had worked** hard. 3) that he **would work** hard.

Упражнение 1. *Переведите следующие предложения, обращая внимание на согласование времен.*

A. He **says** that he **knows** your friend.
She **thinks** that you **passed** your examination in physics.
They **know** you **will graduate** from the Institute next year.
The teacher **asks** if you **can write** English.
She **wants** to know whether you **completed** your work yesterday.
She **says** she **has seen** that magazine in our library.
We **know** that the young writer **is working** at a novel.

He **said** that he **knew** your friend.
She **thought** that you **had passed** your examination in physics.
They **knew** you **would graduate** from the Institute the next year.
The teacher **asked** if you **could write** English.
She **wanted** to know whether you **had completed** your work the day before.
She **said** she **had seen** that magazine in our library.
We **knew** that the young writer **was working** at a novel.

B. 1. I did not know that my friend's son had failed in chemistry. 2. They thought I could drive a car. 3. The boy said he had scarcely enough money to return home. 4. I knew he was experimenting steadily for hours. 5. They said that they had chosen their course and nothing could turn them from it. 6. We considered that she had already obtained her Master's degree in mathematics. 7. The student said that he could not translate the article without a dictionary. 8. I did not think that she would be refused a better room for her research. 9. He asks if he may keep this book as long as he needs it. 10. They told the child that the weather was fine and he could have a walk for two hours. 11. He asked how normal temperature was maintained in the underground. 12. He asked whether in the early days the trains had been driven by locomotives which burnt coal. 13. He said that entirely automatic driving would be developed.

Неопределенные местоимения *some, any*, отрицательное местоимение *no* и их производные

some, somebody, someone, something; any, anybody, anyone, anything; no, nobody, no one, nothing

Упражнение 2. *Переведите следующие предложения, обращая внимание на неопределенные местоимения и их производные.*

1. **Something** important took place there. 2. **Nobody** failed in this examination yesterday. 3. I wasn't shown **any** interesting photographs. 4. Have you **any** questions? 5. Can **anybody** show me the way to the station? 6. He didn't try to do **anything.** 7. The commission has found **nothing** wrong. 8. They made **no** changes in the working plan. 9. **Nothing** interesting happened while I was away. 10. **No** traffic was allowed along the street because of the accident. 11. He could think of **nothing** really interesting. 12. **Some** new safety rules were considered by the committee. 13. I couldn't understand **anything** from his letter. 14. The old man didn't get **any** education.

VOCABULARY NOTES

Задание I. *Переведите следующие предложения.*

1. **scientist** — ученый. Kurchatov is one of the greatest scientists of the 20th century.

2. **to care (for)** — любить, нравиться. He has cared for mathematics since he was a boy of seven.

3. **to make (made, made)** — 1) делать; 2) заставлять. 1) He likes to make things himself. 2) What makes you leave the town so early?

4. **to die** — умирать. Alfred Nobel, one of the greatest scientists of the last century, died in 1896, at the age of sixty-three.

5. **explosive** — 1) взрывчатое вещество; 2) взрывчатый. 1) They used explosives to cut the tunnel through the mountain. 2) The group of engineers worked at new explosive materials for industrial usage.

to explode — взрывать(ся). The builders had to explode the rock to continue the construction of the railway.

6. **mine** — шахта. The hardest work in the mines is now performed by robots.

7. **war** — война. All progressive people struggle against war, for peace and cooperation between nations.

8. **to kill** — убивать. Magellan, a well-known traveller was killed on the Philippine Islands in 1521.

9. **to injure** — вредить, повреждать. During the car accident the driver and the passenger were injured.

10. **useless** — бесполезный. He realized that without the experiment his work would be useless.

11. **while** — 1) пока (в то время как); 2) время (некоторое время). 1) I'll finish my work while you are playing chess. 2) I'm busy now but if you wait a while, I'll help you.

12. **to avoid** — избегать. To avoid accidents the driver must strictly follow the traffic rules.

13. **to expect** — ожидать, предполагать. He did not expect that his friends would arrive so soon.

14. **to deserve** — заслуживать. It was difficult to decide who deserved the first prize; everybody played very well.

15. **plenty of** — много. They will require plenty of sand for building the road.

16. **government** — правительство. The Romans were the first people who had free of charge schools organized by the government.

to govern — управлять. The law of gravity governs the movement of the planets.

17. **then** — затем, тогда. First they studied traffic conditions in the town and then made necessary recommendations.

18. **suddenly** — вдруг, внезапно. The car suddenly stopped in the middle of the road.

19. **back** — назад, обратно. He looked back and saw the dog running after him.

20. **too** — 1) тоже, также; 2) слишком. 1) He was at the meeting too. 2) These boots are too small for him.

21. **own** — собственный. He refused to give his own explanation of the fact.

22. **to occur** — 1) случаться, происходить; 2) приходить на ум. 1) The car accident occurred in the centre of the town. 2) It never occurred to him that the accident happened through his weakness.

23. **excellent** — отличный, превосходный. This student passed all his examinations with excellent marks.

24. **to master** — овладеть, изучить. A polyglot is a person who has mastered many foreign languages.

25. **ability** — способность, умение. His extraordinary ability to work day and night during the experiments was known to all his colleagues.

26. **really** — действительно. Are you really interested in this problem?

27. **seldom** — редко. He seldom went by the underground as he lived quite near his office.

28. **meaning** — значение, смысл. He could not understand the text as he did not know the meaning of many words.

29. **probably** — вероятно. She will probably be here today.

30. **about** — 1) о, относительно; 2) вокруг; 3) приблизительно, около. 1) He told us about the results of his research work. 2) There was nobody about. 3) What's the time? — It's about five.

31. **every** — каждый. I see my brother every day.

32. **opportunity** — благоприятная возможность. We'll give you an opportunity to make your experiments in our laboratory.

33. **used to** — имел обыкновение, бывало. He used to go to the country every weekend.

34. **time** — 1) время; 2) раз. 1) I don't have much time for sports. 2) Pete's memory was not very good, so he had to repeat the words many times to remember them well.

35. **to believe** — 1) верить; 2) полагать. 1) I don't believe what he says. 2) I believe you are right.

36. **to justify** — оправдывать. I believe you will justify all our hopes.

37. **to respect** — уважать. He was respected by everybody for his kindness.

38. **threat** — угроза. The summer was very dry and there was a threat of fires in the forests.

to threaten — угрожать, грозить. He said, "Don't threaten me. I'm not afraid of you."

39. **nuclear** — ядерный. He studied nuclear physics at the university.

40. **to form** — образовать, создавать. International Children's Fund was formed in the United Nations to improve the living conditions of the children.

41. **as follows** — как ниже следует, следующим образом. The load was distributed as follows: each lorry carried twenty tons.

42. **abolition** — отмена, упразднение. The development of cars in England led to the abolition of different acts which limited the speed of the motor transport.

43. **encouragement** — поощрение. The encouragement of

peace conferences and marches was the aim of the committee fighting against arms race.

44. **to choose (chose, chosen)** — выбирать. There are some books on the table. You may choose any book you like.

45. **to win (won, won)** — 1) победить; 2) выиграть, получить (приз). 1) It's known all over the world that Soviet people won great victory in 1945. 2) She won first prize at the figure-skating championship.

Задание II. *Прочтите следующие интернациональные слова и догадайтесь об их значении.*

industrialist, contrast, millionaire, idealist, patriotic, dynamite ['daɪnəmaɪt], industry, laboratory, chemist ['kemɪst], linguist ['lɪŋgwɪst], financial [faɪ'nænʃəl], company, philosophy [fɪ'lɔsəfɪ], memorial, nation, prize, chemistry, physiology [ˌfɪzɪ'ɔlədʒɪ], medicine, progressive, organization, conference, nationality

TEXT 5A

Задание. *Прочтите и переведите текст.*

ALFRED NOBEL — A MAN OF CONTRASTS

Alfred Nobel, the great Swedish inventor and industrialist, was a man of many contrasts. He was the son of a bankrupt, but became a millionaire; a scientist who cared for literature, an industrialist who managed to remain an idealist. He made a fortune but lived a simple life, and although cheerful in company he was often sad when remained alone. A lover of mankind, he never had a wife or family to love him; a patriotic son of his native land, he died alone in a foreign country. He invented a new explosive, dynamite, to improve the peacetime industries of mining and road building, but saw it used as a weapon of war to kill and injure people. During his useful life he often felt he was useless. World-famous for his works, he was never personally well-known, for while he lived he avoided publicity. He never expected any reward for what he had done. He once said that he did not see that he had deserved any fame and that he had no taste for it. However, since his death, his name has brought fame and glory to others.

He was born in Stockholm on October 21, 1833 but moved to Russia with his parents in 1842, where his father, Im-

manuel, made a strong position for himself in the engineering industry. Immanuel Nobel invented the landmine [1] and got plenty of money for it from government orders during the Crimean War, but then, quite suddenly went bankrupt. Most of the family went back to Sweden in 1859. Four years later Alfred returned there too, beginning his own study of explosives in his father's laboratory. It so occurred that he had never been to school or University but had studied privately and by the time he was twenty was a skilful chemist and excellent linguist having mastered Swedish, Russian, German, French and English. Like his father, Alfred Nobel was imaginative and inventive, but he had better luck in business and showed more financial sense. He was quick to see industrial openings for his scientific inventions and built up over 80 companies in 20 different countries. Indeed his greatness lay in his outstanding ability to combine the qualities of an original scientist with those of a forward-looking industrialist.

But Nobel was never really concerned about making money or even making scientific discoveries. Seldom happy, he was always searching for a meaning to life, and from his youth had taken a serious interest in literature and philosophy. Probably because he could not find ordinary human love — he never married — he began to care deeply about the whole mankind. He took every opportunity to help the poor: he used to say that he would rather take care of the stomachs of the living than the glory of the dead in the form of stone memorials. His greatest wish, however, was to see an end to wars, and thus peace between nations; and he spent much time and money working for the cause until his death in Italy in 1896. His famous will, in which he left money to provide prizes for outstanding work in Physics, Chemistry, Physiology, Medicine, Literature and Peace, is a memorial to his interests and ideals. And so the man who often believed that he was useless and has done little to justify his life is remembered and respected long after his death. Nobel's ideals which he expressed long before the threat of nuclear war have become the ideals of all progressive people of the world.

According to Nobel's will the capital was to be safely invested to form a fund. The interest [2] on this fund is to be distributed annually in the form of prizes to those who, during the previous year has done work of the greatest use to mankind. This interest is to be divided into five parts and distributed as follows: one part to the person who has

made the most important discovery or invention within the field of physics; one part to the person who has made the most important chemical discovery or improvement; one part to the person who has made the most important discovery within the field of physiology or medicine; one part to the person who has produced within the field of literature the most outstanding work; and one part to the person who has done the most for brotherhood between nations, for the abolition or reduction of permanent armies and for the organization and encouragement of peace conferences.

In his will Nobel wrote that it was his firm wish that in choosing the prize winner no consideration should be given to the nationality of the candidates, but that the most worthy should receive the prize, whether he be a Scandinavian or not. This will was written in Paris, on November 27, 1895.

Since Nobel's death many outstanding scientists, writers and public figures from different countries have become Nobel Prize Winners.

NOTES TO THE TEXT

1. **landmine** — мина, фугас
2. **interest** — *зд.* процент

Упражнение 3. *Выразите свое согласие или несогласие со следующими утверждениями, основываясь на информации, полученной из текста 5А. Свое согласие выразите, начиная словами* **That's right,** *а несогласие словами* **That's wrong.**

1. Alfred Nobel had deep knowledge in different fields of science. 2. He studied at the University where he learned languages. 3. He got interested in chemistry and by the time he was twenty became a skilful chemist. 4. From his youth he was much interested in literature and philosophy. 5. He loved fame and during his life was personally well-known. 6. His father was a very successful businessman and died very rich. 7. Alfred Nobel was a man of imagination and at the same time showed great financial and business sense. 8. Alfred Nobel was deeply concerned about the whole mankind and took every opportunity to help the poor. 9. Nobel was very happy in his private life. 10. He was always cheerful and lived a life of a very rich man. 11. He spent much time and money for the cause of peace and brotherhood between nations. 12. His famous will in which he

left money to provide prizes for the outstanding work in Science and Peace is a memorial to his ideals.

Упражнение 4. *Соедините в предложения группы слов из левой и правой колонки словом* **but,** *и вы убедитесь, что жизнь Альфреда Нобеля была полна контрастов.*

Пример: to be a millionaire | but | to live a simple life
He was a millionaire but lived a simple life.

to be an industrialist	but	to remain an idealist
to be cheerful in company		to be sad in private
to love all mankind		not to have a wife or a family to love him
to be a patriot of his native country		to die alone in a foreign land
to invent dynamite to improve peacetime industries		to see it used as a weapon to kill people
to be world-famous for his works		to be never personally well-known as he avoided publicity
to be a Sweden		to live for more than 20 years in Russia
never to study at school or University		to be a skilful chemist and an excellent linguist
to be a man of imagination		to show great business and financial sense

Упражнение 5. *Выберите информацию, которая дана в тексте относительно: а) отца Альфреда Нобеля; б) занятий, работы и интересов Альфреда Нобеля; в) характера и идеалов Альфреда Нобеля; г) завещания Альфреда Нобеля, и изложите ее в устной или письменной форме.*

Упражнение 6. *Переведите следующие предложения на русский язык, выбрав из трех слов подходящее по смыслу.*

1. You must take every (property, opportunity, achievement) to speak English. 2. Are these your (probable, own,

wrong) books? 3. They were sitting in a big room with the windows open widely; so there was (plenty of, little, a few) fresh air in it. 4. This railway accident (exploded, abolished, occurred) some years ago. 5. The car (really, suddenly, greatly) stopped at full speed at the side of the road. 6. She received (difficult, sudden, excellent) knowledge of English and French at the University. 7. The money which he (expected, respected, avoided) from his parents did not arrive. 8. The professor was (respected, avoided, deserved) for his deep knowledge of the subject and very interesting lectures. 9. He was well-known for his (opportunity, ability, difficulty) to solve most complicated problems very quickly. 10. People who (have mastered, have deserved, have chosen) many foreign languages are called polyglots. 11. During the car accident the driver was killed and three passengers were (threatened, abolished, injured). 12. He (believed, occurred, received) that the weather would change by the end of the week and he would be able to go to the country. 13. Nothing can (occupy, justify, satisfy) the crimes done by the fascists during World War II. 14. Alfred Nobel came (there, far, back) to Sweden, after his long life in Russia in 1863.

Упражнение 7. *Подберите пары антонимов.*

A. 1. seldom; 2. excellent; 3. plenty of; 4. never; 5. useless; 6. to come back; 7. full; 8. easy; 9. poor; 10. then; 11. war; 12. to close; 13. free; 14. to offer

B. 1. peace; 2. to open; 3. now; 4. busy; 5. to leave; 6. rich; 7. empty; 8. difficult; 9. often; 10. useful; 11. always; 12. bad; 13. little; 14. to refuse

Упражнение 8. *Найдите в каждом ряду слово, близкое по значению первому слову ряда.*

1. **plenty of** a) much, b) little, c) enough, d) few
2. **to occur** a) to injure, b) to avoid, c) to happen, d) to justify
3. **to make** a) to choose, b) to do, c) to master, d) to win
4. **to believe** a) to respect, b) to abolish, c) to deserve, d) to consider
5. **to care** a) to like, b) to encourage, c) to govern, d) to use
6. **to matter** a) to carry out, b) to obtain, c) to learn, d) to care for
7. **to come back** a) to leave, b) to return, c) to retreat, d) to avoid
8. **too** a) while, b) almost, c) again, d) also

9. **to determine** a) to believe, b) to decide, c) to provide, d) to receive
10. **entirely** a) probably, b) suddenly, c) completely, d) really

Упражнение 9. *Найдите в каждом ряду слово, перевод которого дан в начале ряда.*

1. **способность** a) opportunity, b) ability, c) difficulty, d) property
2. **значение** a) understanding, b) beginning, c) meaning, d) opening
3. **повреждать** a) to injure, b) to kill, c) to explode, d) to abolish
4. **избегать** a) to threaten, b) to expect, c) to avoid, d) to deserve
5. **заслуживать** a) to respect, b) to encourage, c) to occur, d) to deserve
6. **выбирать** a) to choose, b) to offer, c) to develop, d) to install
7. **выигрывать** a) to grow, b) to need, c) to win, d) to build
8. **отмена, упразднение** a) consideration, b) education, c) competition, d) abolition
9. **шахта** a) site, b) mine, c) field, d) tube
10. **оправдывать** a) to justify, b) to threaten, c) to cause, d) to introduce

Упражнение 10. *Переведите на русский язык следующие словосочетания.*

to have an excellent opportunity; to believe in progress; to have plenty of free time; to be a really good doctor; to achieve excellent results; to be seldom free; to find the meaning of the new word in the dictionary; to think about the meaning of life; to see something with one's own eyes; to come back late; it occurred during the war; to be a famous scientist; scientific research work; while he was translating the article; to care for children; to justify one's hopes; to win victory; to win the first prize at the championship; to deserve a good mark for the answer; to respect old people; to encourage one's initiative; the threat of nuclear war; to work in the mine; to use explosive materials for the experiment; the explosion occurred in the old mine; to avoid driving during rush hours; to choose the best translation; to master two foreign languages; to invest the capital into the new fields of industry; to be injured at the car accident;

to leave the town suddenly; to receive help from the government; the abolition of the old Act; the unexpected visitors

Упражнение 11. *Переведите следующие предложения на русский язык, обращая внимание на согласование времен.*

1. He said he didn't expect anybody to come in the evening. 2. He asked me if I knew who was performing at the theatre on Saturday. 3. We asked him if such minerals occurred in the Pamirs. 4. The head of the research laboratory said that he was not completely satisfied with the results achieved. 5. When I was leaving Moscow my adviser asked me whether I would have any opportunity to go on with my work. 6. I always believed that one day the explanation of the fact would be found. 7. We were told that we should have to consult the schedule. 8. It was decided that every member of the club would attend all the meetings. 9. He said he would return home about 3 o'clock. 10. We asked him whether it was possible to master a foreign language in such a short time. 11. The professor asked him why he had chosen, of all professions, one in nuclear physics. 12. The professor asked the student if he had had any experience in physics research.

Упражнение 12. *Ответьте на следующие вопросы.*

1. Is there anything to the right of you? 2. Is there anything to the left of you? 3. Do you have any English books at home? 4. Will you go anywhere tomorrow evening? 5. Can you see anything through the window? 6. Will you bring any English newspaper tomorrow? 7. Do you know any French words? 8. Is there any picture in your room? 9. Are you expecting anybody to come to your place? 10. Did anybody advise you to enter this Institute? 11. Is there anything in the right corner of the room? 12. Is there anybody behind you?

Упражнение 13. *Переведите следующие предложения на русский язык.*

1. He has no experience in this field. 2. It didn't occur to him that he was wrong. 3. You can take any bus from here to the station. 4. Have you got any Russian-English dictionary? 5. There aren't any institutes in this town. 6. Although it was December there was no ice on the rivers. 7. Has anybody made mistakes in this sentence? 8. Nobody was interested in the problem then. 9. No construction was going on at that period. 10. I couldn't find the explanation

of this fact anywhere. 11. Any number of people can be included in the experiment. 12. Such a scale of construction has been achieved nowhere else. 13. He asked if he would be given admission to the meeting of the committee. 14. He said that he had tried to telephone him several times, but nobody had answered the telephone in his office. 15. He explained that they hadn't come to the meeting place in time because they had been shown a wrong way. 16. He asked me whether I could wait for him while he was looking through the papers which his secretary had put on his table. 17. He explained that the task was very complicated and asked me if I would be able to carry it out. 18. In the interview with the students the head of the department tried to find out what had made them choose this profession.

РАБОТА НАД СЛОВООБРАЗОВАНИЕМ

Упражнение 14. *Переведите следующие производные слова согласно моделям.*

Модель 10: *основа существительного* + **-ous** → *прилагательное*

monotony — монотонность	**monotonous** — монотонный
nerve — нервы	nervous
danger — опасность	dangerous
ceremony — церемония	ceremonious
religion — религия	religious
glory — слава	glorious
harmony — гармония	harmonious

Модель 11: *основа глагола* + **-ance/-ence** → *существительное*

+ **-ant/-ent** → *прилагательное*

to differ — различаться	**difference** — различие, **different** — различный
to insist — настаивать	insistence, insistent
to depend — зависеть	dependence, dependent
to correspond — соответствовать	correspondence, correspondent
to resist — сопротивляться	resistance, resistant
to assist — помогать	assistance, assistant
to signify — иметь значение	significance, significant

Упражнение 15. *Переведите следующие предложения и словосочетания.*

absence — отсутствие — John is absent.
confident — уверенный — I have no confidence in you.
competence — компетентность — a competent specialist
an incompetent person
prudent — осторожный — necessary prudence
ignorance — невежество — an ignorant person
to coexist — сосуществовать — peaceful coexistence
coexistent countries
conscience — совесть — a conscientious person
contempt — презрение — a contemptuous smile
curiosity — любопытство, любознательность — a curious person
access — доступ — an accessible mountain
accessibility of the mountain
acute — острый — acuity of hearing
to accept — принимать — acceptable terms *(условия)*
acceptability of terms

Упражнение 16. *Найдите в тексте слова, имеющие общий корень со словами, данными перед текстом, определите части речи, к которым они относятся, переведите их, затем переведите текст.*

to equip — оборудовать — to execute — исполнять
proper — правильный — entire — весь, целый
improvement — усовершенствование — to contribute — вносить вклад
able — способный

UNICEF

UNICEF, the United Nations International Children's Fund, is an international organization which was established in 1946. Its primary function is to improve the health and living conditions of the children of those countries which ask for UNICEF assistance. It is governed (управлять) by the executive board (совет) of 30 nations and financed entirely by contribution from both governments and individuals. UNICEF provides equipment and medicine (лекарство). It provides for children who are unable to obtain the vital (необходимый) food. It teaches mothers how to care properly for the children.

TEXT 5B

Задание I. *Прочтите текст, стараясь понять основное содержание. (Заметьте время начала и окончания чтения. Этот текст нужно прочитать за 4 минуты, из расчета 80 слов в минуту.)*

ALEXANDER GRAHAM BELL

Alexander Graham Bell was born in Edinburgh in 1847. His father was a world-famous teacher of speech and the inventor of a system which he called "Visible Speech". It helped deaf (глухой) persons to pronounce words they could not hear. Alexander chose the same profession, and as his father became a teacher of the deaf. He moved to the United States and began to teach deaf children to speak. At the same time he worked at improving his father's invention.

In 1866, the nineteen-year-old Bell started thinking about sending tones (звуки) by telegraph. It was then that there came to his mind the idea of the "harmonic telegraph", which would send musical tones electrically from one place to another. Bell was not a scientist. So he had to give all his energy and time to one thing only — knowledge of electricity. There was little time for rest and little time to eat. Hour after hour, day and night he and his friend Watson worked at testing and experimenting with the telephone. Sometimes it worked and sometimes it did not.

"We have to do something to make our telephone work better," Bell used to say again and again.

At last they decided to try a new kind of transmitter (микрофон). The new transmitter was set (устанавливать) in Bell's bedroom. Watson was sitting in the laboratory. He put his ear to the receiver (трубка) and was waiting. Suddenly he heard Bell's voice. And not the voice only but the words too.

"Mr. Watson, come here. I want you."

It was on the 10th of March, 1876. Alexander Graham Bell had invented the telephone.

In a few years there were telephones all over the world. In 1915, the first transcontinental telephone line was opened. Graham Bell, a very old man now, sat in New York at a desk with a telephone before him, while his friend Watson was listening more than three hundred thousand miles away in San Francisco. People were interested what speech Bell had prepared for that great day, on which the telephone

invented by him was to carry from the Atlantic coast to the Pacific.

Bell was sitting in a big hall; there were many people in it. Everyone expected to hear a serious, scientific speech. Suddenly everybody heard his clear voice as he spoke into his old transmitter, "Mr. Watson, come here. I want you." He repeated the words which he had said almost forty years ago. Much to the amusement (удовольствие) of the people Watson answered, "I would be glad (рад) to come, but it would take me a week."

Задание II. *Выберите утверждение, соответствующее содержанию текста.*

1. Alexander Bell was:
   1) an engineer; 2) a teacher; 3) a doctor.
2. He worked at inventing:
   1) a radio-set; 2) a tape-recorder; 3) a telephone.
3. He worked at it:
   1) alone; 2) with his friend; 3) with a group of scientists.
4. The first transcontinental telephone line was opened between:
   1) New York and San Francisco; 2) Paris and London; 3) Rome and Berlin.
5. 1) The test was a great success; 2) Bell heard Watson very badly; 3) The telephone line did not work at all.

Задание III. *Прочтите текст еще раз и ответьте на следующие вопросы.*

1. What did Alexander Bell's father invent and what was it used for? 2. Whom and where did Alexander Bell teach? 3. What did Alexander Bell begin to work at when he was nineteen years old? 4. What device did A. Bell use after which his invention began to work well? 5. How many years later was the first transcontinental telephone line opened? 6. Who made the first test of the transcontinental telephone line between New York and San Francisco? 7. What did Bell say on the opening of this line and what impression did it make on the listeners?

TEXT 5C

Задание I. *Прочтите текст, отыскивая в нем ответы на поставленные вопросы.*

LITTLE-KNOWN FACTS ABOUT WELL-KNOWN PEOPLE

Was Einstein a capable or a backward (умственно отсталый) **child?**

1. Albert Einstein is one of the greatest scientists of our age, yet in his childhood he was slow, shy and backward. He found it extremely difficult to learn even to talk.

What kind of life did Einstein lead?

2. Later he became one of the most famous men in the world. The Theory of Relativity brought him fame on five continents. Yet, he led a very simple sort of life, went around in old clothes, and seldom wore a hat. He said that he did not care for fame or riches. The captain of a transatlantic ship once offered Einstein the most expensive rooms on the ship; Einstein refused and said he would rather travel on deck than accept any special favours (привилегия).

What brought Einstein more joy than anything else?

3. Einstein impressed everybody as being a very happy man. He said he was happy because he didn't want anything from anybody. He didn't want money or titles or praise. He made his own happiness out of such simple things as his work, his violin and his boat. Einstein's violin brought him more joy than anything else in life. He said he often thought in music.

By what illustration did Einstein explain his Theory of Relativity?

4. Einstein's Theory of Relativity, which seemed a flight of imagination (полет воображения) to many at first is now the cornerstone of modern physics. Many physical phenomena could never be explained without the Theory of Relativity.

Einstein said that there were only twelve people living who understood his Theory of Relativity, although more than nine hundred books have been written trying to explain it.

He himself explained Relativity by this very simple illustration: "When you sit with a nice girl for an hour, you think it is only a minute; but when you sit on a hot stove for a minute, you think it is an hour. Well, well — so that's relativity. It sounds all right to me; but if you don't

believe me and would like to try it out (хотели бы проверить), I'll be glad to sit with the girl if you'll sit on the stove."

What two rules of conduct did Einstein have?

5. Einstein was married twice. He had two sons by his first marriage, both brilliant boys.

Mrs. Einstein said that even she didn't understand the Theory of Relativity; but she understood something that is more important for a wife; she understood her husband.

Mrs. Einstein said that her husband liked order in his thinking, but he didn't like it in his living. He did whatever he wanted to, whenever he wanted to, he had only two rules of conduct (поведение). The first was: don't have any rules whatever. And the second was: be independent of the opinions (мнение) of others.

Задание II. *а) Выскажите свое мнение по следующим вопросам.*

1. What fact of Albert Einstein's biography do you consider most interesting? 2. Which feature of Albert Einstein's character impresses you most of all? 3. Can you say that Albert Einstein was a man of contrasts?

б) Перескажите текст 5С на английском языке.

TEXT 5D

HEINRICH SCHLIEMAN

1. Heinrich Schlieman was one of the world's most extraordinary men. From early childhood he wanted to find Troy, to prove that the Greece of Homer was fact not myth. He had to overcome many difficulties — poverty, illness, lack of education to achieve the goal. He trained himself as an archaeologist, he was a genius at languages. His mind was brilliant, his energy immeasurable. He walked the Great Wall of China and penetrated the jungles of Mexico and Peru.

2. His wife Sophia was his partner in all the excavations. The book devoted to their life covers their tremendous discoveries and excavations. Troy came first. At Troy they discovered, in Priam's palace, the great treasure of more than 10,000 pieces. Schlieman offered the treasure to the British museum, which refused it, ultimately it went to Berlin and disappeared at the end of the Second World War.

(...) Work progressed rapidly through the long days. And in late spring, 1873, came the day that justified their hopes.

3. Sophia and Heinrich were digging together but without a crew on a level flagstone floor between two walls. One was the wall of the house that Heinrich thought was the Palace of Priam, the other, a high fortification wall. Heinrich standing apart from Sophia, struck metal, a strike that brought the most sensational archaeological news of the nineteenth century. He called to her. In a moment she stood beside him, looking at a big copper object of a most peculiar shape. Then she too saw a glint of brighter metal. Without speaking, she helped Heinrich dig into the wall. On top of it there was a layer of red ruins, about five feet thick and hard as stone. The fortification wall rested on that layer.

4. The copper object was finally freed from the earth, and the Schliemans stared in the hole. Gold gleamed from it. Heinrich turned to Sophia, his back to the opening. Soundlessly his lips formed the words: None must see it.

In a whisper he told Sophia to tell the workmen to have extra time to rest in honour of his birthday. After that Sophia returned. Together they cut out the treasure with a large knife which it was impossible to do without the greatest risk to their life, for the fortification wall threatened every moment to fall down. As a jumble of gold, silver and copper objects began to pile up Sophia took the treasure to their room in her big red shawl.

5. In their room they began to examine the more than 10,000 precious objects they had dug out from the earth that morning.

Heinrich and Sophia picked up a huge silver vase. Lifting the vase to eye level Heinrich shook the heavy object. His fingers explored the inside of the neck of the vase, and gently pulled out from it gold so glorious that Sophia involuntarily cried out.

Heinrich held two diadems, Sophia slid her hand into the vase and pulled out four golden earrings.

Heinrich impulsively tilted the silver vase, and thou-

sands of tiny objects tumbled to the table. When the tiny gold treasures were counted, they numbered 8,700.

Задание I. *Ответьте на вопросы по тексту 5D. Правильность ответов проверьте в соответствующих частях текста.*

1. Why did Heinrich Schlieman want to find Troy? (1) 2. Was it easy for him to achieve his goal? (1) 3. What did his wife and he discover at Troy? (2) 4. What happened to the Troy treasures? (2) 5. When were the Troy treasures discovered? (2) 6. What were the two walls they were digging between? (3) 7. What did they see in the hole? (4) 8. Why did they give the workmen extra time to rest? (4) 9. How did Sophia take the treasure to their room? (4) 10. What did the huge silver vase contain? (5)

КОНТРОЛЬНЫЙ СЛОВАРЬ

1. ability (*n*); 2. abolition (*n*); 3. about (*adv, prep*); 4. as follows; 5. avoid (*v*); 6. back (*adv*); 7. believe (*v*); 8. care (*v*); 9. choose (*v*); 10. deserve (*v*); 11. die (*v*); 12. encouragement (*n*); 13. every (*a*); 14. excellent (*a*); 15. expect (*v*); 16. explosive (*n, a*); 17. form (*v*); 18. government (*n*); 19. injure (*v*); 20. justify (*v*); 21. kill (*v*); 22. make (*v*); 23. master (*v*); 24. meaning (*n*); 25. mine (*n*); 26. nuclear (*a*); 27. occur (*v*); 28. opportunity (*n*); 29. own (*a*); 30. plenty of; 31. probably (*adv*); 32. really (*adv*); 33. respect (*v*); 34. scientist (*n*); 35. seldom (*adv*); 36. suddenly (*adv*); 37. then (*adv*); 38. threat (*n*); 39. time (*n*); 40. too (*adv*); 41. used to; 42. useless (*a*); 43. war (*n*); 44. while (*cj*); 45. win (*v*)

LESSON 6 (SIX)

Грамматика: 1. Причастие I и II (Participle I, II).
2. Независимый причастный оборот.
Основной текст A: Moscow, the Heart of the USSR.

Причастие

Participle I			Participle II	
Indefinite	Active	Passive	1. основа стандартного глагола + -ed	asked
	asking	being asked		
Perfect	having asked	having been asked	2. особая форма для нестандартных глаголов	gone

Упражнение 1. *а) Образуйте Participle I (Indefinite, Active) от следующих глаголов и переведите их на русский язык.*

to build, to grow, to think, to bring, to determine, to follow, to move, to refuse, to obtain, to contain, to produce, to use, to include, to offer, to enter, to get, to happen, to carry, to teach, to tell, to make, to begin, to keep, to divide, to return, to develop, to save

б) Образуйте Participle II от следующих глаголов и переведите их на русский язык.

to find, to send, to throw, to add, to change, to keep, to take, to save, to maintain, to install, to consider, to burn, to achieve, to show, to develop, to decide, to receive, to leave, to equip, to divide, to return, to write, to read, to make, to do, to give, to see, to say, to speak

Упражнение 2. *Прочтите и переведите на русский язык следующие словосочетания, обращая внимание на причастия.*

a) the student attending all the lectures; the plan containing many details; the workers building a new house; the engineer using a new method; the car developing the speed of 80 km; the plant producing machinery; the growing population of the country; the student studying foreign languages; the young man entering the Institute; the engineer carrying out the research

b) using new methods; constructing new machines; achieving good results; dividing the apple into three parts; dis-

covering new lands; using new equipment; refusing to give an explanation; receiving important information; constructing new roads; moving at high speed; leaving the town; graduating from the Institute

c) having entered the Institute; having calculated the distance; having developed the speed of 120 km; having introduced new methods of work; having decided to leave the city; having divided the apple into three parts; having installed a new equipment; having obtained the necessary information; having found the new way; having changed his behaviour; having offered her his help; having passed all examinations; having returned home

d) the achieved results; all developed countries; the apple divided into three parts; the information obtained recently; the railway built between the two towns; the boy saved by his dog; help offered by the teacher; the lecture read by a well-known professor; the research made in the laboratory; the film shown to the students; the letter sent to his parents; the book left on the table; the news brought by him; the land discovered by Columbus

Независимый причастный оборот

I. подлежащее + причастие The work being finished,	подлежащее + сказуемое they went home.
II. подлежащее + сказуемое The new method was tried,	подлежащее + причастие better results being obtained.

Упражнение 3. *Переведите следующие предложения на русский язык, обращая внимание на независимый причастный оборот.*

1. Some hydroelectric stations having been built on big rivers of the USSR, many villages and towns were electrified. 2. The working day being over, the city transport was overcrowded. 3. They all went away, he remaining at home. 4. All the problems having been solved, they stopped the discussion. 5. Nobody being on the highway, he was driving his car very fast. 6. The experiment having been made, everybody was interested in the results.

VOCABULARY NOTES

Задание I. *Переведите следующие предложения.*

1. **to found** — основывать. By whom was Kiev founded?
2. **seat** — место, местоположение. Where is the seat of the USA Government?

to seat — вмещать. The new theatre seats 800 people.

3. **permanent** — постоянный. John could not get permanent work for a long time.
4. **number** — 1) число, количество; 2) номер. 1) He has a great number of old books. 2) What is the number of your telephone?
5. **carefully** — 1) осторожно; 2) тщательно. 1) He got into an automobile accident because he did not drive his car carefully. 2) They made an analysis of a new substance very carefully.
6. **capital** — столица. Moscow is the capital of the USSR.
7. **scale** — масштаб. This map has a scale of one centimetre to a hundred kilometres.
8. **construction** — строительство, сооружение. The construction of a new factory was started last year.
9. **to perform** — делать. The doctor performed a difficult operation.
10. **recent** — недавний. Much research work has been carried out in recent years.
11. **to calculate** — вычислять. How was the distance to Mars calculated?
12. **population** — население. The population of this country has grown considerably in recent years.
13. **increase** ['ınkri:s] — увеличение. There was an increase in the number of road accidents in winter.

to increase [ın'kri:s] — увеличивать(ся). The interest to the achievements of the Soviet Union is steadily increasing throughout the world.

14. **facilities** (*pl*) — 1) оборудование; сооружения; 2) возможности, благоприятные условия. 1) Our laboratory is equipped with all modern facilities. 2) The tourists were provided with all facilities for rest.
15. **previous** — предыдущий. Great attention was given to this problem in his previous article.
16. **to facilitate** — облегчать. The calculations were facilitated by the use of a computer.
17. **rapid** — быстрый. There was a rapid increase in traffic in all big cities of the country.

18. **channel** — 1) канал; 2) пролив. 1) The construction of the Volga-Don channel was successfully completed in 1957. 2) The English Channel is between France and Great Britain.

19. **major** — главный, крупный. Do you know all major cities in Great Britain?

20. **feature** — особенность, характерная черта. What is the main feature of your friend's character?

21. **establishment** — создание. The establishment of the information centre will help to carry out important research.

22. **branch** — 1) отрасль; 2) ветвь, ветка. 1) What branches of industry are being developed in the Urals? 2) The child hid (спрятаться) among the branches of the tree.

23. **quality** — качество. We have recently received instruments of high quality.

24. **to exist** — существовать. Such substance doesn't exist on the Earth.

25. **successful** — удачный. Was your experiment with the new machinery successful?

26. **to solve** — решать. This problem has been solved at last.

27. **although** — хотя. Although they tried hard, they failed to do it.

28. **to expand** — расширять(ся). Metals expand when heated.

29. **considerable** — значительный. We have received considerable information on the properties of this substance.

30. **district** — район. He lives in a new district of the city.

31. **reason** — причина. What reasons do you have to think so?

32. **improvement** — улучшение, усовершенствование. This method still needs improvement.

33. **convenient** — удобный. The bus service is convenient here.

34. **means** — 1) средство; 2) способ. 1) What means of communication exist in the modern world? 2) It is the only means of doing it.

35. **length** — длина. The length of the room is 3,5 metres.

36. **route** — маршрут. The length of the route of bus 55 has been increased by 3 km recently.

37. **to link** — соединять. The first railway in Russia linked Moscow and Petersburg.

link — связь. The telephone link with the mountain village was broken.

38. **several** — несколько. He has several important reasons to refuse to come.

39. **instead of** — вместо. Instead of sending a letter he sent a telegram.

40. **to unite** — объединять. The USSR unites 15 national Soviet Socialist Republics.

41. **task** — задача, задание. The teacher gave the pupils a very difficult home task.

42. **within** — в, внутри, в пределах. Motor cars maintain the speed of 60 km within the city limits.

43. **significance** — значение. Mendeleyev's table of elements is of great significance to science.

44. **valuable** — ценный. He gave us valuable information.

45. **to remain** — оставаться. Road safety remains one of the most important problems in the modern world.

Задание II. *Прочтите следующие интернациональные слова и догадайтесь об их значении.*

political, administrative, economic, cultural, international, academy, museum, theatre, club, architectural, monument, territory, plan, industry, communal, sports, reconstruction, social, technology, migration, trolley-bus, comfortable, polycentric, monocentric, modern, zone, traditional, complex, public, harmony

TEXT 6A

Задание. *Прочтите и переведите текст.*

MOSCOW, THE HEART OF THE USSR

1. Founded in 1147 by Prince Yury Dolgoruky, Moscow has become the largest political, administrative, economic and cultural centre, the railway, highway and international airway crossroads. Moscow is the seat of the Soviet Government, one of the world's cultural, scientific and art centres, the seat of the Academy of Sciences of the USSR, with its numerous institutes, laboratories and other research institutions, of thousands of libraries, museums and permanent exhibition halls, of hundreds of theatres, clubs, houses and palaces of culture. Moscow has a great number

of historical and architectural monuments that should be carefully preserved.

2. Moscow is nearly 850 years old, but never before has our capital seen such a scale of construction as has been performed in recent years. The Draft Plan for its development calculated for the period up to 2000 has been worked out with an eye to [1] the city's future growth. By that time Moscow's territory will exceed 1,000 square kilometres and its population will reach almost 10 million. It is planned to build 48 million square metres of floor space, which will guarantee a comfortable flat for every Moscow family. The increase in housing is given a special place in the plan. Tens of thousands of families have already obtained better housing facilities. Present-day housing projects are essentially different from those of previous years. Moscow today has an adequate building materials industry which facilitates rapid building.

3. Alongside housing, much is to be done in the next years for the further development of cultural and educational institutions, health services, trade, communal and other services.

Great attention is paid to the physical culture activities. Moscow's sports facilities make it possible for athletes in all sports to train and hold large competitions. Among them — a rowing channel, a unique roofed stadium,[2] seating 35,000-40,000 people, the biggest swimming pool in the country as well as other sports centres. However, there is still sharp need in facilities for organizing physical culture and sports activities on a mass scale for children, teenagers and adults of all professions.

4. A major feature of Moscow's development is the establishment of the industries requiring highly-skilled labour,[3] and the branches producing high-quality consumer goods,[4] as well as the development of plasma, laser, electron-beam and other promising technologies. Much attention is also paid to the reconstruction of the industrial facilities which already exist. The successful implementation of the plan will provide for the comprehensive economic and social development of the capital.

5. Transport is a serious problem for all large cities in the world. The capitals of the major capitalist states are often unable to solve this problem. Moscow also has a transport problem. The territory of the capital has expanded considerably in the last few years and with it came the large-scale migration of the population. Every year a lot of

Muscovites move from one district to another, when they get new flats, and for other reasons. All that calls for the further development and improvement of the city's transport services.

The plan provides for the further development of the Metro, which is the most convenient means of transport. The total length of trolley-bus and bus routes being increased, a considerable number of comfortable trolley-buses and buses are to be added to the capital's passenger service.

Roads constitute another aspect of the transport problem. Having taken the decision to reconstruct many of the existing streets and build new roads we have already started the construction of new roads, which will link several of the city's districts between the Moscow Circular Highway and the Sadovoye Ring Road.

The plan provides for polycentric planning for the modern capital instead of traditional monocentric system. According to this planning Moscow complex zones are united by a system of the general city centre.

6. One of the main tasks in the development of Moscow is the reconstruction of the city's centre around the Kremlin. The territory within Sadovoye Ring Road will retain its significance as the city's historic-revolutionary, cultural, educational and administrative public centre. All the valuable architectural monuments as well as its parks, boulevards and old streets with their unique buildings will remain untouched. The main concern of the architects is to achieve harmony between old and new. Moscow must become a city which will provide the people with every comfort and facilities for labour and rest.

NOTES TO THE TEXT

1. **with an eye to** — *зд.* с учетом
2. **a unique roofed stadium** — уникальный крытый стадион
3. **highly-skilled labour** — высококвалифицированный труд
4. **consumer goods** — товары народного потребления

Упражнение 4. *Ответьте на вопросы по тексту 6А.*

1. When was Moscow founded? 2. Where is the seat of the Soviet Government? 3. How has the Draft Plan been worked out? 4. What will guarantee a flat for every Moscow family? 5. How many people will live in Moscow in 2000?

6. How do present-day housing projects differ from those of previous years? 7. What is the major feature of Moscow's industrial development? 8. What are well-known sports facilities in Moscow? 9. Why is transport a serious problem for large cities? 10. Why does the plan provide for the further development of the Metro? 11. What new roads will be built in Moscow? 12. Why will the territory within Sadovoye Ring Road remain untouched?

Упражнение 5. *Вставьте глаголы, подходящие по смыслу, в соответствующей грамматической форме.*

to increase, to expand, to remain, to exist, to solve, to calculate, to found, to perform, to link, to seat

1. Moscow University was ... in 1755. 2. We cannot ... without air. 3. The new road will ... several districts. 4. The theatre ... two thousand people. 5. The child did not want to ... at home alone. 6. Nothing ... of the house, it was completely ruined. (to ruin — разрушать) 7. Many significant problems in transport have been ... since 1970. 8. Our country ... cultural links with other countries. 9. He ... how much a travel to France would cost. 10. The professor ... an operation for two hours. 11. The cultural exchanges are being ... from year to year.

Упражнение 6. *Вставьте существительные, подходящие по смыслу.*

scale, feature, attention, length, branches, establishment, reason, facilities, quality, significance, means, link, route

1. In his report the lecturer gave great ... to the further development of heavy industry. 2. Many young specialists work in different ... of national economy. 3. Reading a book on travelling the boy got interested in the geographical ... of the country. 4. It was broadcasted yesterday about the ... of a new state in Africa. 5. The workers were speaking about the improvement of the ... of construction materials. 6. What is the shortest bus ...? 7. Nobody realized the real ... of his discovery. 8. What is the ... of this map? 9. The ... of the channel is 30 km. 10. What is the ... for his being late? 11. Much money was spent on improving production ... . 12. The ... between the past and the future is very strong. 13. Much attention is given to the development of different ... of transport in the city.

Упражнение 7. *Дайте возможные сочетания следующих прилагательных и существительных.*

rapid	information	successful	factor
considerable	links	major	analysis
several	quality	previous	knowledge
convenient	river	careful	years
valuable	years	great	experiment
permanent	time	recent	attention

Упражнение 8. *Подберите пары синонимов.*

A. 1. many; 2. to think; 3. total; 4. to happen; 5. essential; 6. usual; 7. land; 8. to decide; 9. although; 10. everywhere; 11. to; 12. to get; 13. to store; 14. two times; 15. strong

B. 1. ground; 2. powerful; 3. ordinary; 4. twice; 5. to keep; 6. main; 7. to obtain; 8. towards; 9. to take place; 10. to consider; 11. throughout; 12. all; 13. though; 14. numerous; 15. to determine

Упражнение 9. *Найдите в каждом ряду слово, перевод которого дан в начале ряда.*

1. **значение** a) establishment, b) significance, c) reason, d) capital
2. **маршрут** a) route, b) scale, c) channel, d) feature
3. **качество** a) reason, b) quality, c) member, d) influence
4. **решать** a) to master, b) to turn, c) to solve, d) to obtain
5. **соединять** a) to link, b) to clear, c) to care, d) to split
6. **средство** a) branch, b) improvement, c) means, d) length
7. **несколько** a) permanent, b) each, c) enough, c) several
8. **район** a) facility, b) district, c) admission, d) discovery
9. **расширять(ся)** a) to exist, b) to remain, c) to seat, d) to expand
10. **облегчать** a) to unite, b) to go on, c) to facilitate, d) to wear

Упражнение 10. *Найдите русский эквивалент каждого английского слова.*

A. 1. to win; 2. successful; 3. piece; 4. feature; 5. that is why; 6. to facilitate; 7. job; 8. previous; 9. used to; 10. to expand; 11. to justify; 12. significance; 13. to expect; 14. valuable; 15. behind; 16. convenient; 17. to believe; 18. to choose; 19. towards; 20. plenty of

B. 1. поэтому; 2. облегчать; 3. оправдывать; 4. работа; 5. расширять; 6. множество, изобилие; 7. значение; 8. позади; 9. выиграть; 10. ценный; 11. верить; 12. особенность; 13. по направлению к; 14. предыдущий; 15. бывало; 16. успешный; 17. ожидать; 18. удобный; 19. выбирать; 20. кусок

Упражнение 11. *Переведите следующие словосочетания:*

to found a city; a great number of pictures; room number 14; to study the materials carefully; the capital of a country; construction work on a large scale; recent years; to carry out necessary work; successful research; to give much attention to education; similar features; major branches of industry; existing states; the increase of speed; to facilitate the construction; rapid development; numerous channels; to solve the problem; although it was late; the population has grown considerably; important reason; to improve the system of education; a convenient way; a safe means of transport; the length of the river; to link several countries; to use electricity instead of steam; to unite peoples; within the traffic system; valuable knowledge; permanent task; previous years; several reasons

Упражнение 12. *Переведите следующие предложения на русский язык, обращая внимание на причастия.*

1. He heard the voices coming through the open window. 2. Waiting for him I looked through the magazines lying on the table. 3. They remained at home refusing to go anywhere that day. 4. The channel linking the two seas is being built now. 5. The explanation given was not complete. 6. The new materials recommended for bridge construction were described in the article written by our professor. 7. The results received were of great importance for further work. 8. A balsa tree found in South America is lighter than any other. 9. Having passed all the examinations he left for Kiev. 10. Having been shown the wrong way I could not find his house. 11. Having waited for him for half an hour they went home. 12. Having obtained the necessary results they stopped their experimental work. 13. When studying elements Mendeleyev found that they could be divided into nine groups. 14. When writing a telegram we must use as few words as possible. 15. When burnt coal produces heat. 16. When reconstructed the theatre looked more beautiful than before. 17. Being built in a new way modern houses have better facilities. 18. Being obtained in the laboratory

the new substance had some valuable properties. 19. Being well prepared for the examinations the students could answer all the questions asked by examiners. 20. The population of the city increasing, much attention must be paid to housing construction. 21. No essential results having been obtained, the scientists had to carry out some more experiments. 22. A site for the construction having been chosen, the work started. 23. The translation of the report having been finished, he showed it to the author. 24. The train starting, I ran to catch it. 25. He works hard to pass his entrance examinations, his sister doing her best to help him.

Упражнение 13. *Переведите следующие словосочетания на английский язык.*

а) профессор, читающий лекцию; студент, изучающий английский язык; методы, улучшающие исследовательскую работу; девочка, спрашивающая дорогу; инженер, знающий два иностранных языка; человек, предлагающий свою помощь; мальчики, играющие на улице; студент, сдающий экзамен; народ, строящий новую жизнь; развивающиеся страны; инженер, использующий новые достижения; завод, увеличивающий производство; расширяющиеся газы

б) студент, спрошенный преподавателем; книга, оставленная дома; книга, взятая в библиотеке; университет, основанный Ломоносовым; письмо, найденное в столе; телеграмма, посланная матери; часы, сделанные в Советском Союзе; машина, сконструированная молодым инженером; железная дорога, построенная молодыми рабочими; усовершенствованные методы работы; оборудование, установленное в лаборатории; экзамен, сданный успешно; проблема, решенная успешно

в) изучая иностранный язык; читая книгу; посещая лекции; сдавая экзамены; строя дороги; увеличивая скорость; объединяя народы; отказываясь помогать; устанавливая новое оборудование; производя новые автомобили; покидая город; двигаясь быстро; улучшая уличное движение; оставаясь дома

г) изучив один иностранный язык; прочитав интересную книгу; оставив книгу дома; окончив институт; окончив работу; получив новую информацию; построив дорогу; открыв новый элемент; решив важную проблему; расширив связи с другими странами; получив письмо; оставшись дома; закрыв дверь; увеличив скорость; соединив две части города; объединив всех прогрессивных людей

Упражнение 14 *(обзорное). Переведите следующие предложения на русский язык.*

1. I shall still be translating this long article when you come. You will have to wait until I finish. 2. He said he had already translated the article that the teacher had given him. 3. You may ask comrade Pestov to help you with the translation. He usually translates articles from English into Russian. 4. You have come early. Your article is still being translated because it is long and difficult. 5. When translated, his article on chemistry was sent to the International Chemical Congress. 6. Being translated into many foreign languages Gorky's works are read with great interest all over the world. 7. Translating the English article into Russian he looked up the words in the dictionary. 8. Having translated the article from the newspaper he showed it to the teacher. 9. What is he doing? He is translating some article from a foreign journal. 10. The article was difficult. He was translating it all day yesterday. 11. I have just translated an interesting article from the newspaper. You may have a look at it. 12. The article having been translated, he could read some book for pleasure.

Упражнение 15. *Постройте всевозможные вопросы и ответы, пользуясь таблицей.*

Образец:

Вопрос:	How do you go		to the Institute?
How does	he she your father his sister her brother your friend	go	to the office? to school? to the centre of the city? to the Institute? to the factory?
Ответ:	I go		there by Metro.
He goes She goes			there by trolley-bus. there by tram. there by Metro. there by bus. there on foot.

Упражнение 16. *Сделайте краткие сообщения на следующие темы.*

1. History of Moscow. 2. Moscow, the city of the world's culture, science and art. 3. Moscow as an industrial centre. 4. Transport in Moscow. 5. House-building in Moscow.

Упражнение 17. *Расскажите о своем родном городе или о городе, который вам нравится, используя следующие слова и словосочетания.*

to be born; to like very much; fine city (town); major; to found; wide streets; beautiful squares; valuable monuments; theatre; stadium; channel; houses with modern facilities; rapid building; population; means of transport; several new districts; important industrial centre; plant; factory; construction

РАБОТА НАД СЛОВООБРАЗОВАНИЕМ

Упражнение 18. *Переведите следующие производные слова.*

Модель 12: *основа глагола* + **-ing** → *существительное*

to open — открывать	**opening** — открытие
to break — ломать	breaking
to repair — чинить	repairing
to measure — измерять	measuring
to build — строить	building

Модель 13: **re-** + *основа глагола* → *глагол, означающий повторное действие*

to read — читать	**to reread** — перечитывать, прочитать заново
to form — формировать	to reform
to cover — покрывать	to recover
to do — делать	to redo
to elect — избирать	to reelect
to establish — устанавливать	to reestablish

Упражнение 19. *Переведите следующие словосочетания.*

to reconstruct the old house; to reconsider the problem; to reinstall the motor; to re-use the substance; to recalculate the program; to reunite the country

to design — конструировать	a designer of the ship
occasion — случай	occasional meetings we meet occasionally
to communicate — сообщаться	modern communications

fertile — плодородный
to corrode — корродировать
pervious — проницаемый

fertility of the land
corrosive action
corrosion of metals
impervious to water

Упражнение 20. *Найдите в тексте слова, имеющие общий корень со словами, данными перед текстом, определите части речи, к которым они относятся, переведите их, затем переведите текст.*

to drive — водить машину
to observe — наблюдать
to collide — сталкиваться
to direct — направлять
to govern — управлять
immediate — немедленный

determination — определение

certain — определенный
subsequent — последующий
to vary — различаться
to pave — мостить
to mark — отмечать
to question — подвергать сомнению

In 1911 in Wayne County (округ), Michigan, an automobile driver observed a collision on a narrow bridge between a horse and a buggy (повозка) and an automobile going into opposite directions. Each of the drivers was sure that he was on his own side of the road. The observer was Edward Hines, the governor of the county. Mr. Hines immediately decided that it must be possible for drivers to determine with certainty where their side of the road was. He ordered a white line painted (рисовать) on the centre of every bridge and every curve (поворот) within his county. Subsequently he had his idea extended (распространять) to all the highways of the county. The centre line and various pavement markings have unquestionably saved many lives. They are now one of the most effective means of controlling traffic.

TEXT 6B

Задание 1. *Прочтите текст, стараясь понять основное содержание. (Заметьте время начала и окончания чтения. Этот текст нужно прочесть за 5 минут, из расчета 80 слов в минуту.)*

NEW YORK

New York is a city where all the languages of the world are spoken and where people live on the ground, travel under the ground and work in the sky.

New York makes a great impression on all visitors because of its many high buildings, its theatres, museums and hotels, its beautiful bridges, and its expensive shops with their fabulous (баснословный) prices.

The first permanent white settles (поселенцы) came to New York from Holland in 1626. It was these Dutch settlers who bought all of Manhattan Island (остров) from the Indians for the equivalent of twenty-five dollars, while today some of this land costs a million dollars an acre. This island is the heart of the city.

It is on Manhattan Island that most of the skyscrapers are located. This island is connected by six long bridges, as well as by tunnels and ferries (паром), with the other four districts that constitute New York City.

New York is the largest city in the United States. Today there are more people living in the New York City than in Australia, Peru or Sweden.

For transportation New York depends (зависеть) mainly on buses, the subway, taxis and ferries. The buses are slow because of the crowded streets, whereas the subway train can go as fast as railroad trains, sometimes stopping only at the most important stations. We may go all day by the subway for 50 cents, if we only change trains but do not go out of the stations.

New York moves vertically as well as horizontally, taking its people by elevator to their offices on the fortieth, sixtieth, and eightieth floor.

New York is the richest and the poorest, the most modern and the most old-fashioned (старомодный) of cities. It is the home of expensive hotels and cheap boarding houses, the home of symphonies and popular jazz, of cathedrals (собор) and night clubs; the home of famous Metropolitan Opera and the Metropolitan Museum of Art; the home of most of the largest publishing houses (издательство) of the United States and the biggest newspapers. On the Fifth Avenue there are many expensive stores of international fame, but around the corner one may find little shops where imitation diamonds and cheap souvenirs are sold.

New York is a city of immense (огромный) beauty and immense ugliness (уродство), a place where everyone is in a hurry and where no one seems to have time to live.

Задание II. *Выберите утверждение, соответствующее содержанию текста.*

1. The first permanent white settlers of New York were:
   1) from France; 2) from England; 3) from Holland.
2. The Manhattan Island is:
   1) in the centre of New York; 2) in the suburbs (пригород) of New York; 3) very far from New York.
3. The Island is connected with other parts of New York:
   1) by one long bridge; 2) by six long bridges; 3) by six short bridges.
4. The largest city in the USA is:
   1) Washington; 2) Chicago; 3) New York.
5. The subway trains move:
   1) as fast as railroad trains; 2) slower than railroad trains; 3) faster than railroad trains.

Задание III. *Сделайте краткие сообщения на следующие темы.*

1. The history of New York. 2. Manhattan Island. 3. Transport in New York. 4. New York — the city of contrasts.

TEXT 6C

Задание I. *Прочтите текст, отыскивая в нем ответы на поставленные вопросы.*

LENIN'S LINKS WITH LONDON

When did V. I. Lenin visit London for the last time?

1. V. I. Lenin came to London on five separate occasions (случай). He first came in April 1902 to continue the illegal publication of *Iskra*, after the activities of the German police had made it impossible to continue it in Munich.

He stayed for a year, but was again in London in July 1903, when the Second Congress of the Russian Social Democratic Labour Party had to be transferred (переносить) from Brussels because of the activities of the police there.

In April 1905, Lenin again came to London from Geneva to attend the Third Party Congress, and was in London again for the Fifth Party Congress in April 1907.

His last visit was in April-May 1908 to work at the British Museum gathering (собирать) material for his work *Materialism and Empiriocriticism.*

How did V. I. Lenin and N. K. Krupskaya learn English in Siberia?

2. In her *Memories of Lenin* his wife N. K. Krupskaya tells how, when they arrived in London, they "were met at the station by a comrade living in London in emigration, who had a fine knowledge of English." "At first," she goes on, "he acted as our guide (гид) as we were in rather a hopeless position by ourselves. We thought we knew the English language, having even translated a whole book from English into Russian, when we were in Siberia. There we learnt English from a teach-yourself book (самоучитель), but had never heard a single English word spoken."

How many languages did V. I. Lenin know actively?

3. Lenin began learning foreign languages in his childhood. His first teacher was his mother who knew French and German very well and taught them to each of her six children from the age of three or four. They used to have "language" days at home, when the whole family talked only German or French. At the secondary school Lenin improved his knowledge of German and French and added two more classical languages, Latin and Greek.

While living abroad, Lenin took every opportunity to polish his knowledge of foreign languages no matter what he did: worked in the libraries, met with social democrats or saw the sights. As a result Lenin had an active knowledge of nine languages, namely: German, French, Latin, Greek, Italian, Swedish, Czech, Polish and English.

How did V. I. Lenin divide his time in London?

4. "When we came to London we found we could not understand a single word, and nobody could understand us. At first this was very comical. So we had to learn all over again. We started to master English pronunciation (произношение) little by little, we went to meetings, where we listened to speeches in English, and to Hyde Park to listen to Englishmen making speeches, and we conversed with our landlady (хозяйка). We also exchanged lessons with two Englishmen. We taught them Russian and they taught us English."

Krupskaya helped Vladimir Ilyich with the correspondence, kept house, bought food, prepared meals.

Lenin divided his time between editing (редактирование) *Iskra*, looking through the correspondence that came illegally from Russia and studying in the British Museum Reading Room.

Where was the *Iskra* published?

5. It was possible to publish the *Iskra* thanks to the help gladly given by Harry Quelch, editor of the journal *Justice*, which was printed in the building now known as Marx House. Before Lenin's arrival in London, arrangements had been made with Harry Quelch for the publication of the *Iskra* in the editorial offices of the *Justice*.

The small room where Harry Quelch and Vladimir Lenin worked together in those days still stands and is kept as it was in their days in Marx House — a standing memorial to the cooperation between the socialist movements of Britain and Russia.

Задание II. *Прочтите текст еще раз и выделите в каждой части интересные для вас факты.*

Задание III. *Сделайте краткие сообщения на следующие темы.*

1. V. I. Lenin's visits to London. 2. V. I. Lenin's life in London. 3. Foreign languages in Lenin's life.

TEXT 6D

A FEW WORDS ABOUT ENGLISH TRADITIONS

1. When we arrived in London the day was fine and warm, there was a bright sun and a cloudless sky, but the general opinion abroad is that London has fog or rain, or both, every day of year. After a short rest we went for a drive about the city. We saw many places of interest, such as Trafalgar Square with Nelson's Column in its centre, the British Museum and the House of Parliament. When we drove into the Strand, which is one of the busiest London streets, we could see a long stream of cars, buses and taxis.

The newest and most comfortable cars ran side by side with old ones made more than twenty years ago.

2. The traffic regulations in Great Britain differ from ours; we are to keep to the right but in the streets of London you are to keep to the left. The street traffic is very heavy; it is much heavier than in Moscow. There are notice-boards at every crossing which show you the place where to cross the road: "Please, cross here", "Please, drive slowly". The streets of London were always of great interest to us. In some parts of London they look very much alike, as the houses are the same in style.

And sometimes the same street may have different names. For example—Grosvenor Street at Hyde Park is no longer Grosvenor Street a little farther, but Grosvenor Place, and when it comes nearer the Thames it is Grosvenor Road.

In the oldest part of London many streets are quite narrow and have strange names, as White Horse Street, Milk Street, Honey Lane and Cheapside.

3. The houses are not very big, they are mostly two-storeyed buildings with as many front doors and as many little gardens as there are lodgers in the house.

Imagine how surprised we were to see the windows of one and the same house painted in different colours. And not only the windows. Whole parts of houses were in different colour, that is, doors, steps and walls.

"What is the idea of painting houses in this way?" I asked.

"We don't notice such things. We are used to them. Everybody paints his own part of the house in the colour he likes best," was the answer.

In many English houses windows are different from ours. To open such windows, you have to raise or to lower them. One may ask why they have such kinds of windows. The thing is that the winds in England often become very strong, and may easily break windows of the kind we have.

Though central and electrical heating is found in many houses of London you may often see a fireplace in English houses. I asked my English friend, "Why must you have open fires in the houses?" He laughed and said, "What shall we do without them in the evenings?"

This was, of course, a joke but it helped me to understand the whole thing. The fireplace is a symbol of a happy family life in England, Englishmen are fond of spending their evenings round the fire. This is an old tradition. They won't go to bed before the fire goes out and the room grows cold.

4. The next day was Sunday. Sunday is a very quiet day

in London. Most shops are closed and so are the theatres and most of cinemas. Londoners like to get out of town on Sundays. There are thousands of cars on the roads into the country. The south coast is only fifty or sixty miles away and people like to go down to the sea for the day.

Our English friends took us to Brighton. We enjoyed the journey but not the swimming because the water was very cold.

5. When we drove out of town, we noticed here and there, young men and women riding on bicycles. We were told that those were members of sports clubs. Our attention was also attracted by cars standing along both sides of the road. Whole families were sitting nearby with baskets before them. It was half past one and they were having lunch.

"But what is that, over there?" one of us asked. "It looks very much like a house on wheels."

"We call it a caravan," our English friend explained, "a whole family can sleep in a caravan and prepare their meals when they go on a trip. But I must say that a caravan costs a lot of money and few people can buy one."

"Well, there are many ways to have a good rest," he continues, "one may go to the country by train or even on a bicycle. Many people in England spend their holidays in the country. It is a tradition with us."

6. Then we began talking about cars. As I had noticed many old cars on the road, I said, "Aren't they ashamed of such cars?"

"Ashamed? Why, they are proud of them! You see, there is a tradition even about old cars. Every year they hold a rally from London to the town of Brighton. Only the oldest cars are allowed to take part in it. A rally like that is very funny, indeed."

7. The English certainly have many traditions, manners and customs of which they can be proud and English humour is one of them. It is ironical, often directed against oneself in a self-critical way.

Obraztsov, the Russian actor, observed the English type of humour very carefully, telling the following little story as an illustration:

"While I was in England, I always took my camera with me and I tried to take shots of everything I saw, particularly everyday life. One day, I set off for Petticoat Lane. One of the passengers in the bus in which we were travelling was gaily telling us that this market had, for a long time, been notorious for its thieves; when a woman came out of

the market she had been offered her own petticoat at a reduced price, the very same petticoat which she had been wearing when she came into the market. Hence the name. The conductor appeared to be paying no attention to our conversation and was whistling some tune. The bus came to a stop at the market. The jolly passenger shouted: 'Good luck! You'll find something to photograph in the market alright.' And the conductor added, 'If you've still got your camera ...'."

Задание I. *Ответьте на вопросы по тексту D. Правильность ответов проверьте в соответствующих частях текста.*

1. What do people think about the weather in London? (1) 2. What kind of traffic regulations is there in Great Britain? (2) 3. What can you see at every crossing? (2) 4. What do houses in Great Britain look like? (3) 5. Where do Londoners go on Sunday? (4) 6. What is a caravan? (5) 7. What race do Londoners hold from London to Brighton? (6)

Задание II. *Укажите, какие из перечисленных фактов вы узнали из текста впервые.*

1. The traffic in London keeps to the left side of the road.
2. One and the same house in London is often painted in different colours.
3. In many English houses windows are different from ours.
4. Usually there is a fireplace in English houses.
5. Londoners like to get out of town on Sundays and spend the day in the country.
6. Every year a rally of the oldest cars takes place in England.

Задание III. *Сделайте краткие сообщения на следующие темы.*

1. Traffic in Great Britain. 2. Streets in London. 3. Houses in London. 4. Sunday in London. 5. The tradition about old cars.

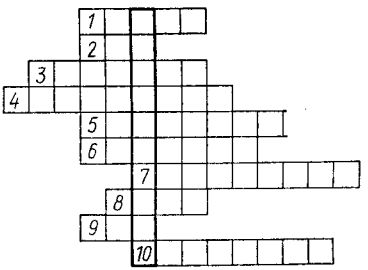
КОНТРОЛЬНЫЙ СЛОВАРЬ

1. although (*cj*); 2. branch (*n*); 3. calculate (*v*); 4. capital (*n*); 5. carefully (*adv*); 6. channel (*n*); 7. considerable (*a*); 8. construction (*n*); 9. convenient (*a*); 10. district (*n*); 11. establishment (*n*); 12. exist (*v*); 13. expand (*v*); 14. facili-

tate (*v*); 15. facility (*n*); 16. feature (*n*); 17. found (*v*); 18. improvement (*n*); 19. increase (*n, v*); 20. instead of (*prp*); 21. length (*n*); 22. link (*n, v*); 23. major (*a*); 24. means (*n*); 25. number (*n*); 26. perform (*v*); 27. permanent (*a*); 28. population (*n*); 29. previous (*a*); 30. quality (*n*); 31. rapid (*a*); 32. reason (*n*); 33. recent (*a*); 34. remain (*v*); 35. route (*n*); 36. scale (*n*); 37. seat (*n, v*); 38. several (*a*); 39. significance (*n*); 40. solve (*v*); 41. successful (*a*); 42. task (*n*); 43. unite (*v*); 44. valuable (*a*); 45. within (*prp*)

QUIZ

Lessons 4-6



Fill in all the horizontal blanks correctly, and in the vertical blank you will get the name of Kapitsa's scientific adviser in Great Britain.

1. The city Marie Curie studied and worked in. (4A)
2. English personal pronoun.
3. Rutherford's favourite pupil. (4D)
4. The invention made by A. Bell. (4C)
5. Scientific field Marie Curie received the Nobel Prize for in 1911. (4A)
6. The house on wheels which the British families use when they travel. (6D)
7. Open fire in British houses. (6D)
8. The thing that gave Einstein much happiness in life. (5C)
9. What did A. Nobel never want to happen? (5A)
10. The invention made by A. Nobel. (5A)

PART II

LESSON 7 (SEVEN)

Грамматика: 1. Герундий (Gerund).
2. Конверсия.
Основной текст А: The House.

Герундий

	Active	Passive
Indefinite	asking	being asked
Perfect	having asked	having been asked

Упражнение 1. *Переведите следующие предложения на русский язык, обращая внимание на герундий.*

1. Reading English technical magazines is important for an engineer. 2. By building new comfortable houses we improve the living conditions of people. 3. He remembers having added some water to the mixture. 4. They finished installing the apparatus only on Saturday. 5. The strange man stopped following me. 6. They began making the experiment in May. 7. He began determining the properties of the new material. 8. After failing in the examination in January he had to take it again in February. 9. After graduating from the Institute he worked in the Far North. 10. At the meeting they discussed different ways of improving their work. 11. There are different ways of obtaining the substance. 12. The problem of obtaining power was solved. 13. The organizers of the conference were informed of his refusing to take part in it. 14. We were informed of new results being obtained at the laboratory. 15. I remember his having been interested in languages in his childhood.

house *n* — дом, жилище, здание *v* — вмещать(ся), поместить	Modern **houses** are comfortable. The building **houses** a library, and a reading hall.

Упражнение 2. *Переведите следующие предложения на русский язык, обращая внимание на перевод слов, образованных по способу конверсии.*

1. Do you know Ned's new **address**? 2. The letter was not **addressed** to him. 3. The **telephone** is the invention of the 19th century. 4. Sam didn't **telephone** me yesterday. 5. Nelly's **visit** has come to an end. 6. Why don't you **visit** her? 7. The city was in **ruins**. 8. That fact **ruined** John's career. 9. Have you got many **mistakes** in your test? 10. You have **mistaken** me for somebody else. 11. I don't know this girl's **name**. 12. The boy was **named** after his grandfather. 13. Pete wants **to pilot** modern airplanes. 14. He wants to become a **pilot**. 15. I haven't received an **answer** to my letter. 16. She didn't **answer** my last letter.

VOCABULARY NOTES

Задание I. *Переведите следующие предложения.*

1. **to depend on (upon)** — зависеть от. She started working as a secretary as she did not want to depend on her parents.

2. **wood** — 1) лес, роща; 2) дерево (материал), древесина. 1) Though it was dark they had to go through the wood. 2) The houses in the country are made of wood.

3. **earth** — земля, земной шар. The spacemen say that the Earth is really beautiful.

4. **top** — верхушка, вершина. The top of the mountain was covered with snow.

5. **region** — область. There are many factories and plants in the Moscow region.

6. **stone** — камень. The bus was moving along the street covered with stones.

7. **without** — без. He said that she should not leave the town without him.

8. **still** — еще. They were still working when we went home.

9. **to appear** — 1) появляться; 2) казаться. 1) Last year fruit appeared early in the south of the country. 2) It appears that he lives in Kiev.

10. **shallow** — мелкий. In summer some rivers become very shallow.

11. **hole** — дыра, отверстие. There was a big hole in the wall of the old house.

12. **roof** — крыша. The shape of the roof was very strange.

13. **brick** — кирпич. The art of brickmaking dates from very early time.

14. **to put up (put, put)** — 1) поднимать; 2) возводить. 1) The sportsmen put up a flag on the top of the mountain. 2) A new bridge was put up across the river.

15. **above** — над, выше. Your parents live in the flat above ours.

16. **to borrow** — 1) заимствовать; 2) занимать. 1) The Romans borrowed much from the Greeks. 2) He often borrows money from his friends.

17. **flat** — плоский. In Asia one can see many houses with flat roofs.

flat — квартира. Many families have moved into new comfortable flats.

18. **to arouse** — пробуждать, вызывать. The exhibition of old cars aroused great interest.

19. **direction** — направление. They were driving in the direction of the forest.

20. **middle** — середина. There was a table right in the middle of the room.

21. **in turn** — по очереди; в свою очередь. The teacher called out the students in turn.

22. **thus** — таким образом. She wanted to attract everybody's attention so she began thus: "Ladies and Gentlemen..."

23. **strength** — 1) сила; 2) прочность. 1) He is a man of great strength. 2) The strength of this new synthetic material is great.

24. **unfortunately** — к сожалению. Unfortunately they could not achieve better results.

25. **thick** — 1) толстый; 2) густой. 1) The people were safe behind the thick walls of the house. 2) They were going through a thick forest.

26. **to serve** — служить. Young men serve in the Soviet army for 2 years.

27. **to destroy** — разрушать. Minsk was almost completely destroyed during the war.

28. **effort** — усилие. Many efforts had been made before the problem of transport in the city was solved.

29. **to restore** — реставрировать. Many fine old buildings will be restored.

30. **shortage** — нехватка, недостаток. Among other difficulties Sedov's expedition had food shortage.

31. **advanced** — передовой. Advanced methods of work must be developed to increase the scale of production.

32. **unit** — 1) единица; 2) агрегат, узел. 1) The metre is a unit of length, and the gramme is a unit of weight. 2) The construction units were brought to the site by lorries.

33. **to assemble** — собирать. He is a good engineer. He has assembled a motor-car of his own.

assembly — сборка. The assembly of heavy units took much time.

34. **advantage** — преимущество. The knowledge of a foreign language is a great advantage.

35. **to cut (cut, cut)** — 1) резать; 2) сокращать. 1) Glass is usually cut with a diamond. 2) As it was late, he had to cut his speech.

36. **to extend** — удлинять. According to the new plan the railway will be extended as far as the seaport.

37. **to heat** — отапливать. In England plenty of houses are heated with coal.

38. **furthermore** — кроме того, к тому же. Higher education is free in the Soviet Union, furthermore most of the students receive monthly grants.

39. **duration** — продолжительность. Doctors believed that the duration of the epidemic would not be more than a month.

40. **expensive** — дорогой. This car is very expensive.

41. **huge** — огромный. He is a man of huge strength.

РАБОТА СО СЛОВАРЕМ

Задание II. *Определите, к какой части речи относятся выделенные в данных предложениях слова; затем найдите в словаре нужные значения этих слов и переведите предложения.*

1. **part**

a) The greatest **part** of the research has been completed.
b) They **parted** after they graduated from the Institute.
c) He divided the apple into two **parts.**

2. **cover**

a) The trees were **covered** with snow and the forest looked

beautiful. b) It's raining hard, we must get under **cover,** quick! c) This book needs a new **cover.**

3. **tie**

a) The man **tied** his horse to the tree. b) Family **ties** are often very strong.

4. **shape**

a) It was getting dark and I could not see the **shape** of the building clearly. b) He **shaped** a piece of clay into a ball. c) He saw clouds of different **shapes** in the sky.

5. **place**

a) The house is well **placed,** not far from the river. b) They hoped that the horse would get the first **place** in the race. c) **Place** the books in the right order.

6. **damage**

a) Storms sometimes cause great **damage.** b) Several valuable pictures were **damaged** by fire. c) The accident didn't do much **damage** to the motor-car.

7. **crowd**

a) There were large **crowds** in the streets. b) People quickly **crowd** round when there is a street accident. c) The pupils **crowded** round the teacher to ask questions.

8. **concrete**

a) **Concrete** as well as other building materials was widely used for bridge construction. b) **Concrete** units have been brought to the site. c) The road was **concreted** long ago.

9. **manufacture**

a) High quality goods are **manufactured** at this plant. b) The steel **manufacture** has been considerably increased in the last years. c) The shop **manufactures** engines for motor-cars.

Задание III. *Прочтите следующие интернациональные слова и догадайтесь об их значении.*

climate, tent, primitive, cement, oval, conical, period, standard, pyramids, sphinx, tourist, technique, to industrialize, season

TEXT 7A

Задание. *Прочтите и переведите текст.*

THE HOUSE

1. Man has always been a builder. The kind of house he built in the beginning depended upon the climate, upon his enemies, and upon the building materials at hand. The

first houses in many parts of the world were made of wood, for in those days the greater part of the Earth was covered with forests. Men tied together the tops of several trees and covered them with the skins of animals or with leaves and grass. So a tent, or hut, was the first house of the primitive people who lived where there was much wood.

In other regions the most convenient building material was stone. Men began building houses out of stone very long ago. Although they were built without cement, the remains of a few of them still exist.

It appears that the most ancient homes on the territory of the Soviet Union were earthenhouses. One such home was discovered near Voronezh in 1927. It consisted of a shallow hole of oval shape. The floor was covered with limestone slabs.[1] The roof had been conical and stood on poles (столб) covered by branches or animal skins. Such dwellings existed in that part of the country in the Upper Paleolithic Period (from 40,000 to 12,000 years ago).

2. The ancient Egyptians built very simple houses by present standards. Having dried the bricks in the sun, they put up four walls, and above these they placed a flat roof. The roof was flat because there was very little rain in Egypt. Although their buildings were simple in construction, the Egyptian art of building was very beautiful. Their pyramids and monuments, sphinxes and palaces arouse our wonder to this day. An important part in the history of building has been played by the column, and it was ancient Egypt that gave the world its first lessons in the art of making columns.

The Greeks learned much from Egypt. But they did not borrow the flat roof. They built a slanting roof because there was much rain in their country. The Greeks made the roof slant in two directions from the middle. They also improved on Egypt's columns and soon became the teachers of the world in column making.

The Romans, in turn, learned much from the Greeks. First of all, they borrowed the slanting roof and the columns. But they added the arch, thus adding much strength and beauty to their buildings.

3. In our country architecture flourished for the first time in Kiev Rus. Unfortunately, only a few of the church buildings of that period have remained. The churches of the time were strong buildings with thick walls and small windows. They often had to serve as fortresses during enemy invasions. Tourists from all over the world come to see the

famous Cathedral of St. Sophia, the cornerstone of which was laid in 1037 to commemorate the victory over the Pechenegs. Having been forced out of Kiev the German fascists did their best to destroy its finest ancient architecture, although it had no military significance. Great effort has gone into restoring them.

4. Having become very acute in many countries after World War II, the housing problem called for a solution. As a result of the damages caused by the war there has been a great housing shortage. The Soviet Government set itself the task of housing all the homeless people who had lost their flats and of improving the living conditions of those who lived in crowded and uncomfortable flats.

To solve the problem great housing construction has started since the end of the war. Millions of people have already moved into new flats.

5. A very advanced construction technique today is the use of precast concrete.[2] According to this technique, the reinforced concrete[3] units of which a building is to be made are manufactured at a factory and are then simply assembled on the site.

The use of precast concrete has many advantages over other building methods. For one thing,[4] building work is industrialized more highly. The site becomes something like an assembly shop which cuts the labour needed for building by 60 to 70%, the main part of the work being done at the factory. The building season is also extended. After all,[5] in the greater part of the Soviet Union winter lasts for several months.

Precast building units are manufactured in heated premises [6] and can be assembled at the site all the year round in any frost. Furthermore, the duration of building is cut. And, finally, materials and money are saved, as, for example, it is possible to do away [7] with expensive scaffolding.[8]

The precast concrete technique, which is continuously being improved in the Soviet Union, has to play a big part [9] in the country's huge building program.

NOTES TO THE TEXT

1. **limestone slab** — известняковая плита
2. **precast concrete** — сборный бетон (изготовленный на заводе)
3. **reinforced concrete** — железобетон
4. **for one thing** — во-первых

5. **after all** — в конце концов
6. **premises** — помещение
7. **to do away** — покончить
8. **scaffolding** — (*техн.*) леса́
9. **to play a big part** — сыграть большую роль

Упражнение 3. *Выразите свое согласие или несогласие со следующими утверждениями, основываясь на информации, полученной из текста А. Свое согласие выразите, начиная предложение словами* **That's right** *или* **That's true,** *а несогласие, начиная словами* **That's wrong** *или* **According to the text.**

1. The first houses in many parts of the world were made of earth. 2. Men cut the tops of several trees and covered them with skins of animals to make a house. 3. On the territory on what is now the Soviet Union the most ancient homes were earthenhouses. 4. One such home was discovered near Voronezh in the 19th century. 5. The floor of that house was covered with wood. 6. The roof of the Egyptian house was flat. 7. The Greeks borrowed the flat roof from Egypt. 8. The Greeks improved on Egypt's column. 9. The Greeks became the teachers of the world in column making. 10. In our country architecture flourished for the first time in Kiev Rus. 11. The famous Cathedral of St. Sophia was founded in the 12th century. 12. A very advanced construction technique today is the use of precast concrete. 13. The use of precast concrete has many advantages over other building methods. 14. Precast building units are manufactured in heated premises and can be assembled in summer season.

Упражнение 4. *Найдите в каждом ряду слово, противоположное по значению первому слову ряда.*

1. **empty** a) proper, b) full, c) dry, d) total
2. **shallow** a) flat, b) huge, c) similar, d) deep
3. **easy** a) above, b) difficult, c) main, d) successful
4. **to destroy** a) to arouse, b) to cut, c) to build, d) to heat
5. **huge** a) small, b) main, c) concrete, d) numerous
6. **complicated** a) advanced, b) expensive, c) permanent, d) simple
7. **to assemble** a) to cover, b) to part, c) to extend, d) to manufacture
8. **shortage** a) advantage, b) damage, c) duration, d) plenty
9. **to remain** a) to assemble, b) to place, c) to leave, d) to put up

10. **strength** a) weakness, b) crowd, c) hole, d) brick
11. **always** a) still, b) never, c) as well as, d) without
12. **to damage** a) to tie, b) to shape, c) to heat, d) to restore

Упражнение 5. *Найдите в каждом ряду слово, перевод которого дан в начале ряда.*

1. **огромный** a) advanced, b) flat, c) huge, d) convenient
2. **продолжительность** a) advantage, b) duration, c) establishment, d) length
3. **дорогой** a) main, b) concrete, c) previous, d) expensive
4. **кроме того** a) in turn, b) furthermore, c) without, d) still
5. **отапливать** a) to heat, b) to tie, c) to increase, d) to extend
6. **главный** a) shallow, b) recent, c) main, d) huge
7. **преимущество** a) shortage, b) strength, c) effort, d) advantage
8. **вытягивать, расширять** a) to assemble, b) to expect, c) to extend, d) to rise
9. **резать** a) to perform, b) to cut, c) to heat, d) to shake
10. **единица** a) place, b) unit, c) shape, d) hole
11. **собирать** a) to put up, b) to solve, c) to wear, d) to assemble
12. **передовой** a) advanced, b) expensive, c) ordinary, d) similar
13. **нехватка** a) duration, b) damage, c) shortage, d) strength
14. **связывать** a) to cut, b) to cover, c) to arouse, d) to tie
15. **толпа** a) part, b) piece, c) crowd, d) unit

Упражнение 6. *Заполните пропуски подходящими по смыслу словами.*

above, unfortunately, concrete, hole, part, assemble, heat, restored, serve, appear, advantages, expensive, main, covered, the Earth, extends, manufactures, wood, huge

1. I don't like the second ... of the book. 2. The old house was made of ... . 3. ... goes round the Sun. 4. There was a big ... in the roof of a wooden house. 5. We were waiting for him for two hours but he did not ... . 6. He said that in his country the ground was never ... with snow. 7. At last we could see the top of the mountain ... us. 8. Higher education is very ... in capitalist countries. 9. Our garden ... as far as the river. 10. We need warm water for our experiment. Please ... some. 11. Aluminium has many ... over other metals. 12. What is the ... idea of the book? 13. After the war many destroyed buildings had to be ... . 14. Young people usually ... in the Soviet army for 2 years. 15. This

... building can be seen from all parts of the city. 16. ... I was ill and could not attend this interesting lecture. 17. New methods of construction allow us to ... ready-made units on the site. 18. This factory ... motor-cars of the latest make. 19. The house looked like a big box made of steel and ...

Упражнение 7. *Переведите следующие словосочетания.*

to depend on quality; in the middle of the wood; to tie together; the top of a wooden house; to appear on the horizon; the middle of the day; a shallow hole; to have no shape; a flat ground; to put up a tent; a stone wall; to do something in turn; the strength of the material; thick wood; to serve as an explanation; to destroy the city; great effort; advanced workers; steel and concrete; numerous units; to manufacture tubes; to assemble houses; the North Region; to be made of bricks; a new flat; to arouse interest; in the wrong direction; shortage of water; the assembly of aggregates; the duration of the crises; a number of advantages; to extend the road; to heat the house; expensive means; huge scale; to play an important part; to take part in the concert; to take place; to be damaged by storm; a damaged car; an overcrowded bus; a crowded street

Упражнение 8. *Переведите следующие предложения, обращая внимание на герундий.*

1. I know of his having been sent to work to the Far East. 2. What is the reason for his having left our city so suddenly? 3. We heard of the experiment having been started last week. 4. He improved his report by changing the end. 5. They objected to his remaining at home. 6. Instead of restoring the old theatre they decided to build a new one in the centre of the town. 7. New possibilities for applying atomic energy open up. 8. It is possible to set up power stations based on utilizing the heat of the Sun. 9. The idea of creating a multi-stage rocket belongs to Tsiolkovsky. 10. Before being sent up the balloon was filled with a special gas. 11. What apparatus do we use for measuring air pressure? 12. Science requires experimenting. 13. Speaking foreign languages is of importance for every cultured man.

Упражнение 9 *(обзорное). Переведите следующие предложения на русский язык, обращая внимание на* **ing-forms.**

1. The monument needs restoring. 2. The monument of what century are you restoring? 3. The monument of what

century is being restored? 4. The experts restoring the monument were provided with all modern technique. 5. With the help of a magnet we can hold two huge metal plates together without tying them. 6. He pointed out that the assembling time of the apparatus was very short. 7. The police were informed of the criminals having appeared in the city. 8. The committee studied the problem of improving the bus service in the town without increasing the number of buses operating on the routes. 9. Increasing population of the world changes the face of the Earth. 10. Heating the substance to high temperatures may change its properties. 11. Being heated to high temperatures the substance considerably expanded. 12. The substance was being heated for 3 hours.

Упражнение 10. *Переведите следующие предложения на русский язык, обращая внимание на перевод слов, образованных по способу конверсии.*

1. Concrete has become an important construction material. 2. The large hole was concreted over. 3. He carefully studied the shape of the stones. 4. Clay is easily shaped. 5. There is no need to heat the substance. 6. You needn't accompany him to the station. 7. The region is cut into two parts by the river. 8. There was a deep cut on his hand. 9. We couldn't find a dry place anywhere. 10. Why have they placed the bridge here? 11. There are close cultural ties between socialist countries. 12. The battalion approached the town under the cover of the night. 13. Rivers are covered with ice in winter.

Упражнение 11. *а) Дайте русские значения следующих предлогов:* **above, on, to, until, throughout, in front of, about, in, of, with, from, within, without.**

б) Составьте предложения с этими предлогами.

Упражнение 12. *Спросите своего товарища как можно подробнее о его квартире или доме, в котором он живет, используя следующие слова.*

house, brick, stone, wooden, concrete, ceiling, floor, walls, windows, doors, balcony, roof, flat, kitchen, bathroom, living-room, bedroom, facilities, gas, electricity, running water, central heating, telephone, refrigerator, huge, thick, light, comfortable, modern, high

РАБОТА НАД СЛОВООБРАЗОВАНИЕМ

Упражнение 13. *Просмотрите текст, определите по суффиксам части речи, к которым принадлежат выделенные слова, переведите их. Переведите текст.*

From the earliest times people used many methods of conveying messages (передавать сообщения) as **quickly** and as **efficiently** (efficient — эффективный) as **possible.**

In American history the pony express was one of the most **heroic** adventures (приключений). The discovery (открытие) of gold in California made it necessary to give **important** messages. The stage coaches (дилижанс) which **regularly** carried mail (почта) required months to reach California. The pony express carried messages. It was a group of 80 young men of 18 years of age. These **courageous** (courage — храбрость) men carried mail in relays (по очереди). They used five hundred of the finest horses available (имевшихся в наличии). At each of the 190 stations along the route a fresh rider (to ride — ехать верхом) was ready. The **management** (to manage — управлять) kept men under very strict (строгий) rules. Every rider was given a Bible and was not allowed to drink or swear (ругаться). The pony express had a **remarkable** (to remark — замечать) career. To deliver mail the riders had to overcome (преодолевать) great **physical** danger. On April 3, 1860 the first rider started from Missouri and ten days later the message arrived in California which was two thousand miles away. A huge **celebration** (to celebrate — праздновать) was held in honour of this **magnificent** (magnificence — великолепие) **achievement**. But the pony express had a short life of 16 months only.

In 1861 the **completion** (to complete — завершать) of the first **transcontinental** telegraph line marked the end of the pony express.

ТЕКСТ 7В

Задание I. *Прочтите текст, стараясь понять основное содержание. (Заметьте время начала и окончания чтения. Этот текст нужно прочесть за 3,5 минуты, из расчета 90 слов в минуту.)*

EGYPTIAN PYRAMIDS

Architecture is the art which makes buildings beautiful to look at as well as useful. A man who designs (проектировать) buildings and makes the plans for them is called an architect. He has to think not only of what he wants the building to look like when it is finished, but also what it is to be used for. He must not forget the sort of material to be used in the building. This may be stone, brick, wood or steel and concrete.

There have been many different styles or kinds of architecture in the past and there are many different styles today in different parts of the world.

The oldest monuments which are met within architecture are the colossal pyramids of Egypt most of which were constructed about 6,000 years ago.

The pyramids are large triangular (треугольный) buildings which were placed over the tombs (могила) of Egyptian kings. The best known of the pyramids are a group of three built at Giza south of Cairo. The largest of these is 482 feet high. They tell us of the advanced civilization of ancient Egypt which is much spoken about even in our days.

It was a country which had expert mathematicians and engineers, where astronomy and philosophy were known and studied.

The country was rich in hard and durable (прочный) stone, but poor in timber and metal, so that the main material used for construction was granite, and this was the reason for the durability of the pyramids.

Large blocks of stone were transported over long distances by land and water, and placed into position with the help of the most primitive equipment. That was done by slaves (раб) working for thirty or forty years. All this great amount of work was done, masses of material and a large territory sometimes of about 52,000 square meters were used, only for protecting the body of a dead king and constructing a dwelling place for his happy life in the "other world".

Задание II. *Выберите утверждение, соответствующее содержанию текста.*

1. An architect is a person who:
   1) makes a building; 2) designs a building; 3) founds a building.

2. The oldest architectural monuments are:
   1) the tents of primitive people; 2) the Cathedral of St. Sophia in Kiev; 3) Egyptian pyramids.
3. The main building material for pyramids was:
   1) timber and metal; 2) bricks; 3) granite.
4. Large blocks of building material were:
   1) found near the site; 2) transported over long distances; 3) imported from Giza.
5. The pyramids were constructed:
   1) as monuments; 2) for a dead king; 3) for military purposes.

Задание III. *Прочтите текст еще раз. Составьте план текста.*

Задание IV. *Перечислите содержащиеся в тексте факты, доказывающие следующие утверждения.*

1. The pyramids tell us of the advanced civilization of ancient Egypt.
2. A great amount of work was done to build a pyramid.

Задание V. *Сделайте краткие сообщения на следующие темы.*

1. The work of an architect. 2. Egyptian pyramids.

TEXT 7C

Задание I. *Прочтите текст, отыскивая в нем ответы на поставленные вопросы.*

FROM THE HISTORY OF HUMAN DWELLINGS

Where did primitive people look for protection?

1. Most of the time of a modern man is spent within the walls of some building. Houses are built for dwelling; large buildings are constructed for industrial purposes; theatres, museums, public and scientific institutions are built for cultural activities of the people. The purpose of modern buildings differ widely, but all of them originate from the efforts of primitive (первобытный) men to protect themselves from stormy weather, wild animals and human enemies.

Protection was looked for everywhere. In prehistoric times men looked for protection under the branches of trees;

some covered themselves with skins of animals to protect themselves from cold and rain; others settled in caves (пещера).

What are the earliest types of human dwellings?

2. When the Ice Age had passed, Europe remained very cold, at least in winter, and so the people of the Old Stone Age had to find some warm and dry place to shelter from bad weather. They chose caves, dwelling places that storm and cold could not destroy. On the walls of their caves ancient people painted pictures. Such decorated caves are found in Europe, Asia and Africa.

When man began to build a home for himself, caves were imitated in stone structures, trees were taken as a model for huts built of branches, skins were raised on poles and formed tents.

Primitive stone structures, huts and tents are the earliest types of human dwellings, they are lost in the prehistoric past but serve as prototypes for structures of later historic times.

Why were the houses in town higher than in the country?

3. In the days of early civilization, once men had learnt how to build simple houses for their families, they began to feel a need to have a number of different kinds of houses in one place. At first the difference was mainly in size — the chief or leader had a larger hut or tent than the rest of the people. Much later, when men began to build towns, there grew up a difference between town houses and country houses. The streets in towns were very narrow and there was not much place for building within the town walls, and therefore houses had to be built higher than they were in the country. A typical town house consisted of a shop opening on the street where the man did his work or sold his goods, with a kitchen behind and a bedroom above.

What were the houses in ancient Egypt built of?

4. In the country ordinary people lived in simple one-storey cottages which did not differ much from the mud and stone huts of an earlier age.

The rich people in the country, on the other hand, built huge castles (за́мок) with thick walls and narrow windows. These castles were built not only as dwellings, but also to stand up to enemy attack and to be strong bases in time of war. The earliest houses of which anything is known are those of ancient Egypt. They were built of bricks dried in

the sun. Some of them were built around a courtyard or garden with rooms opening into it.

How did the light come into early English houses?

5. Greek houses, too, had a courtyard in the middle and round their courtyard ran a covered walk (аллея), its ceiling supported by pillars. There were special women's quarters, usually upstairs on the second storey.

In Rome bricks were used for building and houses were often finished with plaster over bricks on both inside and outside walls. The centre of family life was a garden-courtyard, surrounded by columns and with rooms opening out into it.

The earliest houses in Britain were round, built of wood or wicker basket work (плетение из прутьев) plastered over with clay. In the centre of the house was the hearth (очаг) and light came in through the hole in the roof above it and through the door because there were no windows.

Задание II. *Прочтите текст С еще раз и выделите в каждой части текста интересные для вас факты.*

Задание III. *Перечертите таблицу в тетрадь и заполните графы, пользуясь информацией из текстов 7A, 7B, 7C (первая графа дана как образец).*

The name of the country	The type of buildings	Building materials	Constructional features
Ancient Rus	earthenhouses	earth, limestone slabs	conical roof which stood on poles
Egypt			
Greece			
Roman State			
Kiev Rus			
Britain			

Задание IV. *Сделайте краткие сообщения на следующие темы.*

1. Earliest types of human dwellings. 2. First towns. 3. Earliest Egyptian houses. 4. Earliest Greek houses. 5. Earliest Roman houses. 6. Earliest British houses.

TEXT 7D

IMPRESSIONS OF MODERN ARCHITECTURE

(A LETTER FROM ENGLAND)

1. You ask what I think of modern architecture. I don't know very much about modern architecture in Europe, but styles are probably similar in most countries today. I think this is because now architects have no opportunities they had in the past. They are seldom asked to design buildings like wonderful churches and cathedrals of the Middle Ages. Architects today have to design schools, hospitals and huge blocks of flats and offices. If they are asked to make plans for houses, these are usually all alike or nearly alike.

2. Boxes — that's what a good deal of modern architecture reminds me of. The blocks of flats in our big towns are huge boxes, whether the fronts and sides are square or oblong. A man who lives in one of these boxes works in another big box, high up in the air. If he falls ill, he goes to another big box called a hospital.

3. Architects have done some very good work in designing new schools. Many of these are prefabricated, which means that as much of the building work as possible is done, not on the building site, but in factories where mass production methods can be used. The parts are taken to the site and put together there. Children who attend the best of these new schools are very happy. Their classrooms are light and big, and they have a fine large assembly hall. The children have dinner at school, and there is a dining-hall completed with modern kitchen.

4. I began this letter by saying that many modern buildings, especially the blocks of flats and business offices, were like big boxes. They do look like boxes from the outside, but when we go inside, we find them very well planned for their purposes. An architect today has to be an engineer too. The best modern buildings help us to live and work

in comfort. They save plenty of unnecessary work. There is central heating, for example, instead of the dusty open fires we used to have, with coal to be carried up long stairs and ashes to be carried down.

5. I have given my opinion on what I have seen in England. I know a lot of interesting work has been done in Scandinavia, and, of course, I've read about the work of Le Corbusier in France and I'd like to see what American architects are doing now. You may know the work of the American architect Frank Lloyd Wright. He designed the Imperial Hotel in Tokyo. It was designed to resist earthquakes and it proved so strong that it did. It was one of the few buildings in Tokyo that did not fall in the terrible earthquake of 1923.

Задание I. *Ответьте на вопросы по тексту D. Правильность ответов проверьте в соответствующих частях текста.*

1. What kind of buildings do architects design now? (1) 2. What do modern architectural buildings remind the author of the letter of? (2) 3. What does a modern school building look like? (3) 4. What is the advantage of central heating? (4) 5. What is the Imperial Hotel in Tokyo famous for? (5)

Задание II. *Прочтите текст еще раз. Озаглавьте каждую часть текста.*

КОНТРОЛЬНЫЙ СЛОВАРЬ

1. above (*prp*); 2. advanced (*a*); 3. advantage (*n*); 4. appear (*v*); 5. arouse (*v*); 6. assemble (*v*); 7. brick (*n*); 8. borrow (*v*); 9. concrete (*n, v*); 10. cover (*n, v*); 11. crowd (*n, v*); 12. cut (*v*); 13. damage (*n, v*); 14. depend on (upon) (*v*); 15. destroy (*v*); 16. direction (*n*); 17. duration (*n*); 18. earth (*n*); 19. effort (*n*); 20. expensive (*a*); 21. extend (*v*); 22. flat (*n, a*); 23. furthermore (*adv*); 24. heat (*v*); 25. hole (*n*); 26. huge (*a*); 27. manufacture (*n, v*); 28. middle (*n*); 29. part (*n, v*); 30. place (*n, v*); 31. put up (*v*); 32. region (*n*); 33. restore (*v*); 34. roof (*n*); 35. serve (*v*); 36. shallow (*a*); 37. shape (*n, v*); 38. shortage (*n*); 39. still (*adv*); 40. stone (*n*); 41. strength (*n*); 42. thick (*a*); 43. thus (*adv*); 44. tie (*n, v*); 45. top (*n*); 46. in turn; 47. unfortunately (*adv*); 48. unit (*n*); 49. without (*prp*); 50. wood (*n*)

LESSON 8 (EIGHT)

Грамматика: 1. Инфинитив (Infinitive). Формы инфинитива. Инфинитив в функции обстоятельства цели и в функции определения.
2. Цепочка определений.

Основной текст А: The History of Land Transport.

Инфинитив

	Active	Passive
Indefinite	to write	to be written
Continuous	to be writing	—
Perfect	to have written	to have been written

ИНФИНИТИВ В ФУНКЦИИ ОБСТОЯТЕЛЬСТВА ЦЕЛИ

We came here to study.
To know English well you must work hard.

ИНФИНИТИВ В ФУНКЦИИ ОПРЕДЕЛЕНИЯ

They spoke about the method to be used in the near future.

Упражнение 1. *Переведите следующие словосочетания и предложения, обращая внимание на инфинитив.*

I am happy to help you.
I am glad to have helped him.
He was glad to have been helped.
I am glad to be helping them.
I am glad to be helped.
to send the letter to inform them
the house to be built
to build the road to connect two towns
the story to listen to
the question to be answered
the picture to speak of

Упражнение 2. *Переведите следующие предложения, обращая внимание на инфинитив.*

1. They were glad to take part in our expedition. 2. She wanted to be answered at once. 3. He was happy to be working for many years with the famous scientist. 4. To drive

a car in a big city is very difficult. 5. Water may be used to drive dynamos which generate electricity. 6. Sputniks do not need any additional energy to move along their orbit. 7. Newton made use of the three laws of motion to explain the movement of the Moon around the Earth and of the planets around the Sun. 8. This method was introduced in the factory to achieve better results. 9. To extend the main street they had to destroy some old buildings. 10. The workers will use powerful machinery to assemble these huge units. 11. In this area there are no monuments to speak of. 12. Dalton's atomic theory was the first to make successful use of the old Greek theory of atoms in chemistry. 13. The new channel to be constructed here will be the longest in the country. 14. The valuable information to be collected by sputniks will help to improve previous results. 15. The new branches of industry to be developed in this part of the country are metallurgy and radio engineering. 16. Another reason to consider is the absence of necessary facilities for the experiment.

Упражнение 3. *Переведите на русский язык следующие словосочетания. Укажите, чем выражено определение.*

the problem to be solved	the remark made
the new device to be introduced	the distance travelled
the theory to be considered	the money paid
the instrument to be used	the delayed train
the bridge to be constructed	the translated article
the road to be paved	the collapsed building
the experiment to be carried out	the tested method

Цепочка определений

Артикль	Существительные в роли определения	Определяемое существительное
the	land	transport
the	land transport	improvement
the	land transport improvement	problem

Упражнение 4. *Переведите следующие словосочетания на русский язык.*

the traffic speed; the traffic speed increase; the railway bridge; the railway bridge reconstruction; the London un-

derground; the London underground problem; the thermoelectric generator development; the energy accumulation process; the modern house ventilation facilities; the car speed calculation; the arch bridge construction site; the high quality concrete; the research program result; the Moscow region newspaper; the temperature limit determination; the household goods; the household goods store; the steam engine invention; the soil stabilization result; the transport animal; the wheel invention; the deep sea current measuring device; a rocket-propelled five ton sputnik spaceship

VOCABULARY NOTES

Задание I. *Переведите следующие предложения.*

1. **introduction** — введение, вступление. The professor started the lecture with a short introduction.
2. **to mean (meant, meant)** — значить; иметь в виду. The English word "quality" means «качество».
3. **goods** — товары, груз. The train carried goods for the population.
4. **also** — тоже, также. They also made efforts to restore this valuable building.
5. **vehicle** — экипаж, повозка, автомобиль. One can see many old vehicles in the museum of cars.
6. **lorry** — грузовик. We had to use some lorries to transport sand to the site.
7. **coach** — карета, экипаж; автобус (междугородный). A huge coach appeared from behind the corner.
8. **the same** — тот (же) самый, одинаковый. The level of the water in the river remained the same.
9. **stage** — стадия, этап. This discovery opened a new stage in physics.
10. **directly** — прямо, непосредственно. The workers assembled the units directly on the site.
11. **wind** — ветер. The wind was rising.
12. **internal** — внутренний. The internal forces of this new kind of energy still remain unknown.
13. **combustion** — сгорание. Combustion of petrol produces more heat than combustion of coal.
14. **engine** — двигатель. The combustion of an air and gasoline mixture takes place inside the internal combustion engine.

15. **source** — источник. Books are a source of knowledge.

16. **to settle** — 1) разрешать (вопрос); 2) поселяться. 1) They will have to settle the problem of transport in the city. 2) The people settled near the river.

17. **soil** — почва, грунт. This soil needs stabilization before the construction starts.

18. **to beat (beat, beaten)** — бить. It is said that the Suvorov army was never beaten.

19. **backward** — отсталый. Before the Great October Socialist Revolution Russia was a backward country.

20. **to vary** — менять, изменять. The results achieved varied with the material used.

21. **general** — общий, обычный, главный. At the beginning the lecturer gave the general idea of his lecture.

22. **to drag** — тащить. All day long he was dragging heavy stones off his field.

23. **because of** — us-sa, благодаря, вследствие. The accident occurred because of the high speed of the car.

24. **weight** — вес. What is your weight?

25. **at once** — сразу, немедленно. The letter was of great importance and he had to answer it at once.

26. **to lead (led, led)** — вести. The traveller wanted to know where the road led.

27. **wide** — широкий. It is pleasant to drive along a wide road.

28. **to pave** — мостить. The road had been paved by the end of the summer.

29. **unless** — если не. You will be late unless you start at once.

30. **surface** — поверхность. The larger part of the Earth surface is covered with water.

31. **chiefly** — главным образом. He is vegetarian, he eats chiefly vegetables.

32. **gradually** — постепенно. It was getting dark gradually.

33. **rather** — до некоторой степени, довольно. He felt rather tired. The wind is rather cold.

34. **distance** — расстояние. The distance from here to the railway station is 5 km.

35. **device** — устройство. A new safety device has been introduced to regulate traffic.

36. **to connect** — связывать. A new railway will connect some towns with the capital.

37. **due** — должный, надлежащий. The train will arrive in due time.

38. **to charge** — 1) взимать плату; 2) заряжать. 1) They don't charge for parking. 2) The battery has not been charged yet.

РАБОТА СО СЛОВАРЕМ

Задание II. *Определите, к какой части речи относятся выделенные в данных предложениях слова; затем найдите в словаре нужные значения этих слов и переведите предложения.*

1. **remark**
a) What do you mean by your **remark**? b) She **remarked** that it was getting dark. c) The teacher made no **remarks** about my report.
2. **current**
a) They were discussing **current** events. b) The warm **currents** in the Atlantic Ocean influence the climate of Great Britain. c) The physicist was studying the properties of electric **current**.
3. **force**
a) The nearer the Earth, the greater the **force** of gravitation. b) The **force** of steam moves the engine. c) They **forced** the enemy to retreat.
4. **step**
a) We heard **steps** outside. b) An old man **stepped** heavily. c) The **steps** were made of stone.
5. **wheel**
a) There was something wrong with the front **wheel** of the car. b) The boys **wheeled** the vehicle into the yard. c) Nobody knows when the **wheel** was invented.
6. **collapse**
a) The weight of the snow on the roof caused the house **to collapse**. b) Their son's failure meant the **collapse** of his hopes. c) The bridge **collapsed** into the river.
7. **delay**
a) After a **delay** of half an hour they started to work. b) The street traffic was **delayed** by the demonstration. c) The secretary was asked to answer the letter without **delay**.
8. **pay**
a) He always **pays** his rent in time. b) What **pay** do you get for your work? c) I **paid** much money for a new car.
9. **stretch**
a) The **stretch** of the road from airport to the town is to be reconstructed. b) A rope was **stretched** across the room. c) She decided **to stretch** her new shoes by wearing them.

10. **hand**

a) The documents were **handed** over to the writer who wanted to include them into his novel. b) It was dark and the mother took her child by the **hand.** c) She was **handed** the prize for singing.

11. **repair**

a) The house must be **repaired** within a year. b) The **repair** of the car cost him much money. c) It will not take you much time **to repair** your watch, **repair** is done while you wait.

12. **measure**

a) Speedometer **measures** the speed of the car. b) They took **measures** to improve the work of the laboratory. c) A foot is a **measure** of length.

Задание III. *Прочтите следующие интернациональные слова и догадайтесь об их значении.*

civilization, attack, idea, taxi ['tæksɪ], mechanic [mɪ-'kænɪk], moment

TEXT 8A

Задание. *Прочтите и переведите текст.*

THE HISTORY OF LAND TRANSPORT

INTRODUCTION

1. The word "transport" means to carry people or goods from place to place. It is also used for the vehicles that carry people or goods — for example, motor transport includes buses, lorries, motor coaches and motor cars. The American word for the same thing is transportation, and the remark "transportation is civilization" was made by an American, the motor-car manufacturer Henry Ford.

The history of transport is divided into two stages. The first stage is that in which all forms of transport depended directly on the power of men or animals or on natural forces such as winds and current. The second stage began with the development of the steam engine, which was followed by the electric motor and the internal combustion engine as the main sources of power for transport.

PORTERS AND PACK ANIMALS

2. The most ancient peoples were probably wanderers. They did not live in settled homes because they did not know how to till the soil. As they moved from place to place they had to carry their goods themselves. The porters were usually the women, probably because the men had to be ready to beat off attacks by wild beasts or enemies. Even now, to carry the household goods is the job of women in backward wandering tribes.

The next step was the use of pack animals for carrying goods. The kind of animal used varied in different places, but the general idea was the same — the bundles or baskets were carried by the animals on their backs. The dog, although too small to carry much, was probably one of the first transport animals used because it is so easily trained. Dogs are still to be trained for dragging sledges in the Arctic because of their light weight.

3. The next advance in land transport came with the invention of the wheel. The wheel at once led to the development of two-wheeled carts and four-wheeled waggons and carriages, but before these could be used for carrying goods over long distances, a system of roads was necessary. These roads had to be wide enough to take a cart and paved, for unless their surface was paved the wheels sank in and the cart stuck. In Britain, and also over much Europe, the first long-distance paved roads were made by the Romans, chiefly so that troops could be marched without delay from place to place. The roads made it possible to use wheeled traffic. However, when the Roman Empire collapsed, the roads gradually got into a very bad state.

4. There were two problems to be solved — first, how to make good roads, and, second, to decide who was to pay for them. In Great Britain these problems were solved in the 18th century. Stretches of roads were handed over to groups called trusts. The trusts borrowed money for repairing and improving the roads, paying it back from the sums they collected from road users. This method of paying for new roads and bridges is still used, especially in the United States. Then it became possible to travel rather comfortably by coaches. In cities like London, rich people had their own carriages, while poor people went on horseback or walked. Then appeared carriages that could be hired for

short distances. They correspond to the modern taxis. The word is short for "taxi cab" which in turn comes from the words taximeter and cabriolet. A cabriolet is a light two-wheeled carriage introduced from France in the 19th century. The taximeter is a mechanical device connected with the wheels which, by measuring the distance travelled, shows the fare due at any moment. It is also controlled by a clock so that waiting time too is charged for.

Упражнение 5. *Ответьте на вопросы по тексту А.*

1. What does the word "transport" mean? 2. What are the stages of the history of transport? 3. Who were the first porters? 4. What kind of animal was used first for carrying goods? 5. What did the invention of the wheel bring? 6. Whom were the first roads made by? 7. What were the two problems to be solved? 8. What was a cabriolet like? 9. What is a taximeter like? 10. How is waiting time charged for?

Упражнение 6. *Найдите в каждом ряду слово, противоположное по значению первому слову ряда.*

1. **complicated** a) expensive, b) simple, c) similar, d) numerous
2. **shortage** a) current, b) delay, c) distance, d) plenty
3. **to remain** a) to lend, b) to leave, c) to measure, d) to stretch
4. **to destroy** a) to drag, b) to pave, c) to restore, d) to step
5. **huge** a) small, b) strong, c) free, d) hard
6. **shallow** a) wide, b) possible, c) important, d) deep
7. **to connect** a) to charge, b) to collapse, c) to introduce, d) to part
8. **gradually** a) also, b) at once, c) chiefly, d) rather
9. **repair** a) pay, b) remark, c) surface, d) damage
10. **the same** a) due, b) total, c) different, d) essential
11. **wide** a) powerful, b) narrow, c) dry, d) necessary
12. **strength** a) combustion, b) device, c) weakness, d) force

Упражнение 7. *Найдите в каждом ряду слово, перевод которого дан в начале ряда.*

1. **товары** a) vehicle, b) stages, c) substance, d) goods
2. **значить, иметь в виду** a) to drag, b) to mean, c) to pay, d) to justify
3. **грузовик** a) driver, b) coal, c) lorry, d) railway
4. **экипаж, автобус** a) safety, b) coach, c) tube, d) traffic
5. **тот же самый** a) in turn, b) backward, c) the same, d) total

6. **колесо** a) wind, b) weight, c) light, d) wheel
7. **внутренний** a) general, b) current, c) internal, d) excellent
8. **двигатель** a) engine, b) lorry, c) source, d) force
9. **из-за** a) without, b) within, c) because of, d) directly
10. **сгорание** a) direction, b) combustion, c) collapse, d) admission
11. **измерять** a) to measure, b) to settle, c) to vary, d) to repair
12. **почва, грунт** a) step, b) strength, c) piece, d) soil
13. **заряжать** a) to introduce, b) to collapse, c) to charge, d) to hand
14. **если не** a) also, b) although, c) no matter, d) unless
15. **поверхность** a) delay, b) surface, c) top, d) wood

Упражнение 8. *Заполните пропуски подходящими по смыслу словами.*

engine, wind, delayed, distance, charged, soil, the same, to collapse, leads, wide, mean, vehicle, weight, sources, general, handed, connected, introduced

1. He did not ... anything when he said it. 2. This news comes from different ... . 3. Nothing could grow in this poor dry ... . 4. The steam ... was invented in the 18th century. 5. The ... plan of the development of the city was considered at a special meeting. 6. The jeep is a small light ... with great freedom of movement especially for military use. 7. The method of construction is not ... now as it was some years ago. It is quite different. 8. A cold ... was blowing from the north-west. 9. The weight of a heavy tank caused the bridge ... . 10. The train was ... two hours by snow storms. 11. The paper was ... over to the director. 12. He says that the road ... to the forest. 13. The bridge ... the two banks of the river. 14. The lorry was ... to the full. 15. He is big and strong, he is twice my ... . 16. She is an educated person and her interests are rather ... . 17. A new method has been ... at their factory this month. 18. The ... from here to the park is ten kilometres.

Упражнение 9. *Переведите следующие словосочетания на русский язык.*

to mean nothing; a goods train; also successful; a powerful vehicle; huge lorries and coaches; the same route; an ordinary remark; numerous stages; without wind; permanent force; to manufacture car engines; internal affairs; rapid combustion; source of energy; dry soil; a backward country; general weakness; to drag along the road; to vary considerably; quick steps; to repair something at once; rather dark;

measured distance; under repair; wide connections; the Earth surface; atomic weight; in due time; in due form; to pay in full; what's the pay; front wheel; on wheels; to wheel the car; collapse of plans; a collapsed building; without delay; rather big; nuclear device; charged with electricity; to get the same mark; to settle the question; because of the accident; a paved street; the general meaning of the word; a chief engineer; to obtain knowledge gradually; to stretch a cable

Упражнение 10. *Переведите на русский язык следующие словосочетания, укажите, чем выражено определение.*

the new device to be introduced; the theory to be considered; connecting line; advanced students; tested method; general plan; internal combustion engine; George Washington Bridge bus terminal station; destroyed bridge; travelling passenger; the bridge to be constructed; a reading student; the instrument to be used; current events; cylinder wall; English Channel coast; supersonic vertical take-off bomber; fourteen bird and animal stories and plays; wooden house advantages; automatic flight control equipment; essential research programme; beginning college student; improved traffic flow; free school bus service; two-page story; two-bed hotel room; life-long hobby; class words and express ons; federal highway office; Dynamo versus Spartak football match; National Coal Research Institute; Electronic Research and Engineering Laboratory

Упражнение 11. *Переведите на русский язык следующие предложения, обращая внимание на инфинитив в различных функциях.*

1. This does not mean that the discoveries to be made over a period are planned in advance. 2. They will need much concrete to be used for soil stabilization. 3. The problem to be discussed is connected with the city water supply system. 4. This method is not good enough to be used everywhere. 5. People made many efforts to find a new source of energy. 6. A new comfortable coach was developed to transport people over long distances. 7. He was saving money to travel about the country. 8. It did not take much time to pave the road again. 9. The internal combustion engine to be used in this lorry is of a new design. 10. The road surface to be repaired was destroyed many years ago by heavy vehicles. 11. Goods to be transported to the north are stored at the railway station. 12. The main step to take is to settle the

problem of city transport at peak hours. 13. The results to be received may vary considerably. 14. He was too tired to be asked any questions. 15. England looks like one well ordered park. Englishmen like to preserve various old trees. There are some trees which were even too old to be cut for building ships in the seventeenth century. 16. A high speed electronic machine has introduced great changes in carrying out various mathematical calculations. This electronic machine works according to a programme to be prepared in advance and can carry out several thousand arithmetic operations per second.

Упражнение 12. *Переведите следующие предложения на русский язык, обращая внимание на перевод пассивных конструкций.*

1. Special kinds of equipment for developing African countries have been produced by one of the Ural building plants. 2. He was asked to take part in the expedition last week. 3. The building of the theatre is being reconstructed. 4. The work will be performed in due time. 5. My friend was glad to have been given such an interesting book to read. 6. The experiment was very important and it was being watched with great attention. 7. The Urals is known as a region of the greatest mineral resources. 8. The growth of heavy industry is always paid great attention to.

РАБОТА НАД СЛОВООБРАЗОВАНИЕМ

Упражнение 13. *а) Найдите в каждом ряду существительное.*

1. a) developing, b) development, c) developed, d) develop
2. a) provide, b) providing, c) provision, d) provided
3. a) attend, b) attention, c) attentive, d) attending
4. a) knowledge, b) smaller, c) know, d) knows
5. a) better, b) keep, c) keeper, d) kept
6. a) finder, b) finding, c) finds, d) harder
7. a) build, b) better, c) built, d) builder
8. a) behaviour, b) therefore, c) until, d) think
9. a) possible, b) other, c) throw, d) influence
10. a) quite, b) way, c) equip, d) later

б) Найдите в каждом ряду прилагательное.

1. a) probably, b) property, c) probable, d) properly
2. a) suddenly, b) different, c) degree, d) during
3. a) excellent, b) member, c) enough, d) explanation

4. a) dangerous, b) danger, c) determine, d) discovery
5. a) changes, b) consideration, c) consist, d) changeable
6. a) decision, b) decide, c) decisive, d) divide
7. a) possible, b) probably c) opportunity, d) provide
8. a) simplicity, b) shake, c) scientific, d) schedule
9. a) production, b) productive, c) produce, d) provision
10. a) attends, b) admission, c) achievement, d) attentive

в) Прочтите каждое из следующих слов, определите, к какой части речи оно относится (и почему), от какого слова образовано. Переведите каждое слово.

durability, stormy, indifferent, dwelling, appearance, influential, development, mainly, thickness, historic, reasonable, dangerous, movement, simplicity, irregular, weakness, distant, slowly, weightlessness, supposition, islander, promotion, replacement, quantitative, entrance, flyer, hardly, bravely, traveller, different, necessity, happiness

TEXT 8B

Задание I. *Прочтите текст, стараясь понять основное содержание. (Заметьте время начала и окончания чтения. Этот текст нужно прочесть за 5 минут, из расчета 90 слов в минуту.)*

THE WHEEL, STEAM CARRIAGES AND RAILWAYS

One of mankind's earliest and greatest inventions was the wheel. Without it there could be no industry, little transportation or communication, only crude farming, no electric power.

Nobody knows when the wheel was invented. There is no trace of the wheel during the Stone Age, and it was not known to the American Indian until the White Man came. In the Old World it came into use during the Bronze Age, when horses and oxen were used as work animals. At first all wheels were solid discs.

The problem to be solved was to make the wheels lighter and at the same time keep them strong. At first holes were made in the wheels, and they became somewhat lighter. Then wheels with spokes were made. Finally, the wheel was covered with iron and then with rubber.

Light two-wheeled carriages were used widely in the ancient world. As time passed they were made lighter, strong-

er, and better. Later people joined together a pair of two-wheeled carts into a four-wheeled vehicle. At first only kings and queens had the privilege of driving in them.

In the West the first steam carriage was invented in France. The three-wheeled machine had the front wheel driven by a two-cylinder steam engine, and carried two people along the road at a walking pace. It was not a great success, as the boiler did not produce enough steam for keeping the carriage going for more than about 15 minutes.

The steam engine appeared in 1763. It was followed by several improved steam road carriages. Their further development was prevented by railway companies. The rapid spread of railways in the United Kingdom was due largely to George Stephenson, who was an enthusiast as well as a brilliant engineer.

He demonstrated a locomotive that could run eighteen kilometres an hour and carry passengers cheaper than horses carry them. Eleven years later Stephenson was operating a railway between Stockton and Darlington. The steam locomotive was a success.

In Russia the tsar's government showed little interest in railway transportation. After long debates the government, which did not believe in its own engineers, finally decided to invite foreign engineers to submit (представить) projects for building railways in Russia.

Yet at the very time when foreign engineers were submitting their plans, in the Urals a steam locomotive was actually in use. It had been invented and built by the Cherepanovs, father and son, both skilful mechanics and serfs (крепостные). The first Russian locomotive was, of course, a "baby" compared with the locomotives of today. Under the boiler (котел) there were two cylinders, which turned the locomotive's two driving wheels (there were four wheels in all). At the front there was a smoke-stack, while at the back there was a platform for the driver.

Задание II. *Выберите утверждение, соответствующее содержанию текста.*

1. The wheel:
   1) was invented during the Stone Age; 2) was known to American Indians before the White Man came; 3) came into use during the Bronze Age.
2. In the West the first steam carriage was invented:
   1) in the United Kingdom; 2) in France; 3) in Germany.
3. The steam locomotive:

1) was cheaper than horses; 2) was not cheaper than horses; 3) was more expensive than horses.

4. The Cherepanovs were:
   1) engineers; 2) scientists; 3) mechanics.
5. The first Russian locomotive had:
   1) three wheels; 2) two wheels; 3) four wheels.

Задание III. *Прочтите текст еще раз и ответьте на вопросы.*

1. What kind of animals were used for work during the Bronze Age? 2. What were the first wheels like? 3. What are the stages in the development of the wheel? 4. How many people did the first steam carriage carry? 5. Who demonstrated the first locomotive in the United Kingdom? 6. Was the Russian government interested in railway transportation? 7. What were the Cherepanovs? 8. What was the first Russian locomotive like? 9. Are the locomotives widely used in our country? 10. What kind of locomotives are used in our country now?

TEXT 8C

Задание I. *Прочтите текст, отыскивая в нем ответы на поставленные вопросы.*

DIFFERENT KINDS OF LAND TRANSPORT

What was the reaction of the people after the invention of the steam engine?

1. In Washington the story is told of a director of the Patent Office who in the early thirties of the last century suggested that the Office be closed because "everything that could possibly be invented had been invented". People experienced a similar feeling after the invention of the steam engine.

But there was a great need for a more efficient engine than the steam engine, for one without a huge boiler, an engine that could quickly be started and stopped. This problem was solved by the invention of the internal combustion engine.

Who introduced the first cheap motor car?

2. The first practical internal combustion engine was introduced in the form of a gas engine by the German engineer N. Otto in 1876.

Since then motor transport began to spread in Europe very rapidly. But the person who was the first to make it really popular was Henry Ford, an American manufacturer who introduced the first cheap motor car, the famous Ford Model "T".

When did diesel-engined lorries become general?

3. The rapid development of the internal combustion engine led to its use in the farm tractors, thereby creating a revolution in agriculture. The use of motor vehicles for carrying heavy loads developed more slowly until the 1930s when diesel-engined lorries became general.

The motor cycle steadily increased in popularity as engines and tyres became more reliable and roads improved. Motor cycles were found well suited for competition races and sporting events and were also recognized as the cheapest form of fast transport.

When were the trams introduced first?

4. Buses were started in Paris in 1820. In 1828 they were introduced in London by George Shillibeer, a coach builder who used the French name "Omnibus" which was obtained from the Latin word meaning "for all". His omnibuses were driven by three horses and had seats for 22 passengers. Then in the 20th century reliable petrol engines became available, and by 1912 the new motor buses were fast replacing horse-driven buses.

Trams were introduced in the middle of the 19th century. The idea was that, as the rails were smoother than the roads, less effort was needed to pull a tram than a bus. The first trams were horse drawn but the later trams were almost all driven by electricity. The electric motor driving the tram was usually with electric current from overhead wires. Such wires are also used by trolley-buses, which run on rubber tyres and do not need rails.

Another form of transport used in London, Paris, Berlin, Moscow, Leningrad, Kiev and some other crowded cities is the underground railway.

London's first underground railway of the "tube" type was opened in 1863. The Moscow underground which is considered to be the best and most comfortable underground in the world, was opened in 1935.

What do the longest oil pipe-lines connect?

5. The pipe-lines, which were in use by the ancient Romans for carrying water supplies to their houses, are now main-

ly used to transport petroleum. The first pipe-line of this kind was laid in Pennsylvania, the United States, in 1865.

Some of the longest oil pipe-lines connect oil-fields in Iraq and near the Persian Gulf with ports on the Mediterranean coast. A famous Pipe-Line Under the Ocean (PLUTO) was laid across the English Channel in 1944.

What are the cableways used for?

6. A form of transport which is quite common in some mountainous parts of the world, especially in Switzerland, is the aerial cableway. Cableways are used at nearly all winter sport centres to pull or carry skiers to the top of the slopes. Cableways are used by many Alpine villages which lie high up the mountain-sides for bringing up their supplies from the valley below.

Задание II. *Прочтите текст С еще раз и выделите в каждой части текста интересные для вас факты.*

Задание III. *Соотнесите факты, относящиеся к истории развития наземного транспорта, о которых говорится в тексте 8С, с датами, приведенными ниже.*

1820, 1863, 1865, 1876, 1912, 1930s, 1935, 1944

TEXT 8D

THE EARLY DAYS OF THE AUTOMOBILE

1. One of the earliest attempts to propel a vehicle by mechanical power was suggested by Isaac Newton. But the first self-propelled vehicle was constructed by the French military engineer Cugnot in 1763. He built a steam-driven engine which had three wheels, carried two passengers and ran at maximum speed of four miles. The carriage was a great achievement but it was far from perfect and extremely inefficient. The supply of steam lasted only 15 minutes and the carriage had to stop every 100 yards to make more steam.

2. In 1825 a steam engine was built in Great Britain. The vehicle carried 18 passengers and covered 8 miles in 45 minutes. However, the progress of motor cars met with

great opposition in Great Britain. Further development of the motor car lagged because of the restrictions resulting from legislative acts. The most famous of these acts was the Red Flag Act of 1865, according to which the speed of the steam-driven vehicles was limited to 4 miles per hour and a man with a red flag had to walk in front of it.

Motoring really started in the country after the abolition of this act.

3. In Russia there were cities where motor cars were outlawed altogether. When the editor of the local newspaper in the city of Uralsk bought a car, the governor issued these instructions to the police: "When the vehicle appears in the streets, it is to be stopped and escorted to the police station, where its driver is to be prosecuted."

4. From 1860 to 1900 was a period of the application of gasoline engines to motor cars in many countries. The first to perfect gasoline engine was N. Otto who introduced the four-stroke cycle of operation. By that time motor cars got a standard shape and appearance.

In 1896 a procession of motor cars took place from London to Brighton to show how reliable the new vehicles were. In fact, many of the cars broke for the transmissions were still unreliable and constantly gave trouble.

The cars of that time were very small, two-seated cars with no roof, driven by an engine placed under the seat. Motorists had to carry large cans of fuel and separate spare tyres, for there were no repair or filling stations to serve them.

After World War I it became possible to achieve greater reliability of motor cars, brakes became more efficient. Constant efforts were made to standardize common components. Multi-cylinder engines came into use, most commonly used are four-cylinder engines.

5. Like most other great human achievements, the motor car is not the product of any single inventor. Gradually the development of vehicles driven by internal combustion engine — cars, as they had come to be known, led to the abolition of earlier restrictions. Huge capital began to flow into the automobile industry.

From 1908 to 1924 the number of cars in the world rose from 200 thousand to 20 million; by 1960 it had reached 60 million! No other industry had ever developed at such a rate.

6. There are about 3,000 Americans who like to collect antique cars. They have several clubs which possess great influence such as Antique Automobile Club and Veteran Mo-

tor Car Club, which specialize in rare models. The clubs practise meetings where members can exhibit their cars. Collectors can also advertise in the magazines published by their clubs. Some magazines specialise in a single type of car such as glorious Model "T". A number of museums have exhibitions of antique automobile models whose glory rings in automobile history. But practically the best collection — 100 old cars of great rarity — is in possession of William Harrah. He is very influential in his field. The value of his collection is not only historical but also practical: photographs of his cars are used for films and advertisements.

7. In England there is the famous "Beaulieu Motor Museum" — the home for veteran cars.

The founder of the Museum is Lord Montague, the son of one of England's motoring pioneers, who opened it in 1952 in memory of his father. Lord Montague's father was the first person in England to be fined by the police for speeding. He was fined 5 pounds for going faster than 12 miles per hour!

In the Museum's collection there is a car called the *Silver Ghost* which people from near and far go to see. It was built by Rolls-Royce in 1907, and called the *Silver Ghost* because it ran so silently and was painted silver.

There is a car called *The Knight*. It is the first British petrol-driven car. Its top speed was only 8 m.p.h.!

In the Museum there is also a two-seater car, built in 1903.

Задание I. *Ответьте на вопросы по тексту D. Правильность ответов проверьте в соответствующих частях текста.*

1. Who was the first to suggest the idea of propelling vehicle by mechanical power? (1) 2. Who was a self-propelled vehicle constructed by? (1) 3. When and in what country was a steam engine built? (2) 4. What do you know about the Red Flag Act of 1865? (2) 5. What kind of instruction did the Russian governor issue? (3) 6. What did N. Otto introduce? (4) 7. When did it become possible to achieve greater reliability of the cars? (4) 8. What was the number of the cars by 1960? (5) 9. How many Americans collect antique cars? (6) 10. What is historical and practical value of William Harrah's collection? (6) 11. What can you say about the Museum of veteran cars? (7) 12. When did Rolls-Royce build its *Silver Ghost*? (7) 13. What was the speed of the first British petrol-driven car? (7)

Задание II. *Прочтите текст еще раз. Озаглавьте каждую часть текста.*

КОНТРОЛЬНЫЙ СЛОВАРЬ

1. also (*adv*); 2. backward (*a*); 3. beat (*v*); 4. because of (*prp*); 5. charge (*v*); 6. chiefly (*adv*); 7. coach (*n*); 8. collapse (*n, v*); 9. combustion (*n*); 10. connect (*v*); 11. current (*n, a*); 12. delay (*n, v*); 13. device (*n*); 14. directly (*adv*); 15. distance (*n*); 16. drag (*v*); 17. due (*a*); 18. engine (*n*); 19. force (*n, v*); 20. general (*a*); 21. goods (*n*); 22. gradually (*adv*); 23. hand (*n, v*); 24. internal (*a*); 25. introduction (*n*); 26. lead (*v*); 27. lorry (*n*); 28. mean (*v*); 29. measure (*n, v*); 30. at once; 31. pave (*v*); 32. pay (*n, v*); 33. rather (*adv*); 34. remark (*n, v*); 35. repair (*n, v*); 36. the same (*a*); 37. settle (*v*); 38. soil (*n*); 39. source (*n*); 40. stage (*n*); 41. step (*n, v*); 42. stretch (*n, v*); 43. surface (*n*); 44. unless (*cj*); 45. vary (*v*); 46. vehicle (*n*); 47. weight (*n*); 48. wheel (*n, v*); 49. wide (*a*); 50. wind (*n*)

LESSON 9 (NINE)

Грамматика: 1. Объектный инфинитивный оборот.
2. Субъектный инфинитивный оборот.
3. Функции и перевод слов **one (ones), that (those).**

Основной текст А: Water Transport.

Объектный инфинитивный оборот

А. Подлежащее +	глагол-сказуемое +	дополнение +	инфинитив
I	know	him	to study two foreign languages.
Б. Подлежащее +	глагол-сказуемое +	дополнение +	инфинитив без **to.**
I	see hear feel watch notice make (заставлять)	her	sing at the concert.

Упражнение 1. *Переведите следующие предложения, обращая внимание на объектный инфинитивный оборот.*

A. 1. He wanted us to visit the art exhibition. 2. I expect you to tell me everything. 3. I suppose her to be about 50. 4. The teacher does not consider him to be a good student. 5. The engineer expected the work to be done in time. 6. We expect you to show good results. 7. The discovery showed the atomic nucleus to be a vast source of energy. 8. We know him to have graduated from the Institute two years ago. 9. Everybody knows him to be writing a new book. 10. We know the cybernetics to be an important branch of modern technology. 11. We thought him to have taken part in their experiment. 12. Did you want the plan to be improved?

B. 1. She felt somebody look at her. 2. We heard him come in and close the door behind him. 3. Have you ever seen Ulanova dance? 4. She watched the boy buy a newspaper, open it, look it through and then throw it away. 5. Nobody noticed her leave the room. 6. I heard him mention my sister's name. 7. Many people like to watch the sun rise. 8. She saw her son fall. 9. He likes to watch his son play in the garden. 10. The students heard the bell ring. 11. You can't make me believe that all these stories are true. 12. In spite of bad weather the instructor made the sportsmen continue their training.

Субъектный инфинитивный оборот

Подлежащее +	глагол-сказуемое +	инфинитив	
The delegation	is reported	to come	on Monday.
They	seem	to know	the subject well.

Упражнение 2. *Переведите следующие предложения на русский язык, обращая внимание на субъектный инфинитивный оборот.*

1. The lecture was said to be very interesting. 2. The members of the committee are reported to come to an agreement. 3. The English delegation is believed to come at the end of the month. 4. She seems to know English and French. 5. He proved to be a good teacher. 6. This school is considered to be the best in the town. 7. The weather appears to be improving. 8. The doctor happened to be there at the time of the accident. 9. She seems to be waiting for you. 10. Lake Baikal is said to be the deepest in the world. 11. This picture

proved to be the best at the exhibition. 12. These two scientists happened to work at the same problem.

Функции слов *one, ones*

1. He has given me **one** of his English books.
2. **One** must always observe traffic rules.
3. He hasn't got a radio-set, he wants to buy **one**.
4. Those texts are too long, we need shorter **ones**.

Упражнение 3. *Переведите следующие предложения, обращая внимание на значения слов* **one, ones.**

1. I shall have to buy a new coat for myself and another one for my sister. 2. One thing is clear to everybody: one must study hard if one wants to pass one's examinations well. 3. This TV set is very expensive, show me another one. 4. One never knows what may happen. 5. What other methods will they use? The ones they used were not effective. 6. The more one studies, the more one knows. 7. These trucks are too small; they will need bigger ones. 8. This apparatus is more powerful than the one installed in our laboratory. 9. He is one of the most experienced drivers. 10. This article is much more difficult than the one we translated yesterday.

Функции слов *that, those*

1. Give me **that** text-book please. (Give me **those** text-books.)
2. **That** was a hard day. (**Those** were hard days.)
3. He thought **that** they would arrive tomorrow.
4. I shall show you the engine **that** we must test.
5. The year on the Earth is twice as short as **that** on Mars.
6. **That** he is a good driver is a well-known fact.

Упражнение 4. *Переведите следующие предложения, обращая внимание на значения слов* **that, those.**

1. I am afraid that he has fallen ill. 2. That he agreed to help his comrades is only natural. 3. She said that she would come back in ten minutes. 4. The book that you gave me is very interesting. 5. The question that was discussed at the meeting yesterday is of great importance. 6. That happened the year when I entered the Institute. 7. Those children are always very noisy. 8. He thought that all those things were

not important. 9. That was the thing that he wanted. 10. The cities that were destroyed during the war were reconstructed.

VOCABULARY NOTES

Задание I. *Переведите следующие предложения.*

1. **to weigh** — весить. This boat weighs several tons.
2. **slowly** — медленно. Cars were moving slowly along the mountain road.
3. **horse-power (h. p.)** — лошадиная сила. The engine of the "Moskvitch-412" is 75 h. p.
4. **in order to** — для того чтобы. He came here in order to see us.
5. **to fly (flew, flown)** — летать. Who was the first to fly across the North Pole?
6. **to suppose** — полагать, думать. He is right, I suppose.
7. **to seem** — казаться. He was thirty, but he seemed much older.
8. **island** — остров. On the fifth day of the voyage they saw an island.
9. **mile** — миля. In the morning the travellers saw a snow-capped mountain at the distance of about 5 miles.
10. **till** — до. I'll be waiting for you here till 5 o'clock.
11. **century** — век. We live in the twentieth century.
12. **round** — вокруг. The children were playing round a big tree.
13. **to prove** — 1) доказывать; 2) оказываться. 1) It was difficult to prove him anything. 2) The film proved to be very good.
14. **end** — конец. At the end of the lesson the teacher gave the students the home-task.

to end — кончаться. How does the story end?

15. **like** — 1) подобный; 2) как. 1) He is like his father in everything. 2) They are behaving like children.
16. **for** — 1) так как; 2) в течение; 3) для. 1) He did not come to the meeting for he was ill. 2) He was ill for 5 days. 3) He has left this book for you.
17. **iron** — железо. The first iron bridge was built in the 18th century.
18. **steel** — сталь. Modern ships are built of iron and steel.
19. **to replace** — заменять, вытеснять. Buses are replacing the trams in cities.

20. **timber** — строительный лес; дерево (*древесина*). All the northern regions of the USSR are covered with large forests which give us many different kinds of timber.

21. **size** — размер. The scientists studied the shape and size of meteorites found in the taiga.

22. **to promote** — способствовать, содействовать. It was necessary to build good roads to promote the rapid growth of the town.

23. **quantity** — количество. Quantity is transformed into quality.

24. **raw** — сырой; необработанный. In the 19th century a considerable number of raw material was imported from colonial countries.

25. **such as** — как например, такой как. Student must attend lectures on different subjects such as physics, chemistry, and others.

26. **cotton** — хлопок. Some European countries import raw cotton from America and India and export cotton goods to other parts of the world.

27. **a great deal** — много. A great deal of earth work is to be done before the construction starts.

28. **smooth** — ровный, плавный. Gradually the road became smooth. Does the engine work smoothly?

29. **efficient** — эффективный, продуктивный. Efficient methods were used to increase the quantity of manufactured goods.

30. **a few** — несколько. Only a few people could understand the significance of the discovery.

31. **owing to** — благодаря, из-за, вследствие. There was much delay of transport owing to the accident.

32. **to operate** — 1) работать, действовать; 2) управлять, приводить в движение (*машину*). 1) Do you know how this machine operates? 2) This powerful machine is operated by one person.

33. **negligible** — незначительный. A negligible quantity of the chemical substance is sometimes enough to determine its properties.

34. **capacity** — 1) мощность; 2) емкость. 1) Having made some improvements they increased the capacity of the engine. 2) The capacity of the tank is 100 litres.

35. **reliable** — надежный. He was recommended as a reliable person.

36. **protection** — защита, ограждение. When working an electrician must use some means of protection.

37. **to widen** — расширять(ся). The old street had to be widened.

38. **to deepen** — углублять(ся). This shallow river must be deepened for better navigation.

39. **narrow** — узкий. This narrow bridge has been used for many years; now it needs widening.

40. **to run (ran, run)** — 1) бежать; проходить; 2) работать (*о машине*). 1) You have to run very quickly, if you want to be there in time. For several miles the road runs through a thick forest. 2) The engine was running at full speed.

РАБОТА СО СЛОВАРЕМ

Задание II. *Определите, к какой части речи относятся выделенные в данных предложениях слова; затем найдите в словаре нужные значения этих слов и переведите предложения.*

1. **boat**

a) A loaded **boat** was moving in the direction of the port. b) A lot of people went **boating** on this Sunday afternoon. c) Will this **boat** hold all five of us?

2. **supply**

a) They used boats to carry **supplies** of food to the island. b) I took with me a good **supply** of books. c) The expedition was **supplied** with all the necessary equipment.

3. **ship**

a) In modern ports the **ships** are loaded and unloaded mechanically. b) When does the **ship** leave? c) Have the goods for the Polar Station already been **shipped?**

4. **sail**

a) The boat was **sailing** at full speed. b) The boat had beautiful **sails.** c) Can you **sail** a boat?

5. **point**

a) Our opinions differ in some **points.** b) The water was heated to the boiling **point.** c) Everything **points** to a cold winter.

6. **cross**

a) Before **crossing** a street look first to the left, then to the right. b) Put a **cross** on the map to show where we are. c) We can **cross** the river at the next village.

7. **load**

a) The lorries were **loaded** mechanically. b) The **load** weighs a hundred kilograms. c) They **loaded** us with work.

8. **oil**

a) Every machine needs **oiling.** b) Water is heavier than **oil.** c) What sort of **oil** is there at this service station?

9. **fuel**

a) What kind of **fuel** is used in these motor cars? b) We had to stop **to fuel** the car. c) This passenger car needs **fuelling** every 300 miles.

10. **design**

a) He is working on the **design** for a new machine. b) The architect is **designing** a new school. c) The ice-breaker is **designed** for operation in Arctic waters.

Задание III. *Прочтите следующие интернациональные слова и догадайтесь об их значении.*

barge, ton, aeroplane, companion, army, colony, magnetic, compass, motor, revolution, port, turbine, diesel, reactor, radiation, atomic, canal

TEXT 9A

Задание. *Прочтите и переведите текст.*

WATER TRANSPORT

1. One of the most important things about water transport is the small effort needed to move floating craft. A heavy boat or a barge weighing several tons can be moved through the water, slowly but steadily, by one man. An aeroplane of the same weight as the barge needs engines of 1,000 horsepower or more in order to fly.

2. The raft made of logs of wood is supposed to be the earliest type of boat.

Rafts seem to be clumsy vessels, although the Norwegian scientist Thor Heyerdahl and his five companions in 1947 made a voyage on the raft *Kon-Tiki* from Peru to Tuamotu Islands — a distance of 4,500 miles.

3. We know the water transport in ancient times to have been developing most rapidly on great rivers. The ancient Romans used vessels to carry their armies and supplies to colonies. These ships, usually called galleys, continued to be used in the Mediterranean till 1750.

4. The introduction of the magnetic compass allowed long voyages to be made with much greater safety. At the end

of the 15th century, sailing vessels are known to have carried men from Europe to America and round Africa to India.

The middle of the 19th century proved to be the highest point in the development of sailing ships.

5. **Steam and Motor Ships.**— One of the earliest steamboats is known to have been tested at the end of the 18th century. The first steamship to cross the Atlantic was the *Savannah*, 98-foot ship built at New York, which made the crossing in 1819. Like all the early steamships, it had sails as well as paddles.[1] By the middle of the 19th century it became possible to build much larger ships for iron and steel began to replace timber.

6. The rapid increase in the size and power of ships was promoted by the industrial revolution. The industrial countries produced great quantities of goods which were carried to all parts of the world by ships. On their return voyages, the ships brought either raw materials such as cotton, metals or timber for the factories, or grain and foodstuffs for the growing population.

During the same period, a great deal was done to improve ports, and that permitted larger ships to use them and to make loading and unloading more quickly.

7. Improvements introduced in the 20th century included the smoother and more efficient type of engines called steam turbines and the use of oil fuel instead of coal. Between 1910 and 1920 the diesel engine began to be introduced in ships. These diesel-engined ships are called motor ships.[2] The largest ships, however, are still generally driven by steam turbines. In the late 1950s a few ships were being built which were equipped with nuclear reactors for producing steam.

8. In 1957 the world's first atomic ice-breaker was launched in Leningrad.

This atomic ice-breaker is equipped with an atomic engine owing to which her operating on negligible quantities of nuclear fuel is possible. In spite of the capacity of her engine being 44,000 h.p. it will need only a few grams of atomic fuel a week.

The atomic ice-breaker has three nuclear reactors. The operation of the nuclear reactor is accompanied by powerful radiation. Therefore, the ice-breaker is equipped with reliable means of protection. The ice-breaker is designed for operation in Arctic waters.

9. **Canal Transport.**— Sea-going ships can use some rivers, such as the Thames in England, the Rhine, and the

Volga in Europe and the Mississippi in the United States. Generally, however, a river has to be "canalized" before ships can use it. This means widening and deepening the channel and protecting its banks so that they do not wash away and block the river with mud.

10. We find the British canals to be quite narrow and shallow.

The canals in Europe are much larger than those in Great Britain. France has a big network of canals, centred on Paris, and linking ports of the Atlantic, Mediterranean and English Channel [3] coasts with each other and with other countries.

In the USSR canals large enough to be used by ships link Moscow with Leningrad on the Baltic Sea. Other Soviet canals run between the White Sea and the Baltic, and between the Don and the Volga rivers.

NOTES TO THE TEXT

1. **paddle** — гребное колесо
2. **motor ship** — теплоход
3. **the English Channel** — Ла-Манш

Упражнение 5. *Ответьте на вопросы по тексту А.*

1. What is the most important thing about water transport? 2. What is the distance covered by *Kon-Tiki*? 3. What did the Romans use their vessels for? 4. Until what century were galleys used? 5. What made long voyages more safe? 6. What century is the highest point in the development of sailing ships? 7. When did the first steamship cross the Atlantic? 8. What made it possible to build larger ships in the middle of the 19th century? 9. In what way did the industrial revolution influence the size and power of ships? 10. What changes in ports took place during the industrial revolution? 11. What improvements in the type of engines were introduced during the 20th century? 12. How are diesel-engined ships called? When were they introduced? 13. What type of ships were introduced in 1950s? 14. How much fuel a week does the atomic ice-breaker need? 15. What is the operation of nuclear reactor accompanied by? 16. What kind of work must be carried out before sea-going ships can use rivers? 17. What city is the centre of the network of the canals in France? 18. Can sea-going ships use the canal linking Moscow with Leningrad?

Упражнение 6. *Перечертите таблицу в тетрадь и заполните графы, пользуясь информацией текста 9А (первая графа дана как образец).*

The name of the vessel	When did it appear?	What is (was) it driven by?	What is (was) it used for?
Atomic Ice-breaker	in 1957	by atomic engine of 44,000 h. p.	for operation in Arctic waters
Motor Ship			
Steamship			
Sailing Vessel			
Galley			

Упражнение 7. *Заполните пропуски подходящими по смыслу словами.*

capacity, negligible, owing to, timber, prove, loaded, weigh, slowly, supplies, suppose, sailing, seemed, till, raw, replace, smooth, fuel, widening, efficient

1. What ... is to be used for this engine? 2. Aluminium can easily ... iron in many cases. 3. Therefore ... measures were taken. 4. Is the road between the two villages ...? 5. Cotton was among other ... materials imported to the country. 6. They have developed a new reliable means of ... against radiation. 7. They are designing a new car of a greater ... . 8. Even ... changes could lead to the accident. 9. This street is rather narrow. It needs ... . 10. ... is often spoken about as the one of the best structural materials. 11. ... up-to-date equipment new experiments could be made in the laboratory. 12. You look very thin, how much do you ...? 13. They walked ... it got dark. 14. Let us go, I ... he is waiting for us there. 15. This ship is supposed to carry ... of food to the island. 16. It was clear he could ... nothing. 17. He worked hard, and he ... very tired. 18. The ship was ... south. 19. How much did a ... boat weigh? 20. He was very tired and was walking ... .

Упражнение 8. *а) Найдите в каждом ряду слово, противоположное по значению первому слову ряда.*

1. **negligible** a) internal, b) previous, c) considerable, d) permanent
2. **slowly** a) chiefly, b) directly, c) rather, d) quickly
3. **narrow** a) flat, b) wide, c) shallow, d) advanced
4. **a few** a) wrong, b) enough, c) else, d) one
5. **to load** a) to operate, b) to design, c) to unload, d) to develop
6. **shortage** a) plenty, b) protection, c) establishment, d) significance
7. **to repair** a) to cross, b) to damage, c) to test, d) to widen
8. **the same** a) a few, b) recent, c) main, d) different
9. **weakness** a) capacity, b) strength, c) century, d) provision
10. **simple** a) complicated, b) reliable, c) successful, d) major
11. **gradually** a) unfortunately, b) probably, c) at once, d) scarcely
12. **small** a) valuable, b) rapid, c) main, d) huge

б) Найдите в каждом ряду слово, близкое по значению первому слову ряда.

1. **a great deal** a) quantity, b) according to, c) plenty of, d) consist of
2. **to promote** a) need, b) to require, c) to receive, d) to facilitate
3. **to replace** a) to load, b) to cross, c) to change, d) to include
4. **till** a) round, b) until, c) in order to, d) for
5. **to suppose** a) to like, b) to find out, c) to try, d) to think
6. **boat** a) ship, b) fuel, c) island, d) cotton
7. **to solve** a) to develop, b) to consider, c) to decide, d) to send
8. **between** a) round, b) among, c) in spite of, d) through
9. **to supply** a) to sail, b) to maintain, c) to provide, d) to move
10. **invention** a) century, b) influence, c) size, d) discovery
11. **to design** a) to point, b) to construct, c) to test, d) to drive
12. **earth** a) land, b) iron, c) steel, d) coal

Упражнение 9. *Переведите следующие словосочетания на русский язык.*

to load a ship; a loaded barge; to move slowly; weighing several tons; a plane flying northwards; to seem young; an old islander; fresh supplies; a steamship; to fly round the Earth; to prove something; to be made of iron, steel and concrete; to replace iron; rich in timber; different sizes; to promote progress; quality and quantity; to obtain raw materi-

als; to provide with cotton; a great deal of goods; to work smoothly; efficient measures; to supply oil; fuel for vehicles; a few remarks; owing to the advantage; to operate well; negligible progress; reliable sources of information; to protect children; to design according to the plan; to widen a road; to deepen a river; a narrow place; to run between two points; in order to know better; at the distance of 15 miles; till 3 o'clock; till you come; in the last century; to test a new equipment; to like music and literature; for 10 years; such a beautiful garden; few words; a few words; to cross the street; before crossing the street; slow movement; to prove efficient

Упражнение 10. *Переведите на русский язык следующие незаконченные предложения, обращая внимание на субъектный инфинитивный оборот.*

1. The speed of the car is known to be ... . 2. Mars is expected to be ... . 3. The diesel engine is known to be used ... . 4. The results are supposed to be ... . 5. The atmosphere of Saturn is assumed to be ... . 6. The radio was thought to have been ... . 7. The calculations were considered to be ... . 8. The new system was believed to have been ... . 9. The scientist is always supposed to be ... . 10. The match is reported to begin ... . 11. The road is expected to be repaired ... . 12. The design is said to have been improved ... .

Упражнение 11. *Переведите следующие предложения на русский язык, обращая внимание на инфинитивные конструкции.*

1. A lot of people came to watch the ocean liner return home after a long voyage. 2. Everybody thought him to be quite a reliable person. 3. The captain declared the load to be too much for his small boat. 4. He seems to know a great deal about the history of navigation. 5. The boat, though very small, proved to be quite reliable. 6. The 20th century is considered to be the century of space travels. 7. The motor proved to be quite efficient. 8. Atomic ice-breakers are known to operate on a negligible quantity of atomic fuel. 9. The results of the test were found to be very interesting. 10. I know them to be working at the problem of protecting the cosmonauts from the effect of sun radiation. 11. Rubber is known to have been brought from America. 12. Ink is supposed to have been invented in Egypt. 13. We expected him to be appointed director of a new automobile plant. 14. This question appears to be of great importance. 15. The plan proved to be a great success. 16. He happened to leave the

Institute very early that day. 17. The travellers found the people of the small island to be very friendly. 18. They reported the capacity of the new engine to have been increased. 19. The owner of the motor car wanted the old engine to be replaced. 20. All the country watched the first Soviet motor car expedition cross the Kara-Kum Desert.

Упражнение 12. *Переведите следующие предложения на русский язык, обращая внимание на значения слов* **one (ones), that (those).**

1. This dictionary is very large, show me a smaller one. 2. One should be very attentive when taking notes of the lecture. 3. The trouble is that they haven't calculated the exact speed of the car. 4. This device is an ordinary one. 5. The scientist answered that they were going to find a new way of getting valuable minerals. 6. He said that the question should be discussed at once. 7. This advanced method allows one to get good results. 8. The head of the laboratory said that they should take part in the work on the device. 9. They knew that the building had collapsed. 10. One should be very careful when crossing the street. 11. The remark that he made was of no importance. 12. That was the distance that they covered in one hour. 13. The properties of gold are different from those of iron. 14. One never knows what to expect in this case. 15. This was one of the reasons for the lengthening of the bus route. 16. The problems of water supply in this town are as important as those of lighting.

Упражнение 13. *Переведите следующие предложения без словаря, обращая внимание на слова, образованные по способу конверсии.*

1. Besides his work Einstein liked most of all playing the violin and boating. 2. He didn't know her likes and dislikes. 3. A small boat couldn't hold so many people. 4. They supply us with all necessary information. 5. Our supplies of fuel have come to an end. 6. When was this ship built? 7. The supplies are shipped to Antarctic Stations in summer. 8. It was a fine day, and many people were boating on the lake. 9. There was no wind and the sails were down. 10. The ships sailed across the Atlantic as early as the 15th century. 11. A submarine of this design can cross the Arctic under water. 12. Large supplies of fuel were stored during summer. 13. Fuelling stations are situated along the highway. 14. Will you step aside, please? 15. He took one step forward.

16. Can you repair my watch? 17. The house needs only small repairs. 18. I didn't like his last remark. 19. He remarked on the kind of work they would have to carry out.

РАБОТА НАД СЛОВООБРАЗОВАНИЕМ

Упражнение 14. *Найдите в каждом ряду слово, перевод которого дан в начале ряда, опираясь на состав слов.*

1. **поселение** a) settle, b) settlement, c) settler, d) settles
2. **независимость** a) dependence, b) independent, c) depend, d) independence
3. **здание** a) builder, b) builds, c) building, d) build
4. **реставрация** a) restoration, b) restorative, c) restore, d) restores
5. **содействующий** a) promote, b) promoting, c) promotion, d) promotes
6. **замененный** a) replacement, b) place, c) replace, d) replaced
7. **значение** a) mean, b) meaning, c) meant, d) means
8. **предположение** a) supposes, b) suppose, c) supposed, d) supposition
9. **летчик** a) flyer, b) fly, c) flight, d) flying
10. **мощный** a) power, b) powerless, c) powerful, d) proper
11. **медленно** a) slower, b) slowly, c) slow, d) slowest
12. **вес** a) weighty, b) weightlessness, c) weight, d) weightless

Упражнение 15. *Переведите следующие производные слова согласно модели.*

Модель 14: *основа существительного/прилагательного* + **-ize**→ *глагол*

vapour — пар	**to vaporize** — испарять
character — характер	to characterize
oxygen — кислород	to oxidize
critic — критик	to criticize
real — реальный	to realize
magnet — магнит	to magnetize
fraternal — братский	to fraternize
general — общий	to generalize

Упражнение 16. *Найдите в тексте слова, имеющие общий корень со словами, данными перед текстом, определите части речи, к которым они относятся, переведите их, затем переведите текст.*

computer — электронно-вычислительная машина	abnormal — ненормальный

to pollute — загрязнять
to detect — обнаруживать
to indicate — указывать
to predict — предсказывать
local — локальный
industrial
chemistry
meteorology

A computerized air pollution control system has been installed in Netherlands between Rotterdam and the North Sea. The area is densely populated and highly industrialized. Thirty-one detectors have been installed in the district. They are sensors (датчики) measuring levels of chemical substances considered to be indicators of general level of pollution. Signals of the sensors which also include meteorological information are sent electronically to a warning centre computer. The computer then gives predictions based on information from the sensors as well as on more general meteorological information. An abnormally high source of pollution can be localized within a minute. Plant operations are then curtailed (сокращать) or shut down through previous agreements with air pollution control authorities.

TEXT 9B

Задание I. *Прочтите текст, стараясь понять основное содержание. (Заметьте время начала и окончания чтения. Этот текст нужно прочесть за 4 минуты, из расчета 90 слов в минуту.)*

ELECTRIC FISHES

There are several kinds of fishes which are able to generate electricity strong enough to light a small bulb (лампочка) or even to run an electric motor.

Perhaps the best known are the Electric Rays (скат) or Torpedoes of which several kinds are found in the warm seas. It spends most of its time lying hidden on the sea-bed. The Electric Ray is able to give an electric shock by means of special organs behind the head on each side. The shock can stun (оглушать) the fishes on which Torpedo feeds and may knock a man down if he steps on it in water. The electricity produced by a young fish will light a pocket lamp, while that of a grown-up fish is strong enough to run a small electric motor.

Another well-known electric fish is the Electric Eel (угорь) found in the Amazon and Orinoco rivers in South America. It has a long eellike body and may grow to eight feet in length, and the electric organs are on each side of the

long tail (хвост). Its shock can paralyse a horse and man riding through the water.

These electric organs are found in several other fishes. The Electric Catfish (сом) of African lakes and rivers, among them the Nile, gives out its electricity from the organs, lying under the skin. The Electric Catfish is fat, slow and lazy. It grows to about three feet long and is sometimes eaten by Arabs. Electric Catfish and Electric Eel can generate electricity of several hundred volts.

The power for producing electricity may serve these fishes both for defence and attack. If a large enemy attacks them, it will get a shock that will drive it away, but the Catfish uses electricity most often against smaller fishes paralysing them.

No electric fishes can keep on giving shocks, for they soon become exhausted (истощать) and have to rest before they can produce electricity again.

Another very interesting thing about the electric fishes is their ability to predict (предсказывать) earthquakes. In Japan for a long time people have noticed an unusual behaviour of the Electric Catfish several hours before the beginning of an earthquake. It should be noted that before an earthquake begins, seismologists always record an increase of electric field frequency which is probably received by the electric organs of the Catfish.

Thus appeared an entirely new field of scientific research: scientists are going to investigate the possibility of biological forecasts of earthquakes in seismic, densely populated regions of Middle Asia.

Задание II. *Выберите утверждение, соответствующее содержанию текста.*

1. The Electric Ray or Torpedo has powerful electric organs:
   1) in its tail; 2) behind its head; 3) in the middle of the body.
2. The electric shock of the Torpedo:
   1) cannot light even a pocket lamp; 2) cannot stun fishes; 3) can knock a man down.
3. The Electric Eel lives in:
   1) seas; 2) oceans; 3) rivers.
4. The Electric Catfish is:
   1) fat and lazy; 2) thin and energetic; 3) very quick.
5. The electric fishes can give electric shocks:
   1) constantly; 2) once in their life; 3) for some time, and then have to rest before they can produce them again.

Задание III. *Прочтите текст еще раз. Ответьте на вопросы.*

1. Where does the Electric Ray or Torpedo spend most of its time? 2. Can the electric current of grown-up fish run a small electric motor? 3. Which of the electric fishes can paralyse a horse and a man on it? 4. In what continent does the Electric Catfish live? 5. What phenomenon has been observed in Japan concerning the Electric Catfish? 6. What are scientists going to investigate?

TEXT 9C

Задание I. *Прочтите текст, отыскивая в нем ответы на поставленные вопросы.*

THE FIRST VOYAGE ROUND THE WORLD

What was the aim of Magellan's voyage?

1. Magellan lived from 1480 till 1521. The first voyage round the world was made by him over 400 years ago. He thought that by going west he could travel by sea round the world and come to the same place again.

In those early days many people were interested in India. Many knew it was a very rich country whose culture was older than theirs. Magellan wanted to find a new way to India. His country, Portugal, did not help him, but he got money, ships, and all things necessary for the voyage from Spain. Magellan's business was to prepare everything.

To what type of people did Magellan belong?

2. At last the great day came and the voyage began. That was in September of 1519. Some people thought that nothing would come of it, that Magellan and his men would get lost and never come home again; others were sure that the whole thing would be a success. Who would be right, it was difficult to say at the moment. Magellan belonged to those who stop at nothing and always do their best to get what they want.

What did the people whom Magellan met in South America look like?

3. One day, after a voyage of many months, Magellan's crew saw land. It turned out to be South America. As the

travellers were badly in need of food and water, Magellan decided to stop there. With some of his sailors he went to see what the country was like. They were soon met by a crowd of men and women, who looked quite different from them.

These people were dark and had neither shoes, nor clothes. They soon made friends. They could not speak, of course, but understood one another well enough. Then these people went off, but soon returned, bringing with them many different things to eat. In his turn Magellan and his men gave them things which were not dear but looked beautiful. Everyone was well pleased.

Why was the voyage to the Philippine Islands difficult?

4. Magellan did not stay long in South America: he was in a hurry to get to India. This voyage was long and difficult. Islands were few and far between, and the travellers were often in need of food and water. Many of them fell ill, but at last, after many months of travelling, they reached the Philippine Islands. People used to get to India going east, while Magellan wanted to get there by travelling west.

In what war was Magellan killed?

5. In the Philippine Islands Magellan and his men were well met by the people. They stayed there for some time and took part in a war between two different peoples of the islands. Magellan was killed in this war.

Of Magellan's 5 ships which started for India in 1519 only one returned 3 years later, after making the first voyage round the world.

Задание II. *Прочтите следующие утверждения и на основе полученной информации ответьте на вопросы.*

1. Magellan lived from 1480 till 1521. How old was Magellan when he died?
2. He made his voyage over 400 years ago. In what century was it?
3. From South America Magellan decided to go to India. After many months of travel he reached the Philippine Islands. In what direction did he travel? (east or west?)
4. Magellan's ships started for India in 1519. Only one of them returned 3 years later. In what year was it?

Задание III. *Перескажите текст С.*

TEXT 9D

INTERESTING FACTS ABOUT CANALS

1. The best examples of canals used for draining land are found in Holland, where much of the country is below sea-level. Dams are used to prevent flooding and since 1932 over 300,000 acres of land have been drained. In winter the Dutch people use the frozen canals for ice-skating.

2. In a hot dry country such as Egypt water is scarce, and to prevent the land from becoming dry long canals are built from dams. These canals must be continually kept open, for the Egyptian farms and cotton fields cannot exist without these life lines of water.

3. Many inland waterways are used for the transport of heavy goods by barges. This method of carrying materials is not so widely used now, for although it is cheaper, it has the disadvantage of being much slower. Speed is regulated by the number of bridges and locks [1] which the barges encounter.

4. Two notable canals for ships in Europe are the Corinth Canal and the Kiel Canal. The former was built in 1893 across the solid rocks of the isthmus [2] of Corinth. Bridges from the tops of the steep sides of the canal connect north and south Greece. The Kiel Canal, which also has no locks, was built two years later and it gives the countries of the Baltic Sea quicker access to the west.

5. Venice, at the Adriatic Sea, is one of the most beautiful cities in Europe, for it has many canals instead of streets. Long narrow boats with curved ends, called "gondolas", carry passengers and goods from one part of the city to another. The gondolas are supplied with lanterns, which at night make the canals very colourful and romantic. A peculiar custom of former days was that the Ruler of Venice used to throw a ring into the water each year to show that the city was wed [3] to the sea.

6. One of the greatest arteries of world trade is the Suez Canal separating the two continents of Asia and Africa. As trade with India increased, the overland route across Suez became regular but very expensive. In 1859, the French engineer, Ferdinand de Lesseps, started to cut a passage through this flat desert country. Ten years later, the first sea-going ships passed through the canal, which is a hundred miles long and has no locks, thus completing a direct water route from the North Atlantic to the Indian Ocean.

The journey along the canal takes about fifteen hours and shortens the distance from Britain to the East by about 4,000 miles. The canal belongs to Egypt and is a vital waterway serving the merchants fleets of many nations.

7. The Great Lakes which lie between Canada and the United States have become parts of the world's ocean highways for it is now possible for big ships to sail up the Saint Lawrence Canal to the ports of Toronto, Cleveland and Chicago. A 218 mile canal joins the Atlantic with these Great Lakes which contain half of all the fresh water in the world. There are seven locks, five on the Canadian side and two on the United States side. Bridges needed to be raised fifty feet to allow big ship traffic to pass and, indeed, from Montreal, these ocean-going vessels are raised 246 feet above the sea-level to Lake Ontario. The Saint Lawrence Canal takes the ships 2,200 miles inland, half-way across the North American continent and deep into the heart of Canada.

NOTES TO THE TEXT

1. **lock** — шлюз
2. **isthmus** — перешеек
3. **to be wed** — быть обрученным

Задание I. *Ответьте на вопросы по тексту D. Правильность ответов проверьте в соответствующих частях текста.*

1. What are dams in Holland used for? (1) 2. Why aren't barges so widely used now? (3) 3. When was the Corinth Canal built? (4) 4. When was the Kiel Canal built? (4) 5. What makes Venice one of the most beautiful cities in Europe? (5) 6. What makes the canals look so romantic at night? (5) 7. What peculiar custom existed in Venice? (5) 8. When was the Suez Canal opened for navigation? (6) 9. How long does the journey along the Suez Canal take? (6) 10. Who built the Suez Canal? (6) 11. Do the Great Lakes contain fresh or salt water? (7) 12. Can ocean-going ships travel along the Saint Lawrence Canal? (7)

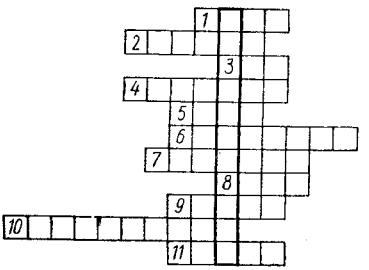
КОНТРОЛЬНЫЙ СЛОВАРЬ

1. boat (*n, v*); 2. capacity (*n*); 3. century (*n*); 4. cotton (*n*); 5. cross (*n, v*); 6. deepen (*v*); 7. design (*n, v*); 8. efficient (*a*); 9. end (*n, v*); 10. a few; 11. fly (*v*); 12. for (*cj*); 13. fuel (*n, v*);

14. a great deal; 15. iron (*n*); 16. island (*n*); 17. horse-power (*n*); 18. like (*a, prp*); 19. load (*n, v*); 20. mile (*n*); 21. narrow (*a*); 22. negligible (*a*); 23. oil (*n, v*); 24. operate (*v*); 25. in order to (*prp*); 26. owing to (*prp*); 27. point (*n, v*); 28. promote (*v*); 29. protection (*n*); 30. prove (*v*); 31. quantity (*n*); 32. raw (*a*); 33. reliable (*a*); 34. replace (*v*); 35. round (*prp*); 36. run (*v*); 37. sail (*n, v*); 38. seem (*v*); 39. ship (*n, v*); 40. size (*n*); 41. slowly (*adv*); 42. smooth (*a*); 43. steel (*n*); 44. such as; 45. supply (*n, v*); 46. suppose (*v*); 47. till (*prp*); 48. timber (*n*); 49. weigh (*v*); 50. widen (*v*)

QUIZ

Lessons 7-9



Fill in all the horizontal blanks correctly, and in the vertical blank you will get the name of one of the most efficient ways of city travel.

1. The Canal separating the two continents of Asia and Africa. (9D)
2. The people who built the first long-distance paved roads in Britain. (8A)
3. The first transport animal. (8A)
4. The name of the vessels used by ancient Romans to carry their armies and supplies to colonies. (9A)
5. The man who introduced the first cheap moto-cars. (8C)
6. The man who made the first voyage round the world in the 16th century. (9C)
7. The country which the architect of the Imperial Hotel in Tokyo came from. (7D)
8. The inventor of the first four-stroke cycle engine. (8D)
9. The shape of the oldest houses in Britain. (7C)
10. A brilliant engineer and organizer of rapid spread of railways in Great Britain. (8B)
11. The country which Magellan wanted to find a new way to. (9C)

LESSON 10 (TEN)

Грамматика: 1. Условные предложения (Conditional Sentences).
2. Многозначность слов.
Основной текст А: Air Transport.

Условные предложения

I. If I **have** time (tomorrow), I **shall go** to see that film.
II. a) If I **had** time (today, tomorrow), I **should go** to see that film.
b) If I **had had** time (yesterday), I **should have gone** to see that film.

Упражнение 1. *Переведите следующие предложения на русский язык, обращая внимание на условные придаточные предложения.*

1. If I come home early, I shall be able to write my report today. 2. If he were at the Institute now, he would help us to translate the article. 3. If you had come to the Institute meeting yesterday, you would have met with a well-known English writer. 4. You will get good results if you apply this method of calculation. 5. If he had taken a taxi, he would have come in time. 6. If the speed of the body were 16 km per second, it would leave the solar system. 7. If it had not been so cold, I should have gone to the country. 8. If the air were only composed of nitrogen burning would be impossible. 9. If you press the button, the device will start working. 10. The design would be ready by the end of the year if they supplied us with all the necessary equipment.

Упражнение 2. *а) Скажите или напишите данные предложения так, чтобы они выражали маловероятное предположение.*

Образец: If I see him tomorrow I shall tell him about the meeting.
If I saw him tomorrow, I should tell him about the meeting.

1. If they find the exact meaning of this word, they will understand the sentence easily. 2. If he works much at his English he will pass his exam well. 3. If I get a good dictionary, I shall translate this text. 4. If you go to the Lenin

Library, you will find there all the books you need. 5. If we receive the documents tomorrow, we shall start loading the lorries on Monday. 6. If the student observes the rules, he will not make mistakes. 7. If you help me, I shall repair the engine in an hour. 8. If they receive all the necessary equipment, they will be able to carry out their experiment. 9. If we drive at such a speed all the time, we shall arrive at the village before night. 10. If they change some details, they will be able to improve the design.

б) Скажите или напишите данные предложения так, чтобы они выражали упущенную возможность совершить действие.

Образец: If I see him, I shall tell him about the meeting.
If I had seen him yesterday, I should have told him about the meeting.

1. If you go there by plane, you will come in time for the conference. 2. If I know the time of his arrival, I shall meet him at the station. 3. If the builders do not work hard, the canal will not be opened in time. 4. If the satellite's speed is much less than the necessary one, the satellite will drop and enter the atmosphere. 5. If the students are more careful, they will not break the new apparatus. 6. If he has all the necessary instruments he will repair the machine much quicker. 7. If the driver is more careful, the accident will not happen. 8. If he knows the reason of the trouble, he will repair the engine himself. 9. If you don't know the design of the motor, you will not be able to operate it properly. 10. If the oil supply does not stop, the motor will work efficiently.

ИНВЕРСИЯ

Упражнение 3. *Измените следующие предложения по образцу, приведенному ниже, и переведите их на русский язык.*

Образец: а) If I were in your place, I should do this work myself.
Were I in your place, I should do this work myself.
б) If he had known the subject better, he wouldn't have failed in his exam.
Had he known the subject better, he wouldn't have failed in his exam.

1. If it were necessary to increase the speed of this particular engine, it could be achieved by using a special device. 2. If the road had been better, we should have been here in due time. 3. If the engineer had been informed of the results before, he would have allowed you to repeat the test. 4. If we had used new methods, we should have saved much time. 5. The plan would not have been fulfilled in time if the people had not worked with such energy. 6. If the oil supply had stopped even for a moment, serious damage might have resulted. 7. If the mechanic were there, he would repair the equipment. 8. If the air within the cylinder were motionless, only a small proportion of the fuel would find enough oxygen. 9. If the books on that subject were available in our library, I should be able to make a good report. 10. If he had all the necessary materials, he would accomplish his model in time.

Многозначность слов

hand *n* 1) рука; 2) работник, исполнитель; 3) *pl.* команда корабля; 4) почерк; 5) стрелка (*часовая*); 6) участие в чем-л.
v передавать, вручать

Упражнение 4. *Переведите следующие предложения, обращая внимание на различные значения слова* **hand.**

1. Where can I wash my hands? 2. Will you hand me that pencil? 3. You can see his hand in this experiment. 4. He worked several years as a farm hand. 5. Do you have a hand in this project? 6. The hour hand in my watch is broken. 7. The letter was written in a strange hand. 8. He handed me a telegram.

VOCABULARY NOTES

Задание I. *Переведите следующие предложения.*

1. **merely** — только. This device is not merely reliable, it is also very efficient.

2. **drawback** — недостаток. The main drawback of the new design is its large size.

3. **whereas** — тогда как. An atomic ice-breaker needs only a few grams of atomic fuel a week, whereas an ordinary ice-breaker needs more than 100 tons of fuel a day.

4. **to break down (broke, broken)** — сломаться, разрушиться. The engine broke down at the beginning of the test.

5. **aircraft** — самолет; *собир.* самолеты, авиация. One of the main advantages of an aircraft is its very high speed.

6. **trouble** — поломка, авария, неполадки. There was some engine trouble and the driver asked the passengers to leave the car.

7. **precaution** — предосторожность (мера предосторожности). All precautions were taken against the new epidemic of the grippe.

8. **to tend** — стремиться, иметь тенденцию. The University tends to pay more attention to the study of foreign languages now.

9. **low** — низкий. There was a low brick wall around the house.

10. **cloud** — облако. There was not a cloud in the sky.

11. **alone** — 1) один; 2) только. 1) I can't repair this motor alone, you must help me. 2) He alone can prove that I am right.

12. **upper** — верхний. If you need a dictionary, it is on the upper shelf.

13. **density** — плотность. The density of lower layers of the atmosphere is greater than that of the upper ones.

14. **weather** — погода. The work at the meteorological stations goes on regularly in any weather.

15. **particularly** — особенно. He likes many subjects, but he is particularly interested in mathematics.

16. **readings** — показания (на приборе). All space rockets are equipped with instruments the readings of which are sent back to the ground.

17. **to observe** — 1) наблюдать; 2) соблюдать. 1) The doctor sat by the patient to observe the effect of the new medicine on him. 2) You must observe the rules of spelling.

18. **to adopt** — принимать. The metric system of measures and weights is adopted by almost all the countries of the world.

19. **no longer** — больше не. He is no longer working at this problem.

20. **capable** — способный. An electronic computer is capable of solving different complicated problems.

21. **skilled** — опытный, квалифицированный. The expedition consisted of skilled engineers and workers.

22. **available** — наличный, имеющийся. Is timber available in this region?

23. **to convert** — превращать. At 100°C water is converted into steam.

24. **extra** — дополнительный. You will receive extra pay for extra work.

25. **to recognize** — 1) узнавать; 2) признавать. 1) He didn't recognize my voice over the telephone. 2) His invention was recognized in all countries of the world.

26. **urgently** — срочно, безотлагательно. This question must be settled urgently. Urgent improvement in the design had to be made.

27. **wholly** — совершенно, целиком. The problem hasn't been wholly solved. The achievements of the Soviet science and technology are known in the whole world.

28. **fast** — быстрый. If you walk faster, you will get there in two hours.

29. **emergency** — крайняя необходимость, крайность. In case of emergency the doctors are sent to the island by helicopter. Helicopters are often used for emergency medical work.

30. **besides** — помимо, кроме. What other construction material besides concrete can you recommend for this project?

31. **unlikely** — маловероятный. It is unlikely that they will discuss the problem today.

32. **ever** — когда-либо. Has anyone ever been on this island?

33. **bulky** — большой, громоздкий. Bulky loads are usually transported by railway or by ship.

34. **cargo** — груз. Bulky cargoes are seldom transported by aircraft.

35. **nearly** — почти, приблизительно. What's the time? It's nearly two o'clock.

36. **to take off** — взлетать. The airliner took off at 6.30 p.m.

37. **to gain** — 1) выигрывать; 2) приобретать. 1) They gained a lot of time by using computers in their research work. 2) They gained much experience working at a factory.

38. **to lose (lost, lost)** — 1) проиграть; 2) терять. 1) Unfortunately *Spartak* lost yesterday's match. 2) He has lost the key to his flat.

39. **because** — потому что; так как. We stayed at home because it rained.

40. **forward** — вперед. They could no longer move forward because of the heavy snowfall.

41. **to combine** — 1) соединять; 2) сочетать. 1) They combined theoretical and practical data. 2) There are many people in our country who combine work and studies.

42. **purpose** — цель, намерение. What was the purpose of their visit?

43. **across** — через. The bridge across this river will be built in a year.

РАБОТА СО СЛОВАРЕМ

Задание II. *Определите, к какой части речи относятся выделенные в данных предложениях слова; затем найдите в словаре нужные значения этих слов и переведите предложения.*

1. **stay**

a) The expedition will **stay** in the arctic zone for three months. b) I met him twice during my **stay** in Kiev. c) I am sorry we can't **stay** here any longer.

2. **truck**

a) **Trucks** are usually used for carrying heavy loads. b) The supplies for the mountain observatory can be **trucked** only in summer. c) Where can I park this **truck**?

3. **cost**

a) The new improvement in the engine design has increased its **cost**. b) How much does the new model of the car **cost** now? c) The **cost** of transportation of bulky loads is very high here.

4. **flow**

a) This device controls the air **flow**. b) The river **flows** between the high banks. c) What is the speed of the water **flow** under the bridge?

5. **release**

a) He **released** the brake (тормоз) and the car started. b) At the end of World War II the Soviet Army **released** all the prisoners from the fascist concentration camps. c) The **release** of a new bus was given much attention in the press.

6. **fit**

a) The seats of modern design were **fitted** in the motor car. b) The water in this lake is not **fit** to drink. c) The engine is not **fit** for the work in the cold climate conditions.

7. **value**

a) Timber has gone up in **value**. b) I **value** your opinion very highly. c) What do you **value** this car at?

Задание III. *Прочтите следующие интернациональные слова и догадайтесь об их значении.*

regular, meteorologist, radio, position, radar, aeroplane, pilot, practice, medical, film, photography [fə'tɔgrəfi], serious, helicopter, platform, motor

TEXT 10A

Задание. *Прочтите и переведите текст.*

AIR TRANSPORT

1. Modern air transport using craft which is heavier than air requires a good deal of power merely to stay in the air. It is for this reason that air transport uses more fuel to carry a ton over a distance of a mile than land or water transport. Another drawback of air transport is that whereas a ship, truck or train whose engines break down can stop until they are mended, an aircraft with the same trouble must land. This means that an aircraft must have several engines and this increases its cost. Safety precautions for air transport also tend to make it expensive. It cannot be relied upon for regular services in places or seasons with low clouds and mist. The great advantages of air transport being its high speed, all civilized countries try to develop it. If you want to save time, you will naturally fly by air.

2. **Balloons.** The earliest form of air transport was balloons, which are sometimes called "free balloons" because having no engines they are forced to drift by the wind flow. This fact alone makes balloons not reliable enough for carrying people. If they were safer, they would be used more for transportation, but at present the scientists use balloons mostly for obtaining information about the upper atmosphere, its density, and other scientific subjects. Weather balloons are particularly used by meteorologists. They carry instruments whose readings are automatically sent back to the ground by the radio, the position of the balloon being obtained by radar. Small balloons released from air-fields are observed to obtain the direction and strength of the wind.

3. **Aeroplanes.** The heavier-than-air machines called aeroplanes were rather slow in being adopted for transport. The first aeroplane flight was made in 1884.

World War I quickened the development of aeroplanes enormously. By 1918 they were no longer unreliable things

capable of only short flights, but powerful machines able to carry heavy loads at high speeds for long distances. What was more, the ending of the war meant that thousands of aeroplanes and skilled pilots were available.

The first aeroplanes were machines that had been used as bombers. They were quickly converted for use by passengers by fitting extra seats and windows. The first regular public air service from London to Paris was started in August 1919.

4. During World War II the value of aeroplanes for carrying heavy loads was recognized. This led after the war to an increase in the practice of sending goods by air. Air freight is expensive but it often thought worth while for such goods as early vegetables, fruits and flowers, as well as for things urgently needed such as spare parts for machinery, medical supplies, films and photographs. Some parts of the world being hundreds of miles from a road, railway or waterway, air transport is the only possible kind. Such places are kept supplied wholly by air.

5. After World War II, bigger and faster airliners were introduced. Jet-propelled aircraft were first used in 1950. Air transport is very valuable for emergency medical work. The most important use of air transport besides carrying passengers is carrying mail. If the letters are sent by air mail, they are not long in coming. Although it is unlikely that aircraft will ever replace ships for carrying heavy and bulky cargoes such as oil, coal, minerals, grain and machinery, air transport is already proving a serious rival to passenger ships on some routes.

6. **Helicopters and Hovercraft.** [1] Helicopters are very useful in places where there is no room for long, flat runways. Modern turbo-jet airliners need a run of nearly two miles long to take off, but helicopters can use small fields, platforms mounted on ships and the flat tops of buildings. Helicopters were first introduced for regular airline service in 1947. Later, helicopters were used for carrying passengers and mail on short routes, and for taking airline passengers between the centres of cities and the main airports.

7. While helicopters gain in needing very little space for taking-off and landing, they lose because the speed at which they move forward is quite low. So the problem was to develop an aircraft combining the advantages of the helicopter with the high speed of an ordinary aircraft. If the designers could develop such a machine the problem would be solved. So for this purpose the hovercraft was designed. Hov-

ercrafts are likely to be useful for ferry services — for example, in ferrying motor cars across the English Channel. They may also be useful for travel in roadless countries.

NOTE TO THE TEXT

1. **hovercraft** — машина на воздушной подушке

Упражнение 5. *Ответьте на вопросы к тексту А.*

1. What transport uses more fuel to carry a ton over a distance of a mile than land transport? 2. What is the drawback of the air transport? 3. What increases the cost of an aircraft? 4. Why can't aircraft be relied upon for regular services everywhere? 5. What are the advantages of air transport? 6. What was the earliest form of air transport? 7. What are balloons chiefly used for? 8. By whom are weather balloons used? 9. When did airplanes become powerful machines able to carry heavy loads at high speed? 10. When was the first regular public air service from London to Paris started? 11. When did people recognize the value of airplanes for carrying heavy loads? 12. What goods are usually sent by air? 13. What places are kept supplied wholly by air? 14. When were jet-propelled aircraft first used? 15. Is it likely that aircraft will some day replace ships for carrying heavy and bulky cargoes? 16. In what places are helicopters very useful? 17. When were helicopters first introduced for regular airline service?

Упражнение 6. *Выберите из текста 10А информацию относительно воздушных шаров, аэропланов, вертолетов, машин на воздушной подушке, реактивных самолетов по следующим аспектам: 1) их использование; 2) преимущества; 3) недостатки. Изложите ее в письменном или устном виде.*

Упражнение 7. *Заполните пропуски подходящими по смыслу словами.*

available, forward, wholly, readings, ever, bulky, value, take off, emergency, unlikely, low, capable, combine, fits, precautions, break down, urgent, whereas, trouble

1. This is the kind of work which only a very skilled worker is ... to carry out. 2. There were no taxis ... at that moment. 3. We are ... to be delayed so long. 4. ... cargo was loaded with the help of cranes. 5. The newly-found picture was of great ... . 6. We cannot ... these two tasks. 7. Unfortunate-

ly the performance of the apparatus is not ... successful. 8. The task was ... and we had to work fast, if we wanted to complete it in time. 9. He said they couldn't move ... unless they were supplied with enough fuel. 10. Have you ... been to Paris? 11. We expected the airplane to ... at 2 p.m. 12. The key that ... this door appears to have been lost long ago. 13. Aircraft are often used to transport ... goods. 14. Some ... against bad weather should be taken. 15. The tractors of this make tend to ... in cold climate conditions, ... in hot climate conditions they are quite reliable. 16. He said that ... of the device were particularly interesting. 17. There is some ... with the instrument: its readings are no longer reliable. 18. The company expected the operation of widening and deepening of the canal to be carried out at a ... cost.

Упражнение 8. *Найдите в каждом ряду слово, противоположное по значению первому слову ряда.*

1. **drawback** a) purpose, b) influence, c) duration, d) advantage
2. **low** a) fast, b) high, c) smooth, d) wide
3. **capable** a) fit, b) brave, c) incapable, d) due
4. **wholly** a) partly, b) nearly, c) no longer, d) steadily
5. **to gain** a) to release, b) to lose, c) to take off, d) to send
6. **backward** a) available, b) research, c) advanced, d) similar
7. **unlikely** a) ordinary, b) possible, c) likely, d) therefore
8. **fast** a) slowly, b) usually, c) often, d) enough
9. **bulky** a) urgent, b) warm, c) essential, d) small
10. **forward** a) across, b) besides, c) ever, d) backward
11. **gradually** a) probably, b) scarcely, c) at once, d) unfortunately
12. **negligible** a) internal, b) considerable, c) previous, d) permanent

Упражнение 9. *Переведите на русский язык следующие словосочетания.*

to stay at home; another drawback of the new device; to adopt a new system of control; to increase the cost; a new feature of this aircraft; particularly bad weather; it was particularly urgent business; to move forward; to walk across the street; to need little space for taking-off; to gain in speed; to lose speed; to need extra parts; to combine work and studies; to lose time; at a distance of nearly two miles; to observe weather changes; on the upper shelf; low clouds; to move very fast; the density of the atmosphere; the advantages of

the new aircraft design; to fit extra seats; a strong water flow; to convert work into energy; a skilled worker; available extra parts; to recognize the trouble in the engine; densely-populated countries; this fact alone; to take precautions against engine break-down; to be capable of solving complicated mathematical problems; to seem merely a chance; bulky cargoes; to be no longer significant; besides you and me; huge cargo

Упражнение 10. *Переведите данные предложения без словаря, обращая внимание на выделенные слова.*

1. a) An aircraft with engine **trouble** must land. b) We didn't get to town until late at night because there was serious engine **trouble** in our car. c) Cars with **troubles** of this sort are easily repaired at every service station. d) Stoppage of fuel supply caused serious **trouble** in the engine.

2. a) The bombers were quickly converted for use by passengers by fitting **extra** seats and windows. b) Have you got an **extra** ticket? c) On Sundays they run an **extra** train. d) People who work and study get **extra** leave during examination time.

3. a) After World War II, bigger and **faster** airliners were introduced. b) If you can get a ticket for the **fast** train, you'll get there in time. c) Which of you runs **faster?** d) The plane is the **fastest** means of transport.

4. a) Helicopters **gain** in needing very little space for taking-off and landing. b) Comrade Petrov **gained** a lot from his trip to the north of our country. c) By reading this journal you'll **gain** a lot of important information on the research going on in this field.

Упражнение 11. *Переведите следующие предложения на русский язык, обращая внимание на союзы условных придаточных предложений* **if, unless, provided.**

1. If they needed the equipment urgently, it would be sent by plane. 2. The accident would not have happened, if they had been more careful. 3. If I were in his place, I should refuse to stop the experiment. 4. If the goods are shipped in April, they will arrive before the expedition starts. 5. The sputnik will keep to its orbit provided it travels at the uniform speed of 8 kilometres per second. 6. It would have been impossible to send up sputniks unless the laws governing the motion of planets had been studied. 7. We shall carry out our production plan provided everybody does his work well. 8. If I were you I should first test the car. 9. If a student got

interested in the construction of that engine he could obtain all the necessary data in the reference-book on engines. 10. If computers had not been worked out, many important problems would not have been solved.

Упражнение 12. *Переведите следующие предложения на русский язык.*

1. If we had repaired the engine yesterday, we should have left the town before sunrise. 2. He asked me if we had repaired the engine. 3. The chief engineer asked me if we could make the design more efficient. 4. He did not remember whether he had informed everybody of the new test. 5. He was not certain whether the new system would work well. 6. The results of the experiment would have been much better if he had used the new equipment. 7. The expert was interested if the speed of the car had been brought up to its maximum. 8. The members of the delegation asked if the old methods of production had been changed. 9. The quality of the goods produced by the plant would be improved if the old methods of production were changed. 10. The captain of the ship didn't know if he would be able to pass his ship through that old and narrow canal. 11. If you had taken some precautions we shouldn't have found ourselves in such a difficult situation now; almost no fuel left and some 100 km between us and the nearest station. 12. It's a pity we didn't have enough time to discuss the plan in detail before it was put into operation. Had we pointed out all the drawbacks, we should have found ways to solve the problem. 13. Unfortunately there are no cars available at the moment. Had you told us that your mission is so urgent we should have left a car for you.

Упражнение 13. *Ответьте на следующие вопросы, начиная свой ответ с* **I should** ... .

Вопрос: What transport would you use if you went to ...?

a) the Far East;
b) the country;
c) the Crimea;
d) Sofia;
e) London;
f) Prague;
g) New York;
h) Cuba;
i) Sydney.

Ответ: I should go there by ... .

a) car;
b) coach;
c) motor cycle;
d) train;
e) ship;
f) plane.

РАБОТА НАД СЛОВООБРАЗОВАНИЕМ

Упражнение 14. *Найдите в каждом ряду слово, образованное от первого слова ряда.*

1. **science** a) steadily, b) scarcely, c) scientist, d) site
2. **land** a) among, b) landing, c) last, d) later
3. **simple** a) steamer, b) side, c) simplicity, d) shift
4. **determine** a) determiner, b) discovery, c) education, d) decision
5. **ordinary** a) obtain, b) outside, c) often, d) extraordinary
6. **furnish** a) offer, b) furnishing, c) turn, d) though
7. **discover** a) discovery, b) determine, c) degree, d) development
8. **refuse** a) research, b) receiver, c) refusal, d) requirement
9. **soon** a) closer, b) sooner, c) else, d) once
10. **steady** a) simple, b) carry, c) safely, d) steadily
11. **through** a) throw, b) thought, c) throughout, d) therefore
12. **world** a) work, b) worldly, c) way, d) weak

Упражнение 15. *Найдите в тексте слова, имеющие общий корень со словами, данными перед текстом, определите части речи, к которым они относятся, переведите их, затем переведите текст.*

resemblance — сходство	quick — быстрый
to differ — различаться	extreme — крайний
to complete — завершать	to value — ценить
to encourage — поощрять	to assist — помогать

A new way of teaching five-year-olds basic words has been used in one of English schools.

Every day 29 boys and girls spend half an hour playing a game resembling lotto. But instead of using cards containing numbers each card has a different set of words used by the children in everyday life. The teacher calls out words such as "cat", "play", "ball", and the children look through their cards to see if they can find them. On completion of a card another game begins. There is no prize, only a word of encouragement from a teacher. The children learn words more quickly by this method than by conventional (обычный) means. This method could also be extremely valuable because it offers certain assistance in teaching backward (отсталый) children from older age-groups.

TEXT 10B

Задание I. *Прочтите текст, стараясь понять основное содержание. (Заметьте время начала и окончания чтения. Этот текст нужно прочесть за 4 минуты, из расчета 100 слов в минуту.)*

THE FIRST BALLOONS

Etienne and Joseph Montgolfier lived in the eighteenth century in a little village in France where their father had a paper factory. The two brothers took paper bags from their father, filled them with smoke over a fire (огонь) and watched them go up into the air.

After numerous experiments they were ready to show how their balloon worked. On the day of the flight people from different places came to the little village to see the spectacle. The brothers had constructed a bag some thirty feet in diameter. That big bag was held over a fire. When it was filled with hot smoke, it went high up into the air. It was in the air for ten minutes and then, as the air bag became cold, the balloon went slowly down.

The news about the experiment reached the king who wanted to see it himself. So on September 19, 1783 the Montgolfier brothers repeated their experiment in the presence of the King and Queen of France. This time the balloon carried a cage with a sheep, a cock, and a duck (овца, петух, утка) who were thus the first air travellers. The flight was successful. The balloon came down some distance off with the sheep, the cock and the duck completely unharmed (невредимый).

If the animals could live through this, men could risk too. A month later a balloon was sent up with a Frenchman, Rozier by name. He stayed up in the air for twenty-five minutes at a height of about one hundred feet above the ground, and then came down, saying that he had greatly enjoyed the view (вид) of the country.

A month later he and Arlandes made the first free balloon flight. Their friends who came to say good-bye to them were very sad as if the two men were going to certain death, but they went up several hundred feet, were carried by the wind over Paris, and came down in safety.

In 1785 a Frenchman and an American crossed the English Channel in a balloon. When they had covered three quarters of the way, the balloon began to go down. They

threw everything they could overboard. They even undressed and threw away practically all their clothes. If they had not done it, they would have never reached the French coast safely.

Задание II. *Выберите утверждение, соответствующее содержанию текста.*

1. The Montgolfier brothers lived:
   1) in England; 2) in France; 3) in the USA.
2. Their balloon was filled with:
   1) smoke; 2) special gas, 3) steam.
3. In the cage fastened to the balloon there were:
   1) some instruments; 2) a hen, a dog and a cat; 3) a sheep, a cock and a duck.
4. 1) Very few people
   2) Some friends from their village } came to see the
   3) People from different places
   experiment.
5. 1) Rozier's flight was successful. 2) The balloon exploded.
   3) Rozier was wounded.

TEXT 10C

Задание I. *Прочтите текст, отыскивая в нем ответы на поставленные вопросы.*

LONDON AIRPORT SERVES THE WORLD

Why is a big airport like a town?

1. If you have travelled by plane (we also say "by air"), you will probably agree that travelling by plane is a very exciting experience. An airport is so different from a railway station or a bus stop, the people you meet and the things you see are very interesting and new. What is more, a big airport is like a town — with its own shops, banks and police.

How do the passengers approach the centre of the airport?

2. London airport is one of the most modern in the world today and is a popular visiting place for both old and young. The airport covers over four square miles, and the road round it is 13 miles long. The airport has five main runways:

the longest is 12,000 feet. The total number of people who work at the airport is nearly 36,000. London airport is one of the busiest in the world — more than 50 airlines operate from it every week. Every day of the week in the summer, over 800 planes land or take off.

London airport is unique in its layout (планировка). All passenger and control buildings are in the centre of the airport. The only way for passengers to approach these buildings is by a tunnel which has been constructed under the main runways.

What helps the passengers to pass London airport easily and quickly?

3. This great airport is famous for the efficiency of its service to the passengers who are continually travelling to all parts of the world. At the airport, all luggage (багаж) is mechanically handled. This is done by a system of conveyor belts, which enables the passengers to pass this great airport with ease.

The cost of making such an airport was approximately 20 millions, but much more will be spent before the work is completed. Each year money is needed for the development of the airport to accommodate great new transatlantic aircraft. Runways have to be lengthened to enable these airplanes to take off with their heavy loads. Air bus system started in 1977.

From what place can the visitors see how London airport operates?

4. One of the big attractions at London airport is the Roof Gardens which are open to visitors who wish to see how a modern airport operates. The Roof Gardens give a view of the whole of the airport. From the garden you can see all the aircraft landing and taking off: you can see VC-10 — an intercontinental airliner — which has its engines at the back, and has a speed of 600 m.p.h., the Trident, the Boeing 707, the Concord, and many others. While you are watching the planes, a loudspeaker tells you where they are all going to or where they have come from. It also tells you if there are any film-stars, actors or other personalities on board. If you have your own camera you can take a lot of exciting pictures.

What accommodation (удобство) **does London airport have for animals?**

5. The English, as you know, like animals very much. You will not be surprised, therefore, when we tell you that London airport has a special animal "hotel". Every year, thousands of animals arrive at London airport. Some stay the night there; others stay several weeks. Some just go to have a drink of water and a rest. The "hotel" looks after birds, insects, fish, elephants, monkeys and spiders.

TEXT 10D

TRANSPORTATION FOR THE YEAR 2000

1. Experts estimate that by the year 2000, we will go by rocket from New York to Tokyo in 30 minutes. We will be able to reach any point on the globe from any other point through tunnels deep in the earth.

The prospect is adventurous and exciting. But most people are more interested in better ways to travel during their own lifetime. It's possible, that within the next two or three decades we will be riding in remote-controlled electronic cars. [1]

We will travel over plastic-footed climate-controlled highways.

Trips through metropolitan areas will be made on quiet, swift buses travelling on separate express lines of city streets. Helicopters may carry whole buses loaded with passengers from point to point above city traffic.

2. What about monorails? Some are already operating. Tokyo has one that runs from the suburbs of the city to the airport, but few people use it. But for some reason, no monorail system has ever been able to find a practical place.

3. "Flying crane" helicopters soon may help solve the complicated problem of getting passengers from the centre to airport and back again.

A new mass transit system [2] is particularly well suited to medium-sized towns. Lightweight automated vehicles operate singly or in trains on a lightweight aerial roadway. The cars look like buses and run on four pairs of rubber tyres. Service is round-the-clock with trains running every two minutes. The system is controlled by a central computer.

4. Electric cars are under development in a number of countries. Experts believe that their use will be limited al-

most totally to city centre delivery vans and suburban shopping cars.

5. Most of the advances in air transportation expected before 2000 will materialize within the next few years. The largest airplanes ever designed for commercial service, capable of seating nearly 500 passengers, are already being built.

Supersonic transport prototypes now in development will be forerunners of a new generation of 1,800 miles per hour passenger jet-liners.

The "ideal" short-haul air transport [3] probably will be a vertical or short take-off and landing aircraft that will fly 30 to 45 passengers right into the heart of a city or its suburbs on trips up to 260 miles.

6. If engineers could eliminate the friction of steel wheels against steel rails, they would have overcome the main reason why planes go faster than trains. They would also have solved the vibration problems caused by rails and wheels that presently limit a train's speed to about 200 miles per hour.

Such trains are already on the drawing boards and in experimental models, many with neither wheels nor rails.

7. The engineers are trying to overcome the friction barrier with rollers and by shaping the train like an airfoil. [4] They are working on suspending trains on a cushion of air and flying them over the ground at high speeds.

Air-cushion vehicles are getting a lot of press these days, and there's little doubt that they will be in your future. The scheme "Tubeflight" is one in which air-cushion-supported vehicles will travel inside tubes at air transport speeds.

8. Speeds of 300 to 400 miles per hour would be practical in the "Tubeflight" system on runs of 25 to 250 miles. Intervals between trains would be as low as one minute, and the system could accommodate 10,000 to 12,000 passengers per hour per tube. Higher speeds, with longer intervals and lower capacities, would be practical over longer runs. The system would be fully automated.

Some ideas of rapid transportation are on the drawing boards, some may never get off. Some are already under way and operational, while others will see the light of day. Others may not take shape until nearly the year 2000. But changes are taking place, and there are more to come.

NOTES TO THE TEXT

1. **remote-controlled electronic cars** — автомобили, управляемые дистанционно с помощью ЭВМ

2. **mass transit system** — система массовой перевозки пассажиров

3. **the short-haul air transport** — воздушный транспорт для перевозки пассажиров на короткие расстояния

4. **airfoil** — *зд.* обтекаемые формы

Задание I. *Ответьте на вопросы по тексту D. Правильность ответов проверьте в соответствующих частях текста.*

1. How long will it take people to get from New York to Tokyo by the year 2000? (1) 2. What transport will people use in the next two or three decades? (1) 3. How will people travel within the city? (1) 4. How many monorails are already operating now? (2) 5. By what transport will the passengers get from the centre to the airport? (3) 6. What cars are used in the new mass transit system? (3) 7. During what part of the day does the new mass transit system operate? (3) 8. For what purpose will the electric cars be used? (4) 9. How many passengers will the new planes seat? (5) 10. What kind of transport will be used for transportation up to 260 miles? (5) 11. What factors limit the train's speed to about 200 miles per hour? (6) 12. In what way are engineers trying to overcome the friction barrier? (7) 13. At what speed will air-cushion vehicles be able to travel inside tubes? (8) 14. How long will be the intervals between trains of the "Tubeflight" system on distances of up to 250 miles? (8)

КОНТРОЛЬНЫЙ СЛОВАРЬ

1. across (*prp*); 2. adopt (*v*); 3. aircraft (*n*); 4. alone (*adv*); 5. available (*a*); 6. because (*cj*); 7. besides (*prp*); 8. break down (*v*); 9. bulky (*a*); 10. capable (*a*); 11. cargo (*n*); 12. cloud (*n*); 13. combine (*v*); 14. convert (*v*); 15. cost (*n, v*); 16. density (*n*); 17. drawback (*n*); 18. emergency (*n*); 19. ever (*adv*); 20. extra (*a*); 21. fast (*a*); 22. fit (*a, v*); 23. flow (*n, v*); 24. forward (*adv*); 25. gain (*v*); 26. lose (*v*); 27. low (*a*); 28. merely (*adv*); 29. nearly (*adv*); 30. no longer; 31. observe (*v*); 32. particularly (*adv*); 33. precaution (*n*); 34. purpose (*n*); 35. readings (*n*); 36. recognize (*v*); 37. release (*n, v*); 38. skilled (*a*); 39. stay (*n, v*); 40. take off (*v*); 41. tend (*v*); 42. trouble (*n, v*); 43. truck (*n, v*); 44. unlikely (*a*); 45. upper (*a*); 46. urgently (*adv*); 47. value (*n, v*); 48. weather (*n*); 49. whereas (*cj*); 50. wholly (*adv*)

LESSON 11 (ELEVEN)

Грамматика: Многозначность глаголов **shall, will, should, would, to be, to have.**

Основной текст А: The History of Bridge and Tunnel Building.

Многозначность глаголов shall, will, should, would, to be, to have

shall	1) I shall make this experiment next week. 2) They shall make this experiment by all means.
will	1) He will come to see you. 2) I will come to see you.
should	1) You should send for a doctor. 2) I should send for a doctor if I felt bad. 3) They knew I should send for a doctor.
would	1) He would translate this article if you gave him the journal. 2) He said he would easily translate this article. 3) He would translate articles from English into Russian when he was free. 4) I said I would not go there.
to be	1) The students were in the laboratory. 2) The students were left in the laboratory. 3) The students were making experiments in the laboratory. 4) The students were to come to the laboratory at 3 o'clock.
to have	1) They have a good motor-car. 2) They have bought a good car. 3) He had to buy a car as he worked far from his house.

Упражнение 1. *Переведите следующие предложения на русский язык, обращая внимание на глаголы* **shall, should, will, would, to be, to have.**

1. I shall take my examination in June. 2. They shall improve their method of work if they want to obtain better results. 3. This new car will be tested tomorrow. 4. I will replace the old parts of the car. 5. You should do it by all means. 6. If I had read yesterday's newspaper, I should have learned about the accident. 7. They knew that I should fly to London. 8. I said I would not change my plans. 9. If he had not made a mistake in the calculations, the bridge would not have collapsed. 10. She said she would be at the Institute. 11. He would sit for hours on the shore and look at the water. 12. The plant was far away from the city. 13. The channel was deepened. 14. He was travelling in the north. 15. He was

to come at 5. 16. They have a good plan. 17. They have already passed their exams. 18. They had to test the engine twice.

VOCABULARY NOTES

Задание I. *Переведите следующие предложения.*

1. **outstanding** — выдающийся. Lunacharsky was an outstanding speaker.

2. **readily** — легко. It can readily be understood why transportation means civilization.

3. **to evolve** — развивать(ся). Society evolved through the ages.

4. **beam** — балка. Timber beams were transported by special lorries.

5. **to reach** — достигать, простираться. The forest reaches as far as the river.

6. **by means of** — при помощи, посредством. Communication over long distances is made possible by means of radio.

7. **rope** — веревка, канат. A rope was stretched across the street.

8. **to suspend** — 1) подвешивать; 2) приостанавливать. 1) The lamp is suspended rather high. 2) The work was suspended for a week.

9. **rock** — 1) скала; 2) горная порода. 1) In the darkness the boat approached the rock. 2) After many metres of sand and clay they at last reached rock.

10. **to lay (laid, laid)** — класть, положить. They laid the foundation of a new school.

11. **temporary** — временный. The tourists lived in the temporary buildings.

12. **extremely** — крайне, чрезвычайно. It's extremely important to get this information before we start.

13. **pile** — свая. The structure was built on piles.

14. **bed** — русло, дно. Driving piles into the bed of the river is considered to be very hard work.

15. **basis** — основа. The struggle for peace is the basis of the international policy of the Soviet Union.

16. **to prevent** — предотвращать, мешать. Nothing could prevent him from doing his duties.

17. **passage** — проход. They went through a long passage and got into the yard.

18. **civil** — гражданский. Civil engineering means the building of roads, railways, bridges, tunnels, canals, etc.

19. **project** — проект. The new project has some advantages over the previous one.

20. **to take into consideration** — принимать во внимание. The rapid growth of the population should be taken into consideration when planning a town.

21. **local** — местный. When constructing a road it is cheaper to use local materials.

22. **suitable** — подходящий. This machine is suitable for loading and unloading earth material.

23. **width** — ширина. The width of the channel was not enough for big ships.

24. **depth** — глубина. They were to measure the depth of the river.

25. **to erect** — строить, сооружать. The monument to the outstanding scientist was erected in the centre of the town.

26. **to distribute** — распределять, раздавать. The postman had many magazines to be distributed at houses all over the town.

27. **range** — 1) цепь (гор); 2) пределы (колебаний, изменений). 1) A range of mountains goes through the whole continent from the north to the south. 2) The temperature range in the experiment was from 10 to 20 degrees Centigrade.

28. **to acquire** — приобретать. You must work hard to acquire a good knowledge of a foreign language.

29. **circular** — круглый, окружной. The construction of a new circular road which will link several of the city's districts has already started.

30. **cross-section** — поперечное сечение. The cross-section of the tube has been measured.

31. **to suggest** — предлагать. He suggested a good plan of replacing the old equipment.

32. **to agree** — соглашаться. They agreed that the repair of the car should be made in two days.

33. **actually** — фактически, действительно. The moving car is actually acted upon by various forces.

34. **scheme** — схема, план, проект. According to this scheme the channel will be deepened and widened.

35. **layer** — слой. This device can be used for studying the upper layers of the atmosphere.

36. **to penetrate** — проникать. It was a reliable means of protection: radiation could not penetrate it.

37. **to share** — делить. They had shared troubles together and now they were close friends.

38. **so far** — до сих пор. So far the explanation of this physical phenomenon has not been given.

РАБОТА СО СЛОВАРЕМ

Задание II. *Определите, к какой части речи относятся выделенные в данных предложениях слова, затем найдите в словаре нужные значения этих слов и переведите предложения.*

1. **doubt**
   a) I am in a **doubt** how to do it. b) He **doubted** the results of the experiment. c) There is no **doubt** about it.
2. **concern**
   a) He is said to have been **concerned** in the crime. b) Everyone was filled with **concern** when news came about the accident. c) It does not **concern** me.
3. **fall**
   a) It's getting dark, be careful not to **fall** down. b) A heavy **fall** of snow was expected. c) The leaves **fall** in autumn.
4. **support**
   a) They hope to have your **support.** b) Hard rock provides a strong **support.** c) He **supports** a big family.
5. **secure**
   a) Mother wants to feel **secure** about her children's future. b) By strengthening the river banks, the city **secured** itself against floods. c) Is this bridge **secure?**
6. **further**
   a) Having reached the river they stopped as it was unsafe to move **further.** b) After the discussion they carried on **further** research. c) The house was on the **further** side of the hill.
7. **demand**
   a) There is a great **demand** for cars in many countries. b) He was stopped by a man who **demanded** his name and address. c) He **demanded** to be told everything.
8. **chain**
   a) The two boats were linked with an iron **chain.** b) The dog was **chained** to the tree. c) They saw a **chain** of mountains in the distance.
9. **object**
   a) They **objected** to our change in the plan. b) There were some strange **objects** in the corner. c) He often **objected** to my remarks.
10. **crack**
    a) The ground was full of **cracks** after the hot dry summer. b) Some parts of the structure **cracked.** c) Boiling water will **crack** a glass.

11. estimate

a) The engineer was asked to **estimate** the costs for the repair of the building. b) I do not know enough about him to form an **estimate** of his abilities. c) We **estimated** that it would take three months to finish the work.

12. mention

a) I hoped he would **mention** my name too. b) He made no **mention** of the fact.

Задание III. *Прочтите следующие интернациональные слова и догадайтесь об их значении.*

story, progress, communication, barrier, canyon, central, parallel, cable, lift, peak, ventilate, automobile

TEXT 11A

Задание. *Прочтите и переведите текст.*

THE HISTORY OF BRIDGE AND TUNNEL BUILDING

BRIDGES

1. One of the outstanding statesmen once said in his speech, "There can be little doubt that in many ways the story of bridge-building is the story of civilization. By it we can readily measure an important part of a people's progress." Great rivers are important means of communication for in many parts of the world they have been, and still are, the chief roads. But they are also barriers to communication, and people have always been concerned with finding ways to cross them.

2. For hundreds of years men have built bridges over fast-flowing rivers or deep and rocky canyons. Early man probably got the idea of a bridge from a tree fallen across a stream. From this, at a later stage, a bridge on a very simple bracket or cantilever principle [1] was evolved. Timber beams were embedded into the banks on each side of the river with their ends extending over the water. These made simple supports for a central beam reaching across from one bracket to the other. Bridges of this type are still used in Japan, and in India. A simple bridge on the suspension principle [2] was made by early man by means of ropes, and is still used in countries such as Tibet. Two parallel ropes suspended from rocks or trees on each bank of the river, with a platform of woven mats laid across them, made a secure crossing. Fur-

ther ropes as handrails [3] were added. When the Spaniards reached South America, they found that the Incas of Peru used suspension bridges made of six strong cables, four of which supported a platform and two served as rails.

3. All these bridges made possible crossings only over narrow rivers. The type of temporary floating bridge,[4] the pontoon bridge, has been used for military purposes; military engineers can construct a temporary bridge on this principle, able to carry all the heavy equipment of a modern army, in an extremely short time.

The idea of driving wooden piles into the bed of the river in order to support a platform was put into practice 3,500 years ago. This is the basis of the 'trestle' or pile bridge [5] which makes it possible to build a wider crossing easier for the transport of animals and goods.

4. With the coming of the railway in the 19th century there was a great demand for bridges, and the railways had capital for building them. The first railway bridges were built of stone or brick. In many places long lines of viaducts were built to carry railways; for instance, there are miles of brick viaducts supporting railways to London.

The next important development in bridge-building was the use of iron and, later, steel. The first iron bridge crossed the river Severn in Great Britain.

The idea of a drawbridge, [6] a bridge hinged so that it can be lifted by chains from inside to prevent passage, is an old one. Some Leningrad bridges were built on this principle.

A modern bridge probably demands greater skill from designer and builder than any other civil engineering project. Many things should be taken into consideration, and these may vary widely according to local conditions. In deciding what type of bridge is most suitable the designer has to consider the type and weight of the traffic, and width and depth of the gap to be bridged, the nature of the foundations and the method of erecting the bridge. The designer has to calculate carefully how the various loads would be distributed and to decide which building materials are more suitable for carrying these loads.

TUNNELS

5. Tunnelling is difficult, expensive and dangerous engineering work. Tunnels are built to provide direct automobile or railway routes through mountain ranges, under or over rivers. They can also provide underground channels for water, sewage

or oil. Before the 19th century men had not acquired enough skill in engineering to carry out extensive tunnelling. Tunnels, however, were known in ancient times. They were, for instance, driven into the rock under the Pyramids of Egypt, and the Romans built one in Rome for their chief drain, parts of which still remain. One of the earliest tunnels known was made in Babylon. It passed under the Euphrates river, and was built of arched brickwork being 12 feet high and 15 feet wide.

Other ancient tunnels were built for water supply and for drainage.

6. Modern tunnels are often very long and deep. The Simplon Tunnel on the France-to-Italy railway, for example, is 12 miles long and in one place the peaks of the Alps rise over 6,000 feet above it. Some tunnels are over 50 feet in diameter. Many are circular in cross-section. Others are horse-shoe-shaped,[7] with a level floor on which it is easy to lay permanent roads and railways.

TUNNEL UNDER CHANNEL

7. "Will There Be a Tunnel under the English Channel?", "A Tunnel — to Be or Not to Be", "A Tunnel or a Bridge?" — articles with such headlines appeared in the press abroad. English and French experts are considering projects created by the specialists of both countries. The authors of the projects offer different solutions. One of them is a bridge/tunnel combination.

A tunnel under the English Channel was first suggested in 1856. It was agreed in 1875 to build it and work was actually begun. However, the British War Office objected that an enemy on the European mainland could easily invade England through such a tunnel, and the British Government objected to the scheme.

In 1957 interest revived in the idea of a Channel Tunnel and the question was studied afresh by a group of French and British engineers. Such a Tunnel between Dover and Sagatte would have a length of about 36 miles of which 24 miles would be under the sea, and would run through a layer of dense chalk which is known to be free from cracks and allows water to penetrate it slowly. It would probably have to be a twin railway tunnel. There are several difficulties in having a road tunnel of this length, the chief of which is the enormous cost of ventilating it. Total cost is estimated at between 450

and 560 million dollars, to be shared by Britain and France with possibly some other European country.

No dates have so far been mentioned definitely but it might be completed at the end of our century.

NOTES TO THE TEXT

1. **a bridge on a bracket or cantilever principle (= a bracket or cantilever bridge)** — консольный мост
2. **a bridge on the suspension principle (= suspension bridge)** — висячий мост
3. **handrails** — поручни
4. **a floating bridge** — понтонный мост
5. **a 'trestle' or pile bridge** — мост на рамных основах
6. **a drawbridge** — разводной мост
7. **horseshoe-shaped** — подковообразный

Упражнение 2. *Ответьте на вопросы по тексту А.*

1. From what did early man get an idea of a bridge? 2. What kind of bridge is a cantilever one? 3. For what purpose is a temporary floating bridge used? 4. For what purpose are piles driven into the bed of the river? 5. Why was there a great demand for bridges in the 19th century? 6. Where was the first iron bridge built in Great Britain? 7. What are tunnels built for? 8. Where did one of the earliest tunnels pass? 9. How long is the Simplon Tunnel? 10. Why did the British War Office object to the building of the tunnel under the English Channel? 11. How long will the tunnel across the English Channel be? 12. What countries will share the cost of the construction?

Упражнение 3. *Выразите согласие или несогласие со следующими утверждениями, начиная словами* **it's wrong, that's right, according to the text, as far as I know.**

1. The bridge that can be lifted by chains from inside is a suspension bridge. 2. The Incas of Peru used iron bridges. 3. Pile bridges are used for very narrow rivers. 4. The first railway bridges were made of timber. 5. Tunnels are built only to provide direct routes through mountain ranges or under or over rivers. 6. Tunnels were quite unknown in ancient times. 7. The construction of the tunnel under the English Channel started in 1956. 8. The British War Office liked the idea of a Channel Tunnel. 9. The Channel Tunnel will be a road tunnel.

Упражнение 4. *Сделайте краткие сообщения на следующие темы.*

1. Rivers as a means of communication. 2. Types of bridges (cantilever bridge, suspension bridge, pontoon bridge, trestle bridge, drawbridge). 3. The purposes of building tunnels. 4. The Simplon Tunnel. 5. The tunnel under the English Channel.

Упражнение 5. *Заполните пропуски подходящими по смыслу словами.*

project, cracks, width, penetrate, objected, civil, mentioned, estimated, actually, local, further, piles, layer, so far, outstanding, to prevent, fall, doubt

1. ... in the structure may lead to its collapse. 2. A big engineering ... was suggested by a group of designers. 3. He ... to their remark. 4. The road needs widening as its ... is not enough for the modern traffic. 5. No sound could ... the thick walls of the building. 6. The people of the village could easily get to town by a ... train. 7. During the war all ... population was evacuated from the city. 8. They had to remove a thick ... of sand before they started the construction. 9. When ... the new project proved to be cheaper and was adopted. 10. The fact that the existing roads were not properly maintained has been also ... during the discussion. 11. ... this valuable information has not been received. 12. ... much more efforts were required in order to finish the work. 13. He never makes people wait, no ... he'll be in time in spite of all the difficulties. 14. The ... of the apple helped Newton to discover the theory of gravitation. 15. What is the most ... discovery of the 20th century? 16. In early times people learned to drive wooden ... into the bed of the river. 17. We must observe traffic rules ... road accidents. 18. To continue the work we must obtain ... information.

Упражнение 6. *Переведите следующие словосочетания на русский язык.*

outstanding invention; outstanding writer; no doubt about it; to have no concern; a fallen tree; to evolve a theory; supporting beam; to get no support; to rope a box; to support a family; to lay bricks; to be secure from danger; to secure freedom; to prevent an accident; to prevent war; a bridge pile; to drive piles; the fall of an apple; civil engineer; a number of projects; although it was taken into consideration; local transport; a suitable person; the width and the depth of the

river; to erect buildings; to distribute books; to acquire experience; circular cross-section; to suggest a scheme; to agree to such a schedule; actually different; to object to the condition; the layers of the soil; numerous cracks; to penetrate rapidly; to estimate the cost; to share losses; so far unknown; to mention the same fact; upper layer and lower layer; to reach the railway station in time; by means of sputniks; to suspend research; to be readily calculated; temporary construction; extremely difficult; to deepen the bed of the river; the basis of the economy; a narrow passage; temperature range; a demand for specialists; a gold chain

Упражнение 7. *Переведите следующие предложения на русский язык, обращая внимание на многозначность глаголов* **shall, should, will, would, to be, to have.**

1. The load is distributed among all piles. 2. The builders are to erect the structure in two months. 3. The theory which is being evolved is of great importance. 4. The chain was long enough to reach the opposite bank. 5. Have you taken all the influencing factors into consideration? 6. The committee had certain doubts concerning the project. 7. You will have to take measures to prevent spring waters from penetrating the foundation. 8. You should acquire certain skill before beginning the work you are so interested in. 9. I was told that a temporary bridge would be built across the river. 10. If the concrete were of a better quality, no cracks would appear. 11. Having widened and deepened the canal, they made it suitable for ocean-going ships. 12. You should increase the width of the bridge. 13. He said that some interesting facts concerning the problem had been obtained. 14. Our aim is to facilitate the work of the builders as much as possible. 15. After the war the country was in ruins and the people had to work hard to restore national economy.

Упражнение 8. *Переведите следующие предложения на русский язык, обращая внимание на модальные глаголы и их заменители.*

1. Much more complicated problems are to be solved. 2. They will have to complete the experiment next month. 3. I shall not be able to leave Moscow until we finish our calculations. 4. The engineer was to make a report at the conference. 5. One is to be very attentive when crossing the street. 6. A machine can do work which a man is unable to do. 7. Children under 16 are not allowed to see this film. 8. They will have to try the method described in the article. 9. The

engineer could correct the program during the test of the engine. 10. Many experiments are to be made to increase the engine efficiency. 11. The material collected is to be sent to the laboratory for examination. 12. You might use all the new equipment for your experiments. 13. He had to study the theory of interplanetary travel. 14. They couldn't discover any atmosphere on the planet. 15. The engineers of the plant had to use computers. 16. To design a spaceship designers must take many things into consideration.

Упражнение 9. *Переведите следующие предложения на русский язык, обращая внимание на слова латинского или греческого происхождения, имеющие сходное написание и различные значения в английском и русском языках (так называемые «ложные друзья переводчика»).*

1. **accurate** — точный (а *не* аккуратный). They received accurate information.
2. **actual** — действительный (а *не* актуальный). The actual facts of this invention became known later.
3. **concrete** — бетон (а *не только* конкретный). a) The house was built of steel and concrete. b) This was the first concrete task to be carried out.
4. **control** — управление (а *не только* контроль). a) He lost control of his motor car and met with an accident. b) Close control is necessary.
5. **copy** — экземпляр (а *не только* копия). a) All copies of the magazine were sold out. b) I want to have copies of my documents.
6. **data** — данные (а *не* дата). His data are reliable.
7. **figure** — цифра (а *не только* фигура). a) 3, 5, 7 are figures. b) The girl has a nice figure.
8. **film** — пленка (а *не только* фильм). a) There was some thin film on the surface. b) A new film is shown in the club.
9. **magazine** — журнал (а *не* магазин). You will find some interesting data in this magazine.
10. **object** — цель (а *не только* объект). a) He has no object in life. b) They found themselves an object of great attention.
11. **operation** — работа, управление (а *не только* операция). a) The operation of this machine is rather easy. b) Only an operation will help him.
12. **original** — первоначальный (а *не только* оригинальный). a) Some changes have been made in the original design. b) It was an original idea.

13. **principal** — главный (а *не* принципиальный). His principal wish was to enter Moscow University.
14. **progressive** — постепенный (а *не только* прогрессивный). a) The progressive increase in quantity may lead to a change in quality. b) All progressive people are fighting for peace.
15. **project** — новостройка (а *не только* проект). a) More and more workers and engineers are required at the new gigantic projects in Siberia. b) They discussed the project of technical assistance to the African countries.
16. **race** — гонки, быстрое движение (а *не* рейс). The boat-race is a popular kind of sport at Cambridge.
17. **record** — запись (а *не только* рекорд). a) They were making a record of his speech. b) Soviet sportsmen established many world records.
18. **solid** — твердый (а *не только* солидный). a) Solid water is called ice. b) He is a man of solid build.
19. **square** — квадрат (а *не* сквер). Squares are studied in plane geometry.
20. **tank** — бак (а *не только* танк). a) After the accident they had to replace the fuel tank. b) It was a tank attack.

Упражнение 10. *Найдите в словаре нужные значения выделенных слов и переведите предложения на русский язык.*

1. I want a room with two **beds.** 2. People try to explore the ocean **bed.** 3. They crossed a dry river **bed.** 4. The machine rests on a **bed** of concrete. 5. They **shared** one hundred roubles among five men. 6. He **shared** his dinner with a friend. 7. He does more than his **share** of the work. 8. Two children **shared** a room. 9. The table was **piled** with books. 10. The house was built on **piles.** 11. The workers **piled** bricks on each other. 12. In the middle of the room there was a **pile** carpet. 13.We all have **civil** rights and **civil** duties. 14. The boy gave a **civil** answer. 15. He left army and entered **civil** life. 16. In English colleges students are sometimes **suspended.** 17. The work of the conference was **suspended.** 18. The water was not pure. There was some **suspended** matter in it. 19. The child was **fast** asleep. 20. If you take a **fast** train you can get there in two hours.

РАБОТА НАД СЛОВООБРАЗОВАНИЕМ

Упражнение 11. *а) Найдите в каждом ряду существительное.*

1. a) recognize, b) precaution, c) pave, d) promote

2. a) tend, b) deepen, c) density, d) destroy
3. a) round, b) readings, c) raw, d) restore
4. a) observe, b) operate, c) alone, d) observer
5. a) capability, b) capable, c) cloudy, d) cut
6. a) distant, b) directly, c) distance, d) due
7. a) skilled, b) settlement, c) slowly, d) smooth
8. a) backwardness, b) beat, c) backward, d) because
9. a) convert, b) chiefly, c) conneet, d) conversion
10. a) merely, b) meaning, c) main, d) mean
11. a) dependent, b) durable, c) depend, d) dependence
12. a) reliable, b) replace, c) replacement, d) run

б) Найдите в каждом ряду слово, образованное от первого слова ряда.

1. **skill** a) steel, b) ship, c) sail, d) skilled
2. **avail** a) available, b) aircraft, c) arouse, d) above
3. **recognize** a) replace, b) recognition, c) repair, d) restore
4. **capable** a) charge, b) chiefly, c) capability, d) capacity
5. **adopt** a) advantage, b) adoptive, c) advanced, d) alone
6. **observe** a) opportunity, b) obtain, c) observer, d) weather
7. **read** a) readings, b) order, c) region, d) remark
8. **particular** a) precaution, b) protection, c) particularly, d) pavement
9. **dense** a) design, b) dependence, c) independent, d) density
10. **cloud** a) convert, b) cloudy, c) low, d) longer
11. **tend** a) trouble, b) tendency, c) thickness, d) timber
12. **backward** a) branch, b) building, c) backwardness, d) break down

TEXT 11B

Задание I. *Прочтите текст, стараясь понять основное содержание. (Заметьте время начала и окончания чтения. Этот текст нужно прочесть за 5 минут, из расчета 110 слов в минуту.)*

THE TRIUMPH OF HUMAN SPIRIT

The Brooklyn Bridge was built in the year 1883. It is still one of the most popular places of interest in New York.

The plan for the Brooklyn Bridge was made by a man named John Roebling. This was in the year 1867.

Roebling was a German. He had come to the United States to live when he was twenty-five years old. In 1867

Roebling was already quite famous. Years before he had invented the steel cable (трос). Using this steel cable he has built several bridges, one at Niagara Falls (Ниагарский водопад) and a second across the Monogahela River at Pittsburgh. He was sure he could build this new bridge.

It was decided to give Roebling a chance. A company was organized. Roebling was head engineer. He began to work making the plans for the bridge. He sent his son Washington to Europe to study some new bridges there. Some experiments had been made with working in a large box under water.

And then the accident happened. Roebling was working near the river. A boat struck the dock on which he was standing. Two weeks later he died. Before he died he asked that his son Washington would continue his work.

W. Roebling began to work with the same interest and energy as his father. The bridge was begun. There were many problems. According to the plans, there were to be two large towers (башни). One of these towers was to be on the Brooklyn side of the river and the other was to be on the Manhattan side. From the towers hung (свешивается) a system of steel cables. These steel cables were to hold (удерживать) the bridge.

Today engineers know how to do these things. They have had much experience. They have special machines. But at that time no one knew exactly how to do this work. The Brooklyn Bridge was the first bridge of its kind in the world. They used the new box that Washington Roebling had studied in Europe. The box was made of wood and was about the size of a house. In this box men could work under water. Air was forced into the box and the water was forced out of it. It was very dangerous. No one understood the problems of this kind of work. Men became sick. There were many accidents. Roebling himself worked with the men in the box. He tried to encourage the men.

One day a worker went down into the box. He felt perfectly well. Within half an hour he began to feel strong pains (боль). Five minutes later he was dead. The same thing happened to other men. One day Roebling himself had a similar attack. He could not talk. He could not hear. He became paralysed. After a week or two he felt better. He went back again to work in the box. He had a second attack, more serious than the first. He could not work again. In fact he was unable to work again during the rest of his life. He remained a cripple (калека). Yet the work had to continue. And Washington Roebling continued to direct the construction of the bridge.

His home was near the bridge. He used a telescope. He watched the work every day. His wife helped him. Each day she went to the bridge. She carried her husband's orders to the men. She worked with the men. At night she returned to her husband. She told him about the work of the day. In this way, year after year the work continued.

In 1876 the first cable was placed from one tower to the other. In 1883 about fifteen years after it was first begun, the bridge was officially opened. Many important people, including the President of the US, took part in the ceremony. Washington Roebling watched the ceremony through his telescope.

The bridge was one of the wonders of the nineteenth century. It is still today. There is more traffic on it today than ever before. The bridge remains very strong. It also remains a monument to the two men who built it, John Roebling and his son Washington.

Задание II. *Выберите утверждение, соответствующее содержанию текста.*

1. When John Roebling came to the United States:
   1) nobody knew him; 2) he was known for his invention; 3) only his friends knew about him.
2. Washington Roebling:
   1) was only making the plans for the bridge; 2) was making experiments; 3) began building the bridge.
3. During the construction of the bridge the people used the box:
   1) which was constructed by John Roebling; 2) which was used in Europe; 3) which was invented by Washington Roebling.
4. Washington Roebling became a cripple after:
   1) he had fallen down the bridge; 2) he had an accident during the construction of the bridge at Niagara Falls; 3) he had worked in the box.
5. Washington Roebling:
   1) did not live to see the ceremony of the opening the bridge; 2) could see the ceremony; 3) was present at the ceremony.

TEXT 11C

Задание I. *Прочтите текст, отыскивая в нем ответы на поставленные вопросы.*

LONDON AS A PORT

Who declared "Hands off Russia"?

1. The port of London is to the east of the City. Here, today are miles and miles of docks, and the great industrial areas that depend upon shipping. This is the East End of London, unattractive (непривлекательный) in appearance, but very important to the country's commerce. The East End is a great proletarian area populated by factory workers, and small craftsmen. The East End is the "hands" of London. The hands which have built the palaces, theatres, shops and hotels, the hands which unload the cargoes in the docks, which make furniture (мебель), dresses, motor cars, and a million and one other things which fill the shops. It was these people, the people of the East End, who declared "Hands off Russia" in 1920 and refused to load arms for the interventionists who wanted to crush (разрушить) the first socialist state in the world.

How were the goods unloaded in the early days?

2. The River Thames, flowing from west to east divides London into two parts known as the north bank and the south bank. Years ago the Thames used to overflow its banks when the tide (прилив) came up, but now it has been banked up and you see a fine wide road way called the Embankment. The Thames estuary (устье) offered excellent facilities for shipping. The deep channel and high tide of the lower river enable vessels to pass inland as far as the bridge and unload in waters that were little troubled by heavy storms in the North Sea. In the early days they anchored (бросать якорь) in the river and unloaded into small boats and barges which carried the goods to landing-places on the banks.

How are the goods unloaded now?

3. As the ships grew larger this became too slow a process, and the river was overcrowded, so docks were constructed, deep-water basins excavated in the banks of the river, where vessels could come alongside and unloaded their cargoes directly on the wharves (пристань) or even into lorries if necessary. Vessels increased rapidly in size during the last century and are still growing, and hence larger and larger docks have had to be constructed with deeper and deeper basins.

When can ocean-going ships go up the Thames?

4. The Thames has the benefit (преимущество) of a good tidal range so that the biggest vessels can go up the river and

enter docks at high tide. By closing the dock gates and thus shutting off their waters from the river, deep water can be maintained in the dock all the time it is occupied by vessels. On the river there are ocean-going ships, and lines of barges pulled along by tugs (буксир). Ships up to 6,000 tons can come as far as London Bridge below which is the part of the river called the Pool.

How are the two halves of the drawbridge raised?

5. The ships can pass under Tower Bridge. It was designed by Sir Horace Jones, London architect, and Sir John Wolfe Barry, civil engineer. It took eight years to build it (1886-1894). It has permanent spans (пролет) 270 feet long, suspended on great chains, connecting them with the river bank and smaller towers (башня) at the shore approaches. The two halves of the drawbridge each weighing 100 tons, can be raised for the passage of ships by hydraulic machinery in a minute and a half only.

Задание II. *Прочтите текст еще раз и дайте заголовок к каждой части текста.*

Задание III. *Сделайте краткие сообщения на следующие темы.*

1. The East End. 2. The Thames. 3. Tower Bridge.

TEXT 11D

I

THE VOLGA-BALTIC WATERWAY

1. The Volga-Baltic Waterway named after Lenin is 842 kilometres long, stretching from Leningrad to Cherepovets, and passing through the Neva River, Lake Ladoga, the Svir River with two hydroprojects, Lake Onega and the Volga-Baltic Canal proper, which extends over 361 kilometres.

The short but steep northern slope contains six locks. These half a dozen steps raise the ships to a height of 80 metres above the level of Lake Onega. The southern slope is more gradual. The difference in level between the Sheksna River

and the Rybinsk Reservoir is 13.5 metres. This is where the Volga-Balt's seventh lock is situated. Generally speaking, all the locks are as like as twins, because of the maximum use made of standard building units and equipment, and the same head of water, amounting to 13.5 metres. Only the sixth lock has a head of 17 metres. It is only one of its kind in the world.

2. Incidentally, a working shift at each of the locks consists of only two people—the shift chief and an inspector. The shift chief's control-panel room is a realm of electronics. The sluice-gates open in the "upper head" of the lock and the water surges in. But "surges" is rather an exaggeration. The water's colossal energy has already been damped by special devices placed deep down below. The ships stand quite steady, even though the rate of filling is high — about 100,000 cubic metres of water in 10 minutes.

Normal shipping conditions are ensured on the water route. 8,000 various indicators — buoys, beacons, and so on — have been installed between Leningrad and Cherepovets. All the lighting devices are automatic.

3. The main cargoes are timber, grain, coal, oil, iron ore and metals. Many shipping companies use the Volga-Baltic Waterway. The cost of the carriage of mass freight is 1.5-2 times less than by rail.

The length of the route, which used to circumvent Europe, has been reduced 2-3 times. The annual saving from the elimination of costly reloading operations from river to sea-going craft runs into tens of millions of roubles. The Soviet "river-sea" craft are well known in the ports of Poland, the GDR, the FRG, Finland, Belgium, Iran, Greece and Italy.

No other country has such a big artificial inland waterway. The Panama Canal is 81 km long; the Suez Canal — 164; the White Sea-Baltic Canal — 227 km and the Volga-Baltic Canal over 361 km.

The commissioning of this route completed the united system of inland deep waterways in the European part of the USSR. This covers a territory where a goodish half of our country's population lives.

Задание I. *Ответьте на вопросы к тексту D (I). Правильность ответов проверьте в соответствующих частях текста.*

1. Why are all the canal locks the same? (1) 2. How many people does a working shift consist of? (2) 3. What is the advantage of the waterway over the railway? (3)

II

PANAMA CANAL

1. The man who built the Panama Canal — Colonel Goethals — was the man who turned a great engineering failure into a great victory. He was not the first engineer to undertake that difficult problem. It was undertaken in 1880 by a Frenchman, Ferdinand de Lesseps who had built the Suez Canal. His idea was to build the Panama Canal by driving it straight through, at sea level. To carry out this plan he had to make deep cuts through rocky hills and mountains and found it was impossible.

2. Then another French expedition of engineers was sent out to see what could be done. But again the technical difficulties were too much for them. Moreover, lots of the workers died from yellow fever.

Some years later — about 1904 — the Americans took control of the Panama Zone. The construction of the canal started again. And just as the Frenchmen before them, the US engineers were powerless against difficulties which they could not overcome, again the workers died of fever, and there were more and more accidents.

3. It was then — in 1908 — that Colonel Goethals was appointed as the Chief Engineer in charge of the construction of the Panama Canal. The first thing he did was to organize a fight against the diseases which had been killing the workers since the canal was first begun. All swamps, lakes were covered with a film of oil to destroy the breeding places of mosquitoes, windows and doors were protected with fine wire netting.

4. Colonel Goethals did not follow the idea of building a canal on the same level all the way. His idea was to carry the canal at different heights by means of locks and sluices. He was successful where so many others had failed. The canal was finished early in October 1913, a great achievement in modern engineering. On the 10th of October President of the United States Wilson pressed a golden button in the White House in Washington; 2,000 miles away the electric current from the White House made a dynamite charge explode and blow up the last dam between the finished canal and the sea. The Atlantic and the Pacific were now connected with each other.

Задание I. *Ответьте на вопросы по тексту D (II). Правильность ответов проверьте в соответствующих частях текста.*

1. Who was the first engineer that undertook the building of the Panama Canal? (1) 2. Did US engineers succeed in building the Panama Canal? (2) 3. What did Colonel Goethals undertake before starting the construction of the Canal? (3) 4. What was the main idea of his project? (4)

КОНТРОЛЬНЫЙ СЛОВАРЬ

1. acquire (*v*); 2. actually (*adv*); 3. agree (*v*); 4. basis (*n*); 5. beam (*n*); 6. bed (*n*); 7. chain (*n, v*); 8. circular (*a*); 9. civil (*a*); 10. concern (*n, v*); 11. crack (*n, v*); 12. cross-section (*n*); 13. demand (*n, v*); 14. depth (*n*); 15. distribute (*v*); 16. doubt (*n, v*); 17. erect (*v*); 18. estimate (*n, v*); 19. evolve (*v*); 20. extremely (*adv*); 21. fall (*n, v*); 22. further (*adv, a*); 23. lay (*v*); 24. layer (*n*); 25. local (*a*); 26. by means of; 27. mention (*n, v*); 28. object (*n, v*); 29. outstanding (*a*); 30. passage (*n*); 31. penetrate (*v*); 32. pile (*n*); 33. prevent (*v*); 34. project (*n*); 35. range (*n*); 36. reach (*v*); 37. readily (*adv*); 38. rock (*n*); 39. rope (*n*); 40. scheme (*n*); 41. secure (*a, v*); 42. share (*v*); 43. so far; 44. suggest (*v*); 45. suitable (*a*); 46. support (*n, v*); 47. suspend (*v*); 48. to take into consideration; 49. temporary (*a*); 50. width (*n*)

LESSON 12 (TWELVE)

Грамматика: Составные предлоги и союзы.
Основной текст A: Survey.

Составные предлоги

1. **according to**	According to the information received by us the ship will arrive on the 10th of April.
2. **as far as***1	I go by bus as far as the Lenin Library and then walk a few blocks to my office.
3. **because of**	They didn't go to the country because of the rain.
4. **by means of**	In big ports ships are loaded and unloaded by means of cranes.

5. **due to***	The train did not arrive in time due to the snow storm.
6. **in addition to***	In addition to the tróuble in the engine there appeared another in the transmission.
7. **in front of***	Who is sitting in front of him?
8. **in order to**	The new equipment was used in order to test the vibration of the engine.
9. **in spite of**	He left in spite of all my protests.
10. **instead of**	What book can you give me instead of that one?
11. **on account of***	The match was delayed on account of heavy rain.
12. **owing to**	Owing to the new system of regulations the number of accidents went down.
13. **thanks to***	Thanks to his help we finished our work early.

[1] Отмеченные звездочкой предлоги входят в состав активного словаря урока 12.

Упражнение 1. *Переведите следующие предложения, обращая внимание на составные предлоги.*

1. By means of this device we can carry out more operations now in shorter time. 2. The work is going on according to schedule. 3. The engine didn't operate well because of bad fuel. 4. In order to protect the surface from heat and cold it was covered with special substance. 5. Due to the establishment of new trolley-bus routes the passenger service in the city was improved. 6. The monument was restored in spite of many difficulties. 7. Who can repair the apparatus instead of him? 8. No planes took off on that day on account of low clouds. 9. Is there any high building in front of your house? 10. Owing to his works not only was the problem solved at last but a wholly new approach to it was introduced. 11. The expedition sailed as far as Borneo. 12. In addition to sails the boat was also supplied with a motor. 13. In addition to the usual methods of computation they made use of computers.

Составные союзы

1. as ... as *[1]	My younger brother is as tall as I am.
2. as long as	I shall remember you as long as I live.
3. as soon as *	I'll telephone you as soon as I return home.
4. as well as	This book is interesting as well as useful.
5. both ... and *	Both the bridge and the tunnel will be finished in time.
6. either ... or	I shall leave either tonight or tomorrow.
7. in order that *	In order that the comfort of the driver may be improved the design of the seat was changed.
8. neither ... nor *	I could find him neither at home nor in the office.
9. so that	They crossed the mountains so that they could reach the village before dark.
10. the ... the	The longer I think of your plan, the more I like it.

[1] Отмеченные звездочкой союзы входят в состав активного словаря урока 12.

Упражнение 2. *Переведите следующие предложения, обращая внимание на составные союзы.*

1. The shorter the lever (рычаг) arm the greater is the effort necessary to lift the weight. 2. Both the bridge and the dam will be completed before the navigation season. 3. You can get to that part of the city either by bus or by the underground. 4. As soon as all the calculations are completed, we shall begin the tests. 5. These children know neither German nor French languages. 6. As long as you refuse to apply new methods the output will remain unchanged. 7. The strength of this synthetic material is as high as that of steel. 8. Special containers were used in order that the supply of food could be improved. 9. The sun gives us both light and heat; it gives us energy as well. 10. The investigations at the Arctic research station are carried out daily in good as well as in bad weather according to a carefully worked out plan. 11. We decided to cross the mountains so that we could reach the airfield in the day-time.

VOCABULARY NOTES

Задание I. *Переведите следующие предложения.*

1. **to indicate** — указывать. The sudden wind indicated a change in the weather.
2. **elevation** — высота; возвышенность. The topographic map indicates elevations of the land surface.
3. **height** — высота. The height and the orbit of satellites can be determined by means of radio.
4. **straight** — прямой. The road extended as a straight line.
5. **line** — 1) линия; 2) ряд. 1) Communication lines must be built first. 2) Lines of trees extended along the both sides of the road.
6. **area** — площадь, район. There are large areas in Australia which are still unpopulated.
7. **rough** — неровный, шероховатый. Tractors can easily drive along rough ground.
8. **angle** — угол. They have measured the angles between the horizontal line and the top of the mountain.
9. **to mount** — устанавливать, монтировать. A new telescope was mounted in the observatory.
10. **fraction** — доля; дробь. A computer can carry out these calculations within a fraction of a second.
11. **highway** — дорога, шоссе. They were building the circular highway to connect some districts of the city.
12. **preliminary** — предварительный. The preliminary calculations showed the high cost of the building.
13. **to make use of** — воспользоваться. They will probably make use of the materials available at the laboratory.
14. **to alter** — изменять(ся). The city has altered a great deal since the war ended.
15. **frequently** — часто. He frequently visits arts exhibitions.
16. **to apply** — применять. New and more reliable methods of computation are being applied in rocket engineering.
17. **to fix** — устанавливать. The position of the star was fixed with the help of a computer.
18. **certain** — определенный, некоторый. Certain details of his biography became known to the public.
19. **vital** — жизненно необходимый, существенный. The earliest completion of the road across the mountains is vital for the population of the area.
20. **curve** — кривая. The curve of the road was calculated so as to allow smooth movement of cars.

21. **embankment** — насыпь, набережная. If no accident had happened, they would have completed the construction of the embankment by this time.

22. **case** — случай. You may use this equipment only in case of emergency.

23. **simultaneously** — одновременно. History knows a great deal of examples when two inventions were made simultaneously by scientists living in different countries.

24. **to check** — проверять. Is there any means to check if he is saying the truth?

25. **with reference to** — относительно. The position of the research ship with reference to the sputnik was checked with the help of navigational instruments.

26. **to utilize** — использовать. Modern railways utilize a great deal of modern facilities to make passenger transportation safe.

27. **to prefer** — предпочитать. Aircraft is usually preferred for transportation of emergency goods.

28. **to accomplish** — выполнять. After the construction of the tunnel under the English Channel is accomplished a direct route between European countries and Britain will become possible.

29. **otherwise** — иначе, в противном случае. The telescope allows to see very small stars which otherwise would be impossible to observe.

30. **access** — доступ, подход. The access to the mountain village was extremely difficult because of many rapid streams.

31. **explorer** — исследователь. G. Sedov was one of the greatest Arctic explorers.

32. **to investigate** — исследовать. In recent years underwater television has been introduced for investigating the ocean.

33. **as** — 1) так как; 2) как (в качестве); 3) когда. 1) The diamond is used for cutting metals as it is the hardest of minerals. 2) Previously the diamond was only valued as a precious stone. 3) As the train was approaching the station, we went to the platform.

РАБОТА СО СЛОВАРЕМ

Задание II. *Определите, к какой части речи относятся выделенные в данных предложениях слова; затем найдите в словаре нужные значения этих слов и переведите предложения.*

1. **survey**

a) **Survey** is an examination of the shape, size, position of a piece of land. b) The land must be **surveyed** before anything may be built on it. c) **Surveys** in the taiga are carried out in most difficult conditions.

2. **pipe**

a) This old water-**pipe** must be replaced by a new one. b) The water was **piped** to the town from a lake. c) There is a hole in that **pipe.**

3. **stream**

a) This wide **stream** is unlikely to be bridged very quickly. b) There is a steady **stream** of cars on the highway all day. c) The people were **streaming** out of the building.

4. **amount**

a) According to the readings of the instrument a considerable **amount** of fuel was stored in the tank. b) The ship needs a large **amount** of coal. c) The speed of the rocket carrier **amounts** to 8 km/sec.

5. **aid**

a) Air photography is often utilized as an **aid** in road survey. b) Let me **aid** you. c) He was given first **aid.**

6. **deposit**

a) It is believed that under the ice and snow of Antarctica lie the largest **deposits** of coal in the world. b) In Ethiopia there is a lake 7 miles across. Half the bed of this lake is dry and is a **deposit** of white sea salt. c) The rivers **deposit** great amounts of sand.

Задание III. *Прочтите следующие интернациональные слова и догадайтесь об их значении.*

topographic [ˌtɔpə'græfik], base, theodolite [θi'ɔdəlait], telescope, horizontal, minute, vertical, construction, transportation, transmission, principle, modification, operation, normal, contour, result, gradient, radius, camera, arctic, territory

TEXT 12A

Задание. *Прочтите и переведите текст.*

SURVEY

1. A topographic survey is a survey made to secure data from which may be made a topographic map indicating the relief or elevation and irregularities of the land surface.

Maps are based on measurements of distances, directions and heights. Surveying is the name given to the methods of making these measurements.

2. The simplest and most commonly used method of measuring the distance between two points on the ground is called chain surveying.[1] It is very similar to the way in which the distance between two points on a piece of paper is measured using a foot-rule. In chain surveying the place of the foot-rule is taken by a chain which is laid down in a straight line between the two points.

Small areas are often surveyed entirely by chain survey provided that the ground is not too rough.

3. Angles in surveying are measured with special instruments called theodolites. In its simplest form the theodolite is a telescope mounted above a horizontal circular scale, which is rather like a protractor. It is marked in degrees, minutes and fractions of minutes. (There are 60 minutes in one degree.)

Theodolite also allows the measurement of angles in a vertical plane, such as the angle between the horizontal and the top of a tall building or hill.

4. Route survey[2] is a survey necessary for the location and construction of transportation or communication lines such as highways, railroads, canals, transmission lines and pipelines. The preliminary work consists of a topographic survey.

5. Mine surveying[3] makes use of the principles of land, topographic and route surveying with modifications in practice made necessary by altered conditions. Both surface and underground surveys are required. City surveying[4] is the term frequently applied to the operation of laying out lots[5] and to the municipal surveys[6] made in connection with the construction of streets, water supply systems and sewers.

6. The maps and data produced by surveyors are used by civil engineers in many ways. Before construction begins the exact position of the various parts of the dam, or the track of the railway or road, are fixed on the ground by using normal surveying methods. In choosing the site for a dam, for instance, an engineer can study on a map the courses of all the rivers and streams in the area. By reading the contours he can calculate the amount of water which can be stored by building a dam of a given height in a certain place. In the same way the results of a soil survey clearly marked on a map will give the engineer vital information about the foundations. When deciding the route of a railway or road, the gradients, radii of curves, heights of embankments and depth of cutting can be calculated from data supplied by the surveyor.

7. In case of a tunnelling which is usually carried out from both ends simultaneously a base line is set out on the ground at each end and the course followed by the tunnellers is continually checked by measuring both levels and angles with reference to the base line. By this means it is possible to make the two tunnels meet accurately or within 1 or 2 inches over a distance of a mile or more.

8. Terrestrial photogrammetry [7] or photographic surveyings from ground stations had been found to be a useful addition to other methods in mapping of mountainous areas. The work consists in taking photographs from two or more control stations and in utilizing the photographs for the projection of details of the terrain in plan and elevation.[8]

AIR SURVEY

9. Surveying by the methods described above is very labourous, the surveyor has to work over all the ground step by step. A great deal of time is saved by modern methods of photographic air survey.

Photographs taken from aeroplanes in flight have been used as aids to map-making since World War I. If such photographs are to be really useful the height and position of the aeroplane at the instant of taking the photographs must be accurately known.

The development since 1940 of radar methods for finding the position of aircraft has increased the role of photogrammetry in surveying.

Air photographs may be taken with the camera either pointing vertically downward, or at an angle. Vertical photographs are preferred for map-making especially when height and contours are required.

The advantages of air survey are the speed with which the field work is accomplished, the wealth of details secured and used in locations otherwise difficult or impossible of access. Air survey is widely used by Soviet explorers in investigating the Arctic zone.

With aeroplanes suitably winterized for operation in northern areas the Soviet pilots carry out the aerial mapping of the Russian Arctic and Sub-Arctic regions on such a scale as no one has ever applied to outlying territories in any other country.

Thanks to the data produced by air surveying Soviet geologists have discovered mineral deposits in areas almost quite unknown until recently.

NOTES TO THE TEXT

1. **chain surveying (survey)** — линейная съемка
2. **route survey** — маршрутная съемка
3. **mine surveying** — маркшейдерская съемка
4. **city surveying** — площадная съемка
5. **lots** — участки земли
6. **municipal survey** — городская съемка
7. **terrestrial photogrammetry** — наземная фотограмметрия
8. **the projection of details of the terrain in plan and elevation** — проекция деталей местности на горизонтальную и вертикальную плоскости

Упражнение 3. *Ответьте на вопросы по тексту А.*

1. What data can be received from a topographic survey? 2. What kind of survey is most commonly used? 3. Can one use chain survey if the ground is very rough? 4. What is the theodolite used for? 5. How is the scale of the theodolite marked? 6. What is the route survey used for? 7. What principles does mine surveying make use of? 8. What information does a civil engineer building a dam get from surveying? 9. What data must be supplied by the surveyor in choosing the route of a road? 10. Is tunnelling usually carried out from one or both sides? 11. Since what time has air survey been used? 12. What are the advantages of air survey? 13. In what part of the Soviet Union is air survey widely used? 14. What aeroplanes are used for operation in northern areas? 15. What have Soviet geologists discovered thanks to air surveying?

Упражнение 4. *Заполните пропуски подходящими по смыслу словами.*

angle, otherwise, simultaneous, survey, access, indicate, utilized, preliminary, preferred, highway, checking, height. frequently, as, deposits, investigation, explorers, both .., and, curve, amount

1. The road turns at a right ... . 2. The extensive soil ... is being carried out. 3. Test results ... that this method proved to be the most effective. 4. The canal needed ... widening ... deepening. 5. Everest is the highest mountain in the world, its ... is 29,002 feet. 6. A new ... will run through the thick forest and link several towns. 7. A ... course of studies is given to the young workers and peasants at the workers' faculties of the Institutes. 8. The TV camera can be used for ... of underwater life. 9. The Soviet Union was the first nation

that sent an expedition to spend the year-round on the floating Arctic ice. In 1937 a party of four ... headed by D. Papanin set up a scientific station on an ice-floe (плавучая льдина). 10. ... there were no wells near the construction site, we had to bring water in tank waggons. 11. Such conditions are ... observed in this area. 12. The most efficient methods of construction are known to be ... in this project. 13. ... weather observation in many points of the globe enables the meteorologists to make their forecasts more reliable. 14. This information needs careful ... . 15. Sometimes air survey is ... to ground survey. 16. By the end of the 20th century man will probably learn to live and work under water to gain ... to the natural resources of the world ocean. 17. The correct calculation of the ... of the highway is of vital importance, ... the cars would not be able to turn at full speed, and many accidents would be caused. 18. Pipe-lines are a reliable means for moving great ... of oil and gas over great distances.

Упражнение 5. *Переведите на русский язык следующие словосочетания.*

to make a survey; reliable data; to indicate the road to follow; a suitable location; to cross the highway; a straight line; to lay pipes; preliminary talks; height and width; common knowledge; a piece of information; safe area; entirely undeveloped; rough ground; a right angle; to mount an engine; to erect a tall building; to make use of a dictionary; to alter nothing in the schedule; both clay and sand; thanks to the development of industry; thanks to the new discovery in the field of physics; to investigate the upper layers of the atmosphere; large deposits of coal; to discover new oil deposits; as it was very cold; as he was late; frequent visits; frequent breakdowns; to apply a method; to apply a rule; to fix the position of a star; to fix the position of a comet; simultaneous translation; to check the amount of fuel; to check the home task; with reference to the modern technology; to utilize new plastic materials; an aid in navigation; downward movement; to prefer an airplane to a train; wide and narrow streams; a certain number of people

Упражнение 6. *Переведите следующие предложения, обращая внимание на составные предлоги и союзы.*

1. According to the data made available by the survey, highway construction in this area was impossible. 2. The access to the mountain was difficult due to the great amount of snow which had fallen during the last week. 3. Preliminary

survey was carried out by means of air photography. 4. Because of frequent breakdowns of the computer the task wasn't carried out in time. 5. In order to get the vital information the researchers had to look through great amount of technical literature. 6. The new plastic to be used for this purpose has to be both strong and elastic. 7. In order that the information should become available a computerized system was designed. 8. As soon as you check whether all parts of the machine function well, you may begin the test. 9. The larger the area to be investigated the more difficult is the task, especially if the area is entirely unpopulated. 10. Before constructing a bridge an engineer has to have certain information about the river to be bridged: the speed of the water stream as well as the amount of water have to be carefully measured. 11. The excavation of the coal was easy owing to the fact that the deposits were situated near the surface. 12. If the work were not organized properly, you would not achieve good results in spite of all the modern equipment you may have had.

Упражнение 7. *Переведите следующие предложения, обращая внимание на перевод слов, образованных по способу конверсии.*

1. How much fuel has been stored? 2. They had stores of food and fresh water on board. 3. The engine needs refuelling. 4. What sort of fuel does this car work on? 5. He doubted whether they would be able to research into such a difficult problem. 6. He has done some very interesting research in the field of electronics. 7. There was no mention of this fact in his report. 8. Did he mention the place where he was going to spend his vacation? 9. Gravitation forces the planets to move along elliptical orbits around the Sun. 10. Man has learned to govern the forces of nature. 11. Because of the cracks in the ice they had to change the place of their camp. 12. The wall of the building cracked in some places. 13. According to the legend Prometheus was chained to a rock. 14. The bridge was suspended on chains. 15. This is a produce of the USSR. 16. The USSR produces a great deal of steel.

Упражнение 8. *Установите, в каких предложениях данные слова имеют указанное значение.*

1. **organized** — организованный

a) The exhibition is organized by two societies. b) The exhibition organized by two societies was held in London. c) The Society of Motor Manufacturers organized the exhibition in London.

2. **is** — должен

a) The equipment is to be supplied by a Japanese firm. b) The equipment is being supplied by a Japanese firm. c) The equipment is supplied by a Japanese firm.

3. **has, have** — должен

a) The electrical equipment has been manufactured in France. b) Electrical equipment of special design has to be manufactured. c) They have electrical equipment manufactured in France.

4. **manufacturing** — производящий

a) CAV is a British firm manufacturing diesel engines. b) The firm is manufacturing diesel engines for automobiles. c) By 1990 the firm will be manufacturing 1-2 million engines a year.

5. **experimenting** — экспериментируя

a) They are experimenting with the new component. b) Experimenting with the new component they found out that it was most suitable for road surfacing. c) The two men started experimenting with the component several years ago.

6. **tested** — испытал

a) The motor car was tested on the roads. b) The firm tested the motor car on the mountain roads. c) The motor car was to be tested next spring.

TEXT 12B

Задание I. *Прочтите текст, стараясь понять основное содержание. (Заметьте время начала и окончания чтения. Этот текст нужно прочесть за 3,5 минуты, из расчета 110 слов в минуту.)*

THE BIGGEST DIAMONDS IN THE WORLD

Of all precious stones diamonds (алмаз) are probably the most widely known.

The first discovery of diamonds in Africa was made in 1867, on the banks of the Orange River, where a child found a particularly pretty stone which proved to be a diamond.

Diamonds have also been discovered in other parts of the world: the USSR, Australia, South America and the United States.

Certain diamonds have become famous. One of the most famous diamonds is the Koh-i-noor. In the 16th century it

belonged to Asiatic r ulers. It was so valued that wars were fought over it.

The largest coloured diamond is the greenish-blue Hope diamond. It is supposed to bring misfortune (несчастье) to its owner. Another famous diamond is the Great Cullinan. Here is the story about Cullinan. In January 1905, the director of the Diamond Mine in South Africa, while walking through the mine during the noon hour, saw the sparkle (блеск) of what he at first thought to be a broken bottle. But it was a diamond as large as a large apple.

This remarkable stone, the largest ever found, has since become known to the world as the Great Cullinan. Upon being cut, it proved to be a pure white stone, four by two and one half by two inches, weighing 3.025 carats or 1.37 pounds. The Great Cullinan was immediately bought by the Transvaal Government and presented to King Edward VII.

The question then arose of how a diamond of such great value could be transported to England in safety. After many discussions and a great amount of newspaper publicity, four men, armed to the teeth, left the mine, carrying with them a dispatch case (сумка курьера).

Having crossed the 30 miles of open country to Pretoria under heavy escort, they went in a special car of the mail (почтовый) train to Cape Town. In the ship by which they went to England a safe had been specially installed and in it was placed the dispatch case. Two of the men remained on duty beside the safe night and day.

From Southampton a special train took them up to London and a strong guard of police and detectives escorted them to the bank at which the diamond was to be delivered.

When the dispatch box was opened in the presence of a group of officials it was found to contain nothing more valuable than a piece of coal. The stone itself had been packed in a box and sent to England by mail, not even the postmaster-general (министр почт) knew about it.

Later it was cut into several stones, two of the largest of which are in the British Crown (корона).

Задание II. *Выберите утверждение, соответствующее содержанию текста.*

1. Great Cullinan was discovered by:
   1) a worker in the mine; 2) director of the mine; 3) a child playing on the bank of the river.
2. Great Cullinan was presented to:

1) the King of Britain; 2) the President of the USA; 3) the head of the Transvaal Government.

3. The problem of the delivery of the diamond was discussed:
   1) by all the newspapers; 2) only by the government officials; 3) only by the postmaster-general and by his officials.
4. When the dispatch case was opened, it was found to contain:
   1) nothing; 2) a piece of coal; 3) the diamond.
5. The diamond:
   1) was sent by mail; 2) was delivered by a diplomatic courier; 3) was delivered personally by the head of the Transvaal Government.

Задание III. *Прочтите текст еще раз и выполните следующие задания.*

1. Name the three most famous diamonds mentioned in the text.
2. Name the countries where diamonds are found.
3. Name all the means of transport used to deliver the dispatch case (plane, motor car, train, ship, bus, helicopter).
4. Describe the route by which the escort with the dispatch case went.

TEXT 12C

Задание I. *Прочтите текст, отыскивая в нем ответы на поставленные вопросы.*

MONORAIL TRANSPORT: FROM THE DRAWING BOARDS TO REALITY

In what country was the first electric monorail designed?

1. The idea of monorail transport occurred to people long ago. Back in 1897 the Russian Technical Society organized in Petersburgh a demonstration of working models. This was the first suspended electric monorail designed by engineer Ippolit Romanov. The small car powered by a miniature electric motor operated without fail.

At the beginning of the century British specialists designed "lightning trains" with the speed of 240 kph.

What are the most efficient forms of the monorail?

2. Most of the monorails operating in the world today are experimental. The successful functioning of these proves that they could be well used as a means of regular passenger transport. Investigations have revealed that the most effective monorails are when the cars either suspend from the rail or roll atop of it. Elevated monorails can be built either with an open or a covered rail. The wheels of the cars, with pneumatic tyres, roll on top of this rail.

What kind of monorails are suitable for the central part of the USSR?

3. The choice of the type of monorail depends upon climatic conditions, terrain and the number of passengers. For example, it would be better to build suspension-type monorail with a covered-up rail in the central part of the USSR, and of the top type with an open rail — in the southern areas. The high-speed air-cushioned transport is most effective for long distances.

Why can monorails be built in a comparatively short time?

4. High speed is the main advantage of the monorail. Today a person who lives in a large city covers some 40 km every day. The monorail trains which can do 80 km or more per hour, as compared with the approximately 15 kph speed of the tram, would save the passenger 670 hours every year. But the saving of time is far from being the only advantage of the monorail. Monorail can be laid at a comparatively short time because its construction involves little earth-moving work. And, surely, as calculations show, the construction of monorail will be about 30 per cent cheaper than that of the Metro.

Where can monorails be utilized?

5. Monorails supply comfortable high-speed communication between the centre of the city and the airports which are usually situated some 25-30 kilometres away.

Moscow, Leningrad, Kiev and other cities and especially industrial centres each have several satellite towns. These towns are densely populated and many people living in them go to work to the centre of the big city, which takes them one or even two hours. Monorails offer a reliable solution to this problem.

The health-resort routes running along the Black Sea coast of the Crimea and the Caucasus are an important possible field for the utilization of monorails. For example, Sochi spreads for 140 km along the sea coast. Naturally the holiday-makers must be given an opportunity to travel up and down the resort swiftly and in comfort. Monorail is the obvious answer here too.

Задание II. *Прочтите текст еще раз и выделите в каждой части интересные для вас факты.*

TEXT 12D

ROADS AND TUNNELS

1. British roads are classified in three groups. The arterial roads, so called because they might be compared to the arteries in the human body, are known as *A* or Class I roads. The arterial roads include the principal roads radiating from London to far parts of the country, and many roads joining big cities. The second group of classified roads consists of *B* or Class II roads which are a little less important than *A* roads. Last comes a third group, which has no official name. Each road of the first two classes, *A* and *B*, has a different number, which appears on all signposts, so that a motor driver can find his way across Britain if he has previously looked up the number on a map.

2. The crowded state of the British roads caused many accidents and delays even before World War II and became much worse afterwards. For some years little was done to tackle the problem apart from widening the roads in places and making by-pass roads around towns to avoid traffic jams in busy streets. In the late 1950s a programme was begun for building some 400 miles of motorways in the form of a network over the country, the chief ones radiating from London to the industrial areas in South Wales, the Midlands, and Lancashire. These modern double-track highways are being built with fly-over junctions and crossings and will in time form part of a system of motorways running right across Europe.

3. A motorway is usually designed with two carriage-ways, one for traffic in each direction. These should be at least 30 feet apart to avoid the vision of drivers being dazzled by the

lights of vehicles coming the other way. The two carriageways needn't run side by side. A width of 24 feet between kerbs usually gives ample room for passing, but some roads are wider, for example the London-Birmingham motorway is 36 feet wide. At all cross-roads there are fly-over or clover-leaf crossings.

4. In thinly populated tropical countries, where the earth is dry and sandy, roads to carry occasional traffic can be made quite cheaply. The soil is turned over and mixed with a small quantity of cement, watered, and finally rolled, after which it has quite a good hard surface.

5. In many countries there are high-speed motorways, like the German "autobahnen" or Italian "autostrade". They are usually fenced in, and motorists are admitted to them only at special gates where they pay a toll. Once inside, they can travel at 80 or 90 miles an hour, for there are hardly any junctions, and no slow moving traffic is allowed.

6. Europe's first automobile tunnel under the Alps — the 3.4-mile Great St. Bernard Tunnel between Italy and Switzerland — was officially opened to traffic on the 19 March 1969. The tunnel was under construction slightly over five years and cost about 38 million dollars. Actual digging starting from both sides was under way from February 1959 to April 1961. Some 1,650 tons of explosives were used to excavate more than a million cubic yards of rock. The project also required 44,000 tons of steel for use in the construction of walls and road-bed, and 165,000 tons of reinforced concrete for lining the inside of the tunnel. The tunnel has a two-line road-bed 24 ft. wide and 14 ft. 9 in. high. Leading up to it on both sides are several miles of approaches built on concrete stilts and roofed with concrete to protect the roads from snow and avalanches and make them useable throughout the year. Up to now the Great St. Bernard Pass has been closed much of the year by snow.

7. More than 30,000 cars a year are expected to use the tunnel. Tolls range from 2.10 dollars to 4.65 depending on the engine, size of the car and the number of passengers. There are 12 other important tunnels under the Alps in central Europe all for rail traffic. Soon a second Alpine motor tunnel will be ready. It will connect Italy and France under Mont Blanc.

Задание 1. *Ответьте на вопросы по тексту D. Правильность ответов проверьте в соответствующих частях текста.*

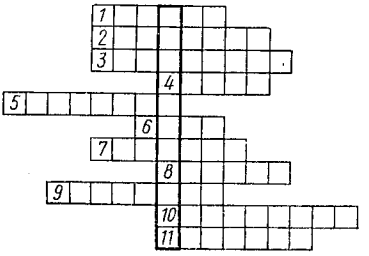
1. What roads are included in Class I roads? (1) 2. Why are Class I roads called arterial roads? (1) 3. What work in roadmaking in Great Britain was done in the 1950s? (2) 4. What roads were built in Great Britain in the 1950s? (2) 5. Why should two carriage-ways be set at a distance? (3) 6. What is the width of London-Birmingham road? (3) 7. What method of road building is used in thinly populated tropical countries with dry climate? (4) 8. What must a motorist do to be allowed to use high-speed motorways? (5) 9. When was Europe's first automobile tunnel under the Alps opened? (6) 10. What was the inside of the tunnel lined with? (6) 11. How many cars a year are expected to use this tunnel? (7)

КОНТРОЛЬНЫЙ СЛОВАРЬ

1. access (*n*); 2. accomplish (*v*); 3. on account of (*prp*); 4. in addition to (*prp*); 5. aid (*n, v*); 6. alter (*v*); 7. amount (*n, v*); 8. angle (*n*); 9. apply (*v*); 10. area (*n*); 11. as (*cj*); 12. as ... as (*cj*); 13. as far as (*cj*); 14. as soon as (*cj*); 15. both ... and (*cj*); 16. case (*n*); 17. certain (*a*); 18. check (*v*); 19. curve (*n*); 20. deposit (*n, v*); 21. due to (*prp*); 22. elevation (*n*); 23. embankment (*n*); 24. explorer (*n*); 25. fix (*v*); 26. fraction (*n*); 27. frequently (*adv*); 28. height (*n*); 29. in front of (*prp*); 30. highway (*n*); 31. indicate (*v*); 32. investigate (*v*); 33. line (*n*); 34. to make use of; 35. mount (*v*); 36. neither ... nor (*cj*); 37. in order that (*cj*); 38. otherwise (*adv*); 39. pipe (*n, v*); 40. prefer (*v*); 41. preliminary (*a*); 42. rough (*a*); 43. simultaneously (*adv*); 44. straight (*a*); 45. stream (*n, v*); 46. survey (*n, v*); 47. thanks to (*prp*); 48. utilize (*v*); 49. vital (*a*); 50. with reference to

QUIZ

Lessons 10-12



Fill in all the horizontal blanks correctly, and in the vertical blank you will get the name of the man whose sons sent up the first balloons filled with smoke.

1. The river on the banks of which London is situated. (11C)
2. The name of the bridge which was built in New York in 1883. (11B)
3. Rail transport the main advantage of which is high speed. (12C)
4. The name of the famous drawbridge in London. (11C)
5. The name of the engineer who built a bridge at Niagara Falls using steel cables. (11B)
6. The name of the largest greenish-blue diamond which was supposed to bring misfortune to its owner. (12B)
7. The earliest form of air transport. (10A)
8. The country where the flight of the balloons was demonstrated at the end of the 18th century. (10B)
9. The name of Class A or Class I roads. (12D)
10. The name of the river under which one of the earliest tunnels in Babylon was built. (11A)
11. The name of the engineer who demonstrated the model of the first suspended electric monorail in Russia. (12C)

МЕТОДИЧЕСКИЕ РЕКОМЕНДАЦИИ К III ЧАСТИ

Третья часть учебника имеет целью дальнейшее совершенствование навыков чтения литературы по специальности для получения информации, развития навыков перевода и устной речи.

В ней соблюдается преемственность в учебном материале и формах работы с учетом специфики второго этапа обучения иностранному языку в техническом вузе.

Эта часть содержит 8 уроков-тем. Урок-тема открывается экспозицией грамматического материала, типичного для стиля научно-технического жанра, непосредственно за которым следуют предтекстовые лексико-грамматические упражнения, рекомендуемые для работы в аудитории. Выделенный для запоминания активный словарь в количестве 40 слов на каждый урок дается в форме словарных разработок двух видов и иллюстрируется на словосочетаниях и предложениях, что дает возможность осуществлять первичное закрепление слов в аудитории. Лексика активизируемых в первом виде словарных разработок взята из текстов А. В упражнениях для работы со словарем (второй вид словарных разработок) слова взяты из текстов А или С. Слова в разработках идут в том порядке, в котором они встречаются в тексте. В конце каждого урока дан алфавитный список 40 изученных в уроке активных слов под рубрикой «контрольный словарь», который может быть использован для контроля проработанной лексики после прохождения урока-темы.

В текстах и упражнениях учебника присутствует также большое количество ранее изученных слов, которые систематически повторяются для лучшего запоминания..

Послетекстовые упражнения включают в себя задания на закрепление лексического и грамматического материала, а также упражнения на словообразование.

В уроке-теме, помимо текста А, предназначенного для изучающего чтения, содержатся также тексты В и С, каждый из которых предназначен для тренировки разных видов чтения. Текст В имеет своей задачей дальнейшую тренировку навыка быстрого чтения от 110 слов в минуту в начальных уроках до 140 в последних.

Текст С дает возможность реализовать совокупность элементов зрелого чтения, которые отрабатывались по отдельности в текстах А и В.

Проверка понимания осуществляется, в частности, с помощью теста «множественного выбора», содержащего альтернативные, но равновероятные идеи, которые невозможно принять или исключить без ясного понимания содержания читаемого.

При определении заданий к текстам преимущество отдавалось тем видам деятельности, которые характерны для инженерных умений — умение принимать решение как по частным вопросам, так и в целом, умение самостоятельно оперировать полученной информацией.

Урок 20 несколько отличается по организации материала от остальных уроков, что объясняется тем, что авторы предназначили

тексты этого урока для контроля полученных навыков изучающего и быстрого чтения.

При выборе текстов для учебника был проведен анализ содержания как советских, так и зарубежных научно-популярных изданий. Авторы ставили своей целью отобрать тексты, которые представляют интерес для студентов, наиболее полно отражают стиль научно-технической прозы и дают информативный материал, расширяющий общетехническую эрудицию студентов.

На каждый урок-тему отводится примерно три аудиторных занятия. Материал урока предполагает интенсивную проработку его в аудитории.

Примерная дозировка времени, отводимого на основные виды работы в аудитории:

1. на введение и первичное закрепление грамматического материала — 15 минут;
2. на работу над лексикой урока, включая интернациональные слова — 15 минут;
3. на работу со словарем — 10 минут;
4. на контроль и закрепление домашнего задания (текст и упражнения) — 30 минут;
5. на чтение текста В и выполнение заданий к нему — 8—10 минут (в зависимости от длины текста);
6. на чтение текста С и выполнение всех заданий к нему — 10—15 минут.

На самостоятельную работу выносятся:

1. тексты А и С (частично);
2. тексты для письменного перевода;
3. работа со словарем;
4. упражнения на тренировку словообразования на материале однокорневых слов;
5. упражнения для работы над трудностями перевода (синтаксические конструкции);
6. задания на извлечение и обобщение информации из различных текстов;
7. контрольный словарь;
8. словарь активной лексики.

При организации самостоятельной работы следует уделить особое внимание заданиям на обобщение информации, которые могут выполняться как на английском, так и на русском языке в конце каждого урока. Выполнение этих заданий должно стимулировать постепенное повышение самостоятельности и творческой активности студентов.

Авторы

PART III

LESSON THIRTEEN

Грамматика: Сказуемое.
Основной текст 13А: Road Transport: Problems and Prospects.

Сказуемое во временах Indefinite, Continuous and Perfect (Active and Passive)

	Active	Passive
Present Indefinite	The book **illustrates** the latest achievements in the development of the diesel engine.	The results of the experiment **are illustrated** by diagrams and tables.
Past Indefinite	The Russian inventor Kulibin **built** his three-wheeled vehicle with brakes, rollers and a gear-box in 1784.	The first vehicles with the internal combustion engine **were built** one hundred years ago.
Future Indefinite	Who **will organize** this conference?	The conference **will be organized** by the Press centre.
Present Continuous	Many roads in developing countries **are carrying** more and heavier transport than they can.	Where **are** these goods **being carried** to?
Past Continuous	The committee **was working** out the recommendations for two weeks.	The road system of the area **was being worked** out by many organizations.
Future Continuous	How much time **will** you **be working** at your report?	—

Present Perfect	He **has** recently **replaced** the engine in his old car.	The old engine **has been replaced** by a new and more powerful one.
Past Perfect	The driver **had not started** until the green light appeared.	The discussion **had not been started** before the chief engineer came.
Future Perfect	He hopes that he **will have finished** to repair his car by Saturday.	All the necessary preparations for the expedition **will have been finished** by the end of the month.

Составное именное сказуемое

Часть речи, которой выражается именная часть сказуемого	Примеры
1. существительное 2. существительное с предлогом 3. местоимение 4. прилагательное 5. герундий 6. инфинитив	1. His father **is an engineer.** 2. The room **has been in disorder.** 3. That book **is not mine.** 4. I think the weather **will be fine.** 5. His hobby **was collecting stamps.** 6. Her duty **was to look through** the morning mail.

Упражнение 1. *Подберите из правой колонки соответствующий перевод для предложений левой колонки.*

1. A new type of engine for sports cars has been produced.
2. The plant is producing a new type of engine for sports cars.
3. The plant has produced a new type of engine for sports cars.

1. Заводом выпускается новый тип двигателя для спортивных автомобилей.
2. Завод выпустил новый тип двигателя для спортивных автомобилей.
3. Завод выпускает новый тип двигателя для спортивных автомобилей.

4. A new type of engine for sports cars is being produced by plant.
5. The plant will produce a new type of engine for sports cars in 199...
6. A new type of engine for sports cars will be produced by the plant in 199...
7. The plant produced a new type of engine for sports cars in 198...
8. A new type of engine for sports cars was produced in 198... .
9. A new type of engine for sports cars will have been produced by the end of the year.
10. The plant will have produced a new type of engine for sports cars by the end of the year.
11. The new engine produced by the plant is more powerful.
12. The new engine is the latest model produced by the plant.

4. Выпущен новый тип двигателя для спортивных автомобилей.
5. Завод выпустил новый тип двигателя для спортивных автомобилей в 198... году.
6. Новый тип двигателя для спортивных автомобилей был выпущен в 198... году.
7. Новый тип двигателя для спортивных автомобилей будет выпущен заводом в 199... году.
8. Завод будет выпускать новый тип двигателя для спортивных автомобилей в 199... году.
9. Завод выпустит новый тип двигателя для спортивных автомобилей к концу года.
10. Новый тип двигателя для спортивных автомобилей будет выпущен к концу года.
11. Новый двигатель — это последняя модель, выпускаемая заводом.
12. Новый двигатель, выпускаемый заводом, более мощный.

VOCABULARY NOTES

Упражнение 2. *Переведите данные ниже словосочетания.*

1. **beyond** *prp* — за (пределами), вне
beyond his knowledge, beyond my efforts, beyond doubt
2. **reflect** *v* — отражать, изображать
to reflect the production achievements in a diagram, the reflection of light, the tendency reflected in the book

3. **quarter** *n* — четверть
a quarter of an hour, a quarter of produced materials, three quarters ($^3/_4$) of the population
4. **consume** *v* — потреблять, расходовать
to consume much energy, the amount of consumed goods, fuel consumption
5. **glass** *n* — стекло
a glass door, a house made of glass and concrete, coloured glass
6. **rubber** *n* — резина, каучук
to wear rubber boots, to produce rubber tubes, to use glass and rubber in motor-car industry
7. **finally** *adv* — в конце концов
Finally he agreed. Finally they appeared. Finally the problem was solved.
8. **employ** *v* — использовать; **to be employed** — служить, работать
to employ construction materials, the employment of rubber and glass in motor cars, the employed part of the population
9. **largely** *adv* — в значительной степени, широко
These materials are largely employed in construction. The difficulties are largely due to the transport indiscipline.
10. **responsible** *a* — ответственный (за что-либо)
a responsible person, to be responsible for the transportation of goods, upon one's responsibility
11. **pollution** *n* — загрязнение
air pollution, to pollute water, to stop the pollution of the atmosphere
12. **exact** *a* — точный
the exact definition, to give the exact information, to receive exactly the same results
13. **definition** *n* — определение
to give a definition, to define one's responsibility, for a definite period of time
14. **root** *n* — корень
the root of the tree, the square root of four, the root of the problem
15. **yet** *cj*, *adv* — однако, все же; еще
Yet we must get an answer. Yet he was right. They have not yet finished the translation. He has not returned yet.
16. **overall** *a* — общий, весь (в целом)
overall transport problem, the overall number of students present, overall road system

17. **involve** *v* — включать в себя; вовлекать; заключать, содержать, затрагивать.
the construction involves several improved parts, the problems involved in developing transport systems
18. **trend** *n* — тенденция, общее направление
the main trends of road transport development, to follow the general trend, the new trends in national liberation movement
19. **consequence** *n* — последствие
to forecast the consequences, the consequences of the war, consequent steps
20. **call for** *v* — требовать, предусматривать
to call for controlled technological progress, to call for the proper investigation
21. **eventually** *adv* — в конечном счете
Eventually it became necessary. The problem was eventually solved
22. **restrict** *v* — ограничивать
to restrict the number of passengers, to allow only a restricted traffic over the bridge, without restriction
23. **relative** *a* — относительный, сравнительный
a relative increase, the movement of the rocket relative to the earth, the theory of relativity
24. **efficiency** *n* — эффективность, производительность, коэффициент полезного действия
relative efficiency, to improve the efficiency of the engine, to use methods efficiently
25. **remember** *v* — помнить
to remember dates, to remember the definition well, to remember the traffic rules
26. **steep** *a* — крутой
a steep bank of the river, a steep mountain road, to rise steeply
27. **result** *v* — происходить в результате чего-либо; **to result in** — приводить к; **to result from** — проистекать, вытекать из
to result in transport indiscipline, to result in higher efficiency, the engine failure resulting from faulty design
28. **by-product** *n* — побочный продукт
the by-products of combustion, to make use of the by-products of the technological process, main by-products
29. **uniformity** *n* — единообразие
the uniformity of motor industry, uniform style, the uniformity of requirements

30. **maintenance** *n* — техническое обслуживание, эксплуатация
to make maintenance easier, to improve the maintenance, to maintain passenger cars
31. **altogether** *adv* — в общем, всего
Altogether more than 35 million people travel by bus every day. Altogether 100 students were present at the meeting.
32. **private** *a* — частный, личный
a private collection of pictures, a private car, to speak privately
33. **sound** *n*, *a* — звук; разумный, здравый; надежный, прочный
to hear a strange sound, a sound argument, a sound foundation, sound principles
34. **application** *n* — применение
practical application, the application of the theory, to apply new technology
35. **vast** *a* — обширный, громадный
a vast territory, vast oil fields, vast plans of research work

Упражнение 3. (Работа со словарем.) *Определите, к какой части речи относятся выделенные слова, найдите в словаре нужные значения этих слов и переведите предложения на русский язык.*

1. **ride**
1. He learnt to **ride** a horse when he was quite a small boy. 2. Yesterday we all went for a **ride** to the country. 3. He is learning to **ride** a motorcycle.
2. **output**
1. The yearly **output** of motors at the factory was increased. 2. The **output** of the motor is one of its main characteristics.
3. **forecast**
1. The experts are trying to give a **forecast** of the population for the year 2000. 2. Weather **forecasts** have become more reliable. 3. These low clouds on the horizon **forecast** storm.
4. **spare**
1. We shall stay here until you bring us fuel and **spares** for the cars. 2. Have you a **spare** copy of the newspaper? 3. Can you **spare** me a pencil for a few minutes?
5. **benefit**
1. We all work for the **benefit** of our country. 2. This book

was of much **benefit** to me. 3. The doctor said that the mountain air will **benefit** him.

Упражнение 4. *Прочитайте следующие интернациональные слова и дайте все русские эквиваленты этих слов, где это возможно.*

Образец: problem — проблема, вопрос, задача

transport, interest, specialist, million, energy, ecology, natural, comfort, limit, tourist, discipline, motor, industry, standard, to transform, proportional, result, socialist, public, analysis, social, role, control, harmony, balance, combination, fact, aspect, technological, aviation, system, progress, technical, resources, situation, economic, specialization, cooperation, individual, type, theory, function, practical, optimal, symptom, territory, colossal

ЗАДАНИЯ К ТЕКСТУ 13А

Задание I. *Просмотрите текст 13А и найдите ответы на следующие вопросы.*

1. What main problems of society does modern transport reflect? 2. What role does public transport play in people's relations? 3. What are the negative aspects of motorization? 4. What role does passenger transport play in a country's life? 5. What is the socialist state policy in the development of public and private transport?

Задание II. *Переведите текст 13А, обращая внимание на новые слова и способы выражения сказуемого.*

TEXT 13A

ROAD TRANSPORT: PROBLEMS AND PROSPECTS

1. Man, nature, transport... What is for which and which is for whom? Who is to gain or to lose?

Interest in these problems had extended beyond the specialist to the millions of men interested in the problems that have come with development. Everyone rides on some vehicle every day, of course, but besides this, in modern society transport reflects some of the main problems of society — the big city, energy problems (in developed countries about a quarter of the power output is consumed by transport), raw materials (a million cars require up to a million tons of steel,

50 thousand tons of glass and 100 thousand tons of rubber). Finally there are the problems of the distribution of manpower resources (about a fifth of the employed population in developed countries work directly or indirectly in transport), and ecology (transport is largely responsible for pollution).

2. So far transport research has given no exact definition of transport's place in modern society.

To get to the root of the transport problems one must begin by understanding what society needs transport for. This seemingly simple question has never been fully answered. Yet an answer we must have, if we are to solve the overall transport problem or even the problems involved in developing one or another system.

Now an analysis of the social role of road transport has made it possible to see the main trends of its development and to forecast the consequences.

The development of road transport has called for controlled technological progress, for subordinating the technical aspects of transport to the harmonious development of transport, for a balanced combination of private and public transport.

3. The fact, though at first glance insignificant, that in public transport people learn to be considerate to each other (in Soviet public transport, for instance, passengers do not smoke, the young should give up their seats to the elderly, etc.) is very important in the development of society — indeed, it helps to create a more friendly atmosphere.

The fast growing transport systems call for still higher costs, and it is essential that technological progress in transport should eventually coordinate the society's transport needs with its materials and manpower resources.

An unbalanced development of transport may lead to a situation when the economic benefits in agriculture and industry are largely swallowed by high transport costs. Therefore, unbalanced developments of both individual types of transport and public transport system may restrict their relative efficiency.

4. In modern society transport has grown from a weak child into a giant whose habits are hard to live with.

Everyone wants to reach a place comfortably and fast. Yet even transport engineers have user interest in transport. This is quite natural, but one must remember that the development of speed and comfort in transport can become a difficult problem — current steep rise in business, tourist and other journeys result in transport indiscipline.

5. We are hearing more and more about the evil by-products of the car — road accidents, smog and so on. Smog alone kills hundreds of people and is the cause of serious illnesses for many thousands of people in cities like Tokyo, New York, and London. How to solve these problems? More effective use of scientific and technological achievements of different countries could help here.

6. Road transport is receiving very close attention in the USSR. The USSR is fast becoming a leading car producer.

One feature of the Soviet motor industry is uniformity. Maintenance, repairs and spares supplies, etc., are made much easier by a highly standardized fleet of cars.

Road passenger transport is playing an extremely important part in the country's life now; it brings town facilities to the village, and improves the standard and quality of life. Every Soviet city with more than 60 thousand inhabitants has bus services. Altogether, more than 35 million people travel by bus every day.

Our country continues to increase the output of buses. This is the result of socialist policy of public transport first. But the number of private cars is also growing.

7. To work out a sound transport policy one must first work out the theory on the functioning of the modern transport systems, practical application of which can make transport really controllable. Thus man will be able to develop a transport system consciously, to make it optimal for the development of society. Finally, this should help avoid the transport indiscipline, symptoms of which are being witnessed in our world.

All this is of prime importance for the USSR whose vast territory and enormous scale of production require a colossal transport system.

Задание III. *Ответьте на вопросы к тексту 13А.*

1. What makes transport problems important to everybody? (1) 2. What are the most important social problems connected with the car? (1) 3. What has the development of road transport demanded? (2) 4. What may an unbalanced development of transport lead to? (3) 5. What does the increase of different journeys result in? (4) 6. What are the negative aspects of the motor transport? (5) 7. What factor makes the service of fleet of cars in the USSR easier? (6) 8. What is the role of road passenger transport in improving the living standards in the country? (6) 9. What kind of public motor transport is most popular in the Soviet Union?

(6) 10. What can make transport really controllable? (7) 11. What makes road transport problems most important for the USSR? (7)

Задание IV. *Выполните данные ниже задания к тексту 13А.*

1. What does the author mean writing: "...in modern society transport reflects some of the main problems of society"?
2. The author writes that the question what the society needs transport for has never been fully answered. Sum up the main aims transport is used for in modern society.
3. The author writes: "We are hearing more and more about the evil by-products of the car..."
What by-products are meant? Give your examples.
4. "Road passenger transport is playing an extremely important part in the country's life."
Give examples.

Упражнение 5. *Переведите следующие словосочетания.*

to avoid water pollution; to consume much fuel; to restrict fuel consumption; to restrict water supply; to use the by-products; to ride very carefully; to ride fast; an exact definition; to remember the definition by heart; beyond the river; beyond one's understanding; beyond his power; to reflect one's thoughts; to see one's reflection in the water; in a quarter of an hour; the increase of the output; the theory of relativity; to use plastics instead of glass; glass breaks easily; the agreement was finally reached; the method employed in final operation; the accident was largely due to the driver's carelessness; to become a highly educated person; rubber boots; spare room; necessary spares for tractors; not yet reliable; to be responsible for the organization of tests; air pollution problem; to be involved in the discussion; to climb a steep mountain; to furnish necessary data; the uniformity of requirements; the uniformity of traffic regulations in all the cities of the USSR; benefits of public transport; to be highly efficient

Упражнение 6. *Заполните пропуски подходящими по смыслу словами.*

steep	rubber	spare
output	pollution	priva e
quarter	maintenance	vast

beyond	involves	avoid
ride	forecast	by-product

1. As it was growing dark the tourists decided to spend the night in the village which was . . . the river. 2. During the . . . along the mountainous roads the tourists enjoyed the sights. 3. The Kremlin tower clock strikes every . . . of an hour. 4. The Soviet Union is the leading country in the . . . of buses. 5. The life of the car depends largely on the . . . which must be performed by skilled mechanics in due time. 6. Tyres are made of . . ., which is required in great quantities for car manufacture. 7. The Stirling engine which first appeared more than 150 years ago . . . external combustion as in the case of a steam engine. Fuel is burned completely outside the cylinders. 8. Few countries are as heavily polluted as Japan. According to the official estimation more than one third of the urban population has suffered from some form of . . . in the past five years. 9. According to the weather . . . it will be sunny and warm during the next two days. 10. The mountain was so . . . that only five men from the tourist group, the strongest and most experienced ones, continued the climbing. 11. An efficient transport system is of great importance for the USSR because of its . . . territory and enormous scale of production. 12. Repairs and supplies of . . . parts have become much easier because of a highly standardized fleet of cars. 13. Only a very experienced driver could . . . accident in such bad weather and road conditions. 14. The . . . of combustion consists of carbon dioxide, water and additives. 15. Though the number of . . . cars is growing in our country, the development of public transport continues to be of prime importance.

Упражнение 7. *Назовите слова, от которых образованы следующие производные слова, и переведите их.*

finally, largely, consumption, reflection, rubberized, responsibility, definition, involvement, uniformity, beneficial, restriction, relatively, efficiency, application

Упражнение 8. *Выберите соответствующий перевод следующих английских слов.*

1. application — применять; применение; примененный
2. consumption — потребление; потреблять; потребляющий
3. definition — определение; определять; определяющий
4. efficiency — эффективный; эффективность; давать эффект

5. eventually — конечный; в конечном итоге; конец
6. involvement — вовлекать; вовлечение; вовлекающий
7. pollution — загрязнять; загрязнение; загрязняющий
8. privately — частным образом; частный; частность
9. reflection — отражающий; отражать; отражение
10. relatively — относительно; относительность; отношение
11. responsibility — ответственность; ответственный; отвечать

Упражнение 9. *Заполните пропуски соответствующими однокорневыми словами.*

reflect, reflection, reflector, reflective

1. Mirrors . . . the rays of the sun. 2. He saw his . . . in the mirror. 3. Mirror served as a . . . of the rays of the sun. 4. Mirror reflects the rays of the sun owing to its . . . qualities.

consumes, consumption, consumer

1. The engine . . . little fuel. 2. The . . . of fuel was low. 3. Motor industry is a great . . . of fuel. 4. The work on the project . . . almost all his time.

final, finally

1. We don't yet know the . . . results. 2. . . . the consumption of fuel was decreased. 3. . . . they agreed to our terms.

employed, employer, employs

1. He was . . . as a clerk. 2. His . . . gave him a difficult task. 3. The firm . . . mathematicians of highest qualification.

responsible, responsibility

1. He was always a most . . . person. 2. He was one of the three people . . . for the operation. 3. Everything was done upon his . . . .

defined, definition

1. Nobody of those present knew how this physical phenomenon could be . . . . 2. The . . . given in the old textbook was wrong.

uniform, uniformity, uniformly

1. All pieces of metal were of . . . size. 2. Temperature conditions in both chambers were . . . . 3. The girls were . . .

dressed in white. 4. . . . of conditions in both chambers was kept up by special devices.

eventual, eventually

1. Such were the . . . conclusions of the committee. 2. . . . they all came to the same conclusion.

benefits, beneficial

1. They studied all possible . . . of the system. 2. The climate has a . . . effect on him. 3. Science and technological progress gives a lot of . . . to national economy.

restricted, restrictions, restrictive

1. The consumption of energy should be . . . . 2. The speed of motor cars on the country's roads was . . . . 3. There were introduced the . . . on fuel consumption. 4. Certain . . . measures were introduced.

relative, relatively, relativity, relation

1. It was a . . . easy task. 2. Einstein's theory established the . . . of time and space. 3. He tried to establish the . . . between these two groups of factors. 4. The speed of the comet . . . to the earth was great.

efficient, efficiently, efficiency

1. He is very . . . in his work. 2. The work was being carried out most . . . . 3. The . . . of the new method was proved beyond doubt.

Упражнение 10. *Переведите следующие словосочетания, обращая внимание на предлоги.*

in front of the office; across the road; behind the door; to build a road between the two cities; among friends; during the lecture; until seven o'clock; to work at the project; to go to the south for holiday; for five days; to send for the doctor; at the beginning of the term; in the afternoon; in a year; to complete the research by the end of the month; on the top of the mountain; to have free days on Saturday and Sunday; to fly over the town; above sea level; inside the building; outside the college; within two weeks; without anybody's help; after seven o'clock; before the accident; to have classes from nine till three o'clock; to walk from the car towards the house; to travel round the world; around the house; to control traffic by means of computing techniques; according to the new plan; in addition to the engine trouble; owing to

a severe storm; thanks to the new system of regulation; due to hard work; in spite of all the difficulties; in case of emergency; to go by bus as far as the railway station; to behave like a child

Упражнение 11. *Переведите следующие предложения, обращая внимание на время и залог глагола-сказуемого.*

1. Automation, telemechanics and computing techniques are being introduced in traffic control to restrict transport indiscipline. 2. In countries of high motorization air pollution has become problem number one. 3. Research laboratory has carried out the investigation into the circumstances of the accidents; aspects examined included the effect of weather, darkness, lighting of streets, speed limits, and the consumption of alcohol. 4. To increase the power output the two smaller engines were equipped with larger inlet valves. This modification was made to enable the engines to cope with the extra weight and size of the models. 5. "Rubber is an elastic substance made from the juice of certain trees and used for making balls, tyres, etc." This definition is given by an English Reader's Dictionary. 6. The communique issued at the end of the talks between the two countries called for the increase in trade cooperation. 7. Wonderful prospects will be opened up to mankind when we learn to convert solar energy into electricity with high efficiency. 8. Radio has found universal recognition and application in a comparatively short period of time. 9. The ride to the city has taken 1 1/2 hours altogether. 10. The consequences of the pollution of the atmosphere by different by-products are being carefully studied. 11. The trend toward restricting the speed of motor cars is becoming more and more evident in many countries. 12. One should remember that the efficiency of transport system depends on many factors.

Упражнение 12. *а) Прочтите текст и назовите в каждом предложении сказуемое.*

PEOPLE ON THE MOVE

I. The motor car is mainly a short-distance means of transport.

II. It has been found in the US that 60 per cent of car trips are for distances of less than 9 km.

III. The motor car is convenient and efficient means of transport for the individual, if there are adequate roads and

parking space, but it is a very inefficient means from the standpoint of the use of expensive urban space.

IV. No definite solution to urban traffic problems has so far been found.

V. Large cities that were built up in the 19th century and that have metro system have begun to improve their tram systems or to build new ones.

VI. The idea, of course, is to attract some of the car passengers back to rail transport.

б) Просмотрите текст еще раз и укажите номера предложений, которые, на ваш взгляд, передают наиболее важную информацию.

Упражнение 13. *Переведите текст письменно.*

TRAMS

The tram, which disappeared in many cities before and after the war, may come back.

The advantages of the tram are that it is considerably cheaper than the railway, silent in operation, free from exhaust gases and able to provide a more frequent service with more stops.

Much interest is being shown in both Europe and America, where existing systems are being extended and new up-to-date vehicles are coming into service.

Studies are being carried out in many countries. Considerable amount of work has been done in the development of electric light railway systems in various parts of the world.

TEXT 13B

Задание I. *Прочтите текст, стараясь понять основное содержание. (Заметьте время начала и окончания чтения. Этот текст нужно прочесть за 3,5 минуты, из расчета 110 слов в минуту.)*

SPACE AGE TRAMS

Boeing is building trams which are designed for service in Boston and San Francisco, where the tram has never really gone out of style. Boston will get 175 and San Francisco is taking 100 over the next few years. These modern trams may signal a return all over the country for a vehicle which has

almost disappeared. New tram systems are under consideration in many other cities, Portland, Oregon, Kansas City, San Diego. New Orleans, which still has a few trams, would like to expand its public transit service.

Why are we suddenly building 300,000 trams when most people thought they had completely disappeared?

City traffic jams, the fuel crisis and pollution have lead to the development of mass transit as a solution to the problem caused by cars and buses in many cities. Subways were the first choice, but their high cost (50 million per mile of system) stops most cities from constructing them. The cost of monorails and other unusual transportation systems is even higher. Buses don't have the passenger capacity of subways and trolleys, nor do they get power from a central source; centralized power is cheaper and more efficient economically to generate. So a tram running on its own lane separate from car traffic has come back as one way of moving large number of passengers, keeping out cities from being choked with gas. Because of these factors the Department of Transportation has put millions of dollars into perfecting Light Rail Vehicle which, it now believes, is the most advanced tram in the world.

The 73-feet-long tram is designed for passenger comfort, and has a smooth quiet ride. At 40 mph the noise level is 80 db (decibels) at 50 feet. The noise level inside the tram is 65 db which compares favourable with the noise levels inside many of the more expensive cars. It accelerates rapidly and smoothly because the tram operator controls the amount of power that's fed to the motors.

Задание II. *Выберите утверждения, соответствующие содержанию текста.*

1. The number of trams in American cities:
   1) is small but increasing; 2) is small and decreasing with every year; 3) is small and will never increase.
2. The advantages of a subway system is:
   1) low cost; 2) high passenger capacity; 3) ease of construction.
3. Trams are planned to run:
   1) along specially designed streets; 2) along a separate track in the street; 3) along the same lanes with other city transport.
4. The disadvantage of a monorail is:
   1) high cost; 2) small passenger capacity; 3) high noise level.

5. The noise level inside the tram is:
1) less than in an expensive passenger car; 2) the same as in an expensive passenger car; 3) higher than in an expensive passenger car.

Задание III. *Прочтите текст еще раз и сравните три вида городского транспорта: автобус, трамвай, метро. В своем сообщении используйте следующие выражения.*

causes (no) pollution; causes (no) jams; more noisy; more expensive to construct; less expensive to construct; carries more passengers; carries less passengers

TEXT 13C

Задание I. *Прочтите текст, отыскивая в нем ответы на поставленные вопросы.*

NEW ENERGY FROM OLD SOURCES

How long will the resources of fossil fuel last?

1. The resources of fossil (ископаемое) fuel which made the industrial revolution possible and have added to the comfort and convenience of modern life were formed over a period of 600-million years. We will consume them in a few hundred years at current rates. Certain steps should be taken to find solutions of energy problems.

Have the efforts to develop new energy resources been adequate?

2. The current energy problem is the result of many complex and interrelated factors, including a world-wide demand for energy; inadequate efforts during the recent past to develop new energy resources; delays in the construction of nuclear power plants (атомные электростанции), automobile changes that increase gasoline consumption.

Demand must, of necessity, be moderated, and intensive efforts must be made to expand the overall energy supply.

What is the Sun's heat used for in many places?

3. Energy is available to use in practically unlimited quantities from other sources. Large amounts of energy can be received from ocean tides (приливы) and currents, from huge underground steam deposits, from the power of wind and from the heat of the Sun. Here comes the Sun.

The idea of heating houses with the warmth of the Sun has become popular in the last few years. Since the *US News and World Report* first told about solar heated homes near Washington some years ago, many similar projects have appeared around the country. In many places schools are using solar units to provide classroom heat.

Where is the solar cell (батарея) **mostly used now?**

4. Most solar-heating systems coming on the market use a black surface to absorb the Sun's heat. Engineers cover the surface with glass which lets in the rays, but holds heat. The heat is transferred to water that runs through small pipes. The hot water is then circulated through the house.

It is estimated that 40 million new buildings will be heated by solar energy by the year 2000.

The solar cell is another way to produce power from the Sun. It converts sunlight directly into electricity. These cells are used with great success in the space program, but remain far too expensive for wide-spread application.

In the meantime, solar homes are being built and lived in from California to Connecticut. The next step is mass production of homes, office buildings and schools — all heated by the Sun.

For what purpose can windmills be used?

5. Putting the wind to work researchers are showing great interest in the age-old windmill (мельница). Several big companies are now studying windmills. These companies are to analyse windmills ranging from 100 to 2,000 kilowatts. The smallest would provide sufficient electricity to power several homes, the largest could provide electricity to a small village.

Задание II. *Прочтите текст еще раз, выпишите все источники энергии, упомянутые в нем, и сделайте краткое сообщение о возможности применения каждого из них, используя следующие слова и выражения.*

to face energy crisis; to try to solve energy problems; to use different sources of energy; to use solar energy for heating homes; to use solar energy to produce electricity; to be used for space programs; to use windmills to provide electricity; to use electricity from windmills to power homes and small villages

ЗАДАНИЕ К ТЕКСТАМ 13-ГО УРОКА

Перечислите сферы деятельности, о которых говорится в текстах данного урока, и расскажите, какую информацию вы могли бы адресовать:

1. специалисту, исследующему проблемы городского транспорта;
2. специалисту, занимающемуся проблемами экологии;
3. исследователю в области энергетики.

КОНТРОЛЬНЫЙ СЛОВАРЬ

1. altogether (*adv*); 2. application (*n*); 3. benefit (*n, v*); 4. beyond (*prp*); 5. by-product (*n*); 6. call for (*v*); 7. consequence (*n*); 8. consume (*v*); 9. definition (*n*); 10. efficiency (*n*); 11. employ (*v*); 12. eventually (*adv*); 13. exact (*a*); 14. finally (*adv*); 15. forecast (*v, n*); 16. glass (*n*); 17. involve (*v*); 18. largely (*adv*); 19. maintenance (*n*); 20. output (*n*); 21. overall (*a*); 22. pollution (*n*); 23. private (*a*); 24. quarter (*n*); 25. reflect (*v*); 26. relative (*a*); 27. remember (*v*); 28. responsible (*a*); 29. restrict (*v*); 30. result (*v*); 31. ride (*v, n*); 32. root (*n*); 33. rubber (*n*); 34. sound (*n, v*); 35. spare (*n, a, v*); 36. steep (*a*); 37. trend (*n*); 38. uniformity (*n*); 39. vast (*a*); 40. yet (*cj, adv*)

LESSON FOURTEEN

Грамматика: Подлежащее.
Основной текст 14А: City and City Transport.

Способы выражения подлежащего

Существительное	**Rubber** is important for automobile manufacture.
Личное местоимение	**He** is responsible for maintenance and repair of the engines.
Указательное местоимение	**This** is the trend to be taken into consideration. **These** are the factors that largely determine the situation. The heat is transferred to water. **This** is then circulated through the house to be heated. You can use cells for heating homes, but **these** are too expensive.

Инфинитив	**To become** an aviation engineer was his school-days dream.
Герундий	**Exploring** the country's natural resources is the work of geologists.
Неопределенно-личное местоимение	**One** should always remember these dates.
Безличное "it"	**It** is necessary to provide regular maintenance of the car. **It** is said that the experiments are going on successfully.
Субъектный инфинитивный оборот	**The trend of population increase** is expected **to continue.**

Упражнение 1. *Переведите следующие предложения, обращая внимание на способы выражения подлежащего.*

1. One should be very careful when driving along the roads with heavy traffic during rush hours. 2. One must strictly observe the rules of the city traffic. 3. It has to be noted that almost all chemical elements known to science can be found in the Urals. 4. It is obvious that in city planning transport has become problem number one. 5. To launch rockets a new type of fuel was needed. 6. Landing a spacecraft on a planet has become a reality in the 20th century. 7. Speeding causes accidents, so most countries have speed limits, the Soviet Union among them. 8. We are said to live in the age of steel and concrete. 9. The ancient Greeks are believed to have founded the art of architecture. 10. It is known that the laser has become a multipurpose tool. It has caused a real revolution in technology. 11. The capacity of the steam engine is lower than that of the turbine. This should be taken into consideration by those working out the most efficient engine for future cars. 12. Coming to a street crossing, one must wait for a green light to cross the street. 13. When the expedition saw at last a small meteorological station hidden in the mountains, they were happy as this was their place of destination. 14. New forms of city transport may involve buses on specially constructed reserved tracks. These do not involve significant amount of new technology.

Упражнение 2. *Переведите данные ниже словосочетания.*

1. **propose** *v* — предлагать
   to propose a new type of the engine, the proposed application
2. **decade** *n* — десятилетие
   transport systems proposed in the past decade, during last two decades, by the end of the next decade
3. **brief** *a* — краткий
   a brief description of the system, to explain briefly, a brief letter
4. **layout** *n* — план, схема расположения
   the layout of the airport, to call for the improved layout, to change the layout of the old city
5. **growth** *n* — рост
   the growth of urban population, the growth of the number of private cars. These plants grow only in the south of our country
6. **rule** *n* — правило; **as a rule** — как правило
   to break the rules of traffic, to know grammar rules well, to go by metro as a rule
7. **suburb** *n* — пригород
   the suburb of a city, to live in the suburbs, to connect the centre with the suburb
8. **mode** *n* — метод, способ; форма, вид
   the modern mode of transportation, to employ the more efficient mode of construction, to propose the most convenient mode of transport
9. **labour** *n* — труд, работа
   "Labour and Capital", a skilled labourer's wages, hard labour of unskilled workers
10. **annual** *a* — годовой
    the annual output of goods, the annual consumption of food, the conference to be held annually
11. **lack** *n, v* — нехватка, недостаток; отсутствие чего-л.; испытывать недостаток в чем-л., нуждаться в чем-л.
    lack of fuel, lack of water supply, to lack new equipment
12. **cheap** *a* — дешевый
    the lack of cheap transport at that time, cheap maintenance and repair, the cheapest means of transportation
13. **set (set, set)** *v* — устанавливать
    the traffic rules set by the city council, to set a new record
14. **broaden** *v* — расширять(ся)

to broaden cooperation between the countries, to broaden a canal, to swim across a broad river

15. **ownership** *n* — собственность, владение
land ownership, to own many automobile plants, the owner of the car
16. **journey** *n* — путешествие
to make a long journey, a three days' journey, the journey across Europe
17. **congestion** *n* — перегруженность, затор (уличного движения), «пробка»
the increase of congestion in modern cities, to avoid congestion, the road congestion during peak hours
18. **acceptable** *a* — приемлемый
to make the conditions acceptable, to accept an invitation, to develop cheaper and aesthetically more acceptable transport systems
19. **reserved** *a* — запасной, резервный, зарезервированный
specially constructed reserved tracks, the money reserved for the development of improved transport system
20. **create** *v* — создавать, творить
to create powerful engines, to create a friendly atmosphere during the talks, creation of new materials, creative efforts, the creator of the theory
21. **pedestrian** *n* — пешеход
for the convenience of pedestrians, to avoid creating a barrier to pedestrian movement, to road sign for pedestrians to cross
22. **below** *prp* — под
to move below the ground, below sea level, the temperature below zero
23. **propel** *v* — приводить в движение
to propel a vehicle, vehicles propelled by electric motors, a self-propelled vehicle
24. **reduce** *v* — уменьшать, понижать
to reduce air pollution, to reduce the overall weight of the unit, the reduction of fuel consumption
25. **noise** *n* — шум
high level of noise, the noise of the moving transport, to hear no noise
26. **tyre** *n* — шина
rubber tyres, wheels with pneumatic tyres, to remove an old tyre
27. **cushion** *n* — подушка
to move on air cushion, the most effective high-speed air-cushioned transport

28. **apart from** *adv* — кроме
apart from the construction problems, apart from the vehicular transport, apart from internal combustion engines
29. **disadvantage** *n* — недостаток
disadvantages of moving pavements, to discuss the advantages and disadvantages of the monorails
30. **human** *a* — человеческий
to struggle for human rights, human problems, the progress of humanity
31. **face** *v* — стоять перед (лицом); **to be faced with** — столкнуться с (чем-л.)
the problems facing humanity, the tasks facing us today, to be faced with difficulties
32. **pleasant** *a* — приятный
to make life more pleasant, a pleasant smile, to have a pleasant voice

Упражнение 3. (Работа со словарем.) *Определите, к какой части речи относятся выделенные слова, найдите в словаре нужные значения этих слов и переведите предложения.*

1. **travel**
1. Light **travels** at the speed of 300,000 km per second. 2. His **travels** in Central Africa were followed with great interest in many parts of the world. 3. The **travel** bureau organized trips to various countries of Europe.
2. **track**
1. Trams move on specially laid **tracks.** 2. Historians **track** the influence of ancient civilizations on modern culture. 3. The police was trying **to track** the criminal.
3. **but**
1. They returned tired **but** happy. 2. The office is open all days **but** Sundays. 3. I spoke to him **but** once.
4. **regard**
1. The law **regards** it as a crime. 2. Their **regard** for him was very high. 3. He **regards** nobody's opinion.
5. **limit**
1. There are no **limits** to human knowledge. 2. You must **limit** your expenses. 3. These **limits** cannot be overcome.
6. **rush**
1. The congestion in the centre occurs only during **rush** hours. 2. Days **rush** by and soon our holiday will be over.
7. **push**
1. He gave the door a hard **push** and entered the house.

2. "Don't **push** me, or I'll fall down," said the boy. 3. He **pushed** his way through the crowd.

8. **attempt**

1. He made some **attempts** but only the last one brought him success. 2. He **attempts** to solve a difficult and dangerous task. 3. Their **attempts** to reach the island by boat were unsuccessful.

Упражнение 4. *Прочтите следующие интернациональные слова и дайте все русские эквиваленты этих слов, где это возможно.*

factor, centre, radius, to coordinate, communication, computer, organization, electronics, information, automatic, monorail, electric, magnet, circulation

ЗАДАНИЯ К ТЕКСТУ 14А

Задание I. *Просмотрите текст 14А и найдите ответы на следующие вопросы.*

1. What factors influenced the development of a modern city transport systems? 2. What requirements should new transport systems meet? 3. What new transport systems are proposed and developed?

Задание II. *Переведите текст 14А, обращая внимание на новые слова и способы выражения подлежащего.*

TEXT 14A

CITY AND CITY TRANSPORT

1. The problem of urban transportation has become very important.

A large number of new transport systems is known to have been proposed in the past decade or so.

But before describing the new systems and their applications it is necessary to look back briefly to see how cities got their present layout, and what are the factors that have caused the present problems of urban transport.

2. The first factor is the growth of population. The cities developed as a rule because of the need for people to gather for mutual protection, for commerce and for education. In England since 1801 the rural population remained almost constant, while the urban population has grown by more

than twenty times. The population growth of the last two decades has greatly enlarged the movement of passengers in big cities.

The second factor is the changing distribution of population within cities. There has been a steady drift [1] of population from the high density centre to the lower density suburbs. The increase and improvements of transport are believed to be the main reasons for this drift.

3. One should remember that walking was the major transport mode both in and out of cities until the end of the eighteenth century. The cost of a horse in terms of [2] a labourer's wages was about three times that of a mass produced motor car today. (The fare for a coach from Paddington to the City of London was about two shillings or 1% of a labourer's annual income.)

This lack of cheap transport led to the development of very high density building within the city centre. The situation was changed by the introduction of horse buses and urban railways in the middle of the nineteenth century, followed by horse trams and electric trams towards the end of that century. These allowed a city to grow beyond the radius set by a walking distance.

The introduction of the motor car and motor bus in the 1920s allowed the residential areas along the railways lines to broaden and the increase of car ownership since about 1950 has led to both residential and industrial development in open areas around cities. This growth leads to longer journeys to work, school, or shopping, and more travel per day, even without population growth.

4. The third factor is the growth of private cars. To own a car has become not only pleasant, but in many cases simply necessary. However, car ownership leads to road congestion. The congestion is partly the result of the peaks in demand for travel to and from work and school, and at present it is usual for 25% of the whole day's travel to occur in a two-hour period.

5. Of course, transport is only a service industry, and must be coordinated with developments in communications and with planning. The first thing to do is to develop transport systems which are cheaper to install, cheaper to operate and aesthetically more acceptable than some of the existing ones.

The examples of such are the use of buses in a demand-activated mode (dial-a-bus); [3] the use of electronics for the presentation of information to car drivers and the automatic

control of cars on motorways; and the design of improved vehicles, such as monorail or automatically controlled trams.

Any automatic vehicle that operates at much above walking speed will need a reserved track, and to avoid creating a barrier to the movements of pedestrians and vehicles the track must be above or below ground. Some of these systems are known to be under development in a number of countries.

The vehicles would be propelled by electric motors to reduce pollution and noise, and would be supported by rubber tyres, air cushion or magnets.

6. At present much thought is given to the development of minitrams for application as distribution systems in central city areas, for links between car parks and high activity areas, and for circulation systems at airports.

Apart from these systems other new forms of urban transport may involve low speed moving pavements, never-stop railways and buses on specially constructed reserved tracks. These do not involve significant quantities of new technology.

Moving pavements are already in use at some airports, transit stations and shopping centres. Their disadvantages is that human limitations at getting on and off restrict their speed to 2 1/2-3 1/2 km/h, as compared to a normal walking speed to 5 km/h.

Improved transport will not solve, of course, all the problems facing cities today. But it will no doubt lead to changes which will make city life more pleasant.

NOTES TO THE TEXT

1. **drift** — *зд.* перемещение
2. **in terms of** — с точки зрения
3. **a demand-activated mode (dial-a-bus)** — по вызову (со стоянки)

Задание III. *Ответьте на вопросы к тексту 14А.*

1. What transport problem has become very important? (1) 2. What has been proposed in the past decade? (1) 3. What are the factors that have led to the present problems of urban transport? (2, 3, 4) 4. What was the major transport mode until the end of the 18th century? (3) 5. What led to the development of very high density building within the city centre? (3) 6. What kind of changes were made in the middle of the 19th century? (3) 7. What does car ownership lead to? (4) 8. What must transport be coordinated with? (5) 9. By what kind of motor should the vehicle be propelled to avoid pollu-

tion? (5) 10. Why is it necessary to support the vehicle by rubber tyres? (5) 11. Where can minitrams find application? (6) 12. What are the other new forms of urban transport? (6) 13. What will make city life more pleasant? (6)

Задание IV. *а) Выполните данные ниже задания к тексту 14А.*

1. "The cities developed as a rule because of the need for people to gather for mutual protection, for commerce and for education."

Do you agree with the author? Which factor was the most important in your opinion? Give your reasons.

2. "There has been a steady drift of population from the high density centre to the lower density suburbs."

What is meant here?

3. "The increase and improvement of transport are believed to be the main reasons for this drift."

Do you agree with the author? Can you give your reasons for the drift of the population from the centre?

4. "This lack of cheap transport led to the development of very high density building within the city centre."

Can you explain why?

5. "Car ownership leads to the road congestion."

Do you agree with the statement? Do you know any other reasons that lead to traffic congestion?

б) Проанализируйте данные ниже основные требования, предъявляемые к новым формам городского транспорта, и объясните, почему они важны.

1) small size; 2) non-pollution; 3) low noise level.

Задание V. *Расскажите о будущих транспортных системах и усовершенствованиях в этой области, закончив следующие предложения.*

1. The use of buses in a demand-activated mode is made possible by . . . . 2. Electronics will be used for the presentation of information to . . . . 3. Automatic control will be used for . . . . 4. Trams will be controlled . . . . 5. To reduce noise and pollution small automatic vehicle systems will be propelled by . . . . 6. The vehicles will be supported by . . . . 7. Minitrams will be used in . . . . 8. Other new forms of urban transport will involve . . . .

Упражнение 5. *Переведите следующие словосочетания.*

to propose the measures for noise limitation; a pleasant journey; the disadvantages of the proposed layout; acceptable

date; a cheap mode of transport; to create new modes of transport; apart from other disadvantages; land ownership; car ownership; to broaden streets; annual conference; a brief instruction; below sea-level; within two decades; to face the lack of labour force; the growth of congestion in the city centre; reserved parking; to limit the number of pedestrians; to reduce traffic congestion; railways tracks; to reduce the number of car accidents; air cushion; the attempt to repair the tyre; rush hour congestion; to face an unpleasant prospect; to reduce tyre wear; to live in the suburbs; to wish him a happy journey; to create a new model of aircraft; the population growth; a city layout; in the past two decades; to avoid noise and pollution; a more efficient mode of calculations; the introduction of jet-propelled aircraft; to broaden one's interests; apart from the reduction of noise; the annual output of the plant; air-cushioned transport; problems facing modern youth; to lack knowledge; to use cheap fuel

Упражнение 6. *Заполните пропуски подходящими по смыслу словами.*

produced	suburb	broaden
human	tyres	congestion
brief	annual	acceptable
disadvantages	noise	below
layout	lack	pedestrian
apart	cheap	created
	set	

1. We are very busy and often feel a . . . of time. 2. He reads a lot and in this way tries to . . . his outlook. 3. A . . . should cross the street at the green light. 4. A lot of goods of high quality should be . . . in the near future. 5. . . . progress is closely connected with engineering progress. 6. New pneumatic . . . are being tested. 7. The town is situated . . . sea-level. 8. The . . . of the traffic was very loud along the highway. 9. The writer . . . many wonderful characters in his works. 10. Their plan of reconstruction is . . . as it can be carried out in a short period of time. 11. He could not answer all our questions in his . . . letter. 12. They were discussing the . . . of roads worked out in the designing office. 13. The road was being widened to avoid . . . . 14. It takes him much time to get to the office because he lives in the . . . . 15. . . . from studying the distribution of polluted zones the department is studying daily and seasonal variations. 16. At the Institute students can have dinner that is rather . . . . 17. She

spends her . . . vacations in the suburbs of Moscow. 18. The machine has serious . . . , so it cannot be accepted for mass production. 19. The new traffic rules . . . by the city council proved to be more efficient and resulted in the reduced number of road accidents.

Упражнение 7. *Назовите слова, от которых образованы следующие производные слова, и переведите их.*

briefly, labourer, annually, cheaply, congestion, creative, reduction, humanity, pleasantly, propeller, acceptable, traveller, ruler

Упражнение 8. *Выберите соответствующий перевод следующих английских слов.*

1. briefly — краткий; кратко; краткость
2. annually — ежегодный; ежегодно; ежегодник
3. cheaply — дешево; дешевый; дешевизна
4. congestion — перегруженность; перегруженный; перегружать
5. acceptable — принимать; принимающий; приемлемый
6. reduction — сокращать; сокращение; сокращенный
7. creative — творчество; творческий; творить

Упражнение 9. *Заполните пропуски соответствующими однокорневыми словами.*

annual, annually

1. The Academy of Sciences holds . . . meetings of its members. 2. He is the author of the . . . review published in the December issue of the magazine. 3. The date is celebrated ... .

lack, lacks, lacking

1. In the dry climate conditions the plants often die for . . . of water. 2. Counting the pages he found that five were . . . . 3. He is quite an efficient engineer but still he . . . the qualities necessary for this kind of work.

congestion, congested

1. Within a large city centre streets are often . . . at peak hours. 2. . . . in the streets is one of the factors of air pollution. 3. . . . traffic is often the cause of accidents.

accept, acceptable, acceptability

1. He said he would . . . the invitation. 2. The . . . date for the conference was found. 3. The . . . of the proposition was the main topic of the discussion.

created, creation, creative

1. The basis of our heavy industry was . . . during the first five-years plans. 2. The book was undoubtedly the . . . of genius. 3. The . . . power of people is the basis of human progress.

reduce, reduction, reduced

1. The . . . level of water made crossing the river easier. 2. The lack of raw materials caused the . . . of the output. 3. In the series of tests we shall . . . the temperature and see what changes in the material will appear.

face, faced, facing

1. Craters are numerous on the . . . of the Moon. 2. He described the difficulties that . . . us. 3. He usually worked in the room . . . the garden.

track, tracks, tracked

1. In his book the author will . . . the history of the country from ancient times. 2. Transport running on . . . has been widely used in the cities of the 19th century. 3. The group was . . . as far as the village in the mountains and after that all the . . . of it disappeared.

rules, ruled, ruled out

1. He found grammar . . . very difficult to remember. 2. The possibility of an accident was completely . . . . 3. William the Conqueror . . . Britain from 1066 to 1087.

attempted, attempts, attempt

1. They were the first to . . . to climb the mountain. 2. No . . . to solve the problem have so far been successful. 3. That year they . . . to reach the North Pole.

limited, limit, limiting

1. The available funds of money were . . . . 2. Nothing can travel faster than light, this . . . cannot be overcome. 3. These were the factors . . . the progress of our investigations.

Упражнение 10. *Найдите союзы и союзные слова в следующих предложениях и переведите предложения.*

1. They will go there either by car or by bus. 2. The tourists were both tired and thirsty as it was very hot and the road was rather bad. 3. Excavators as well as lorries were brought to the construction site. 4. Neither wind nor rain could stop the work. 5. The steam engine could not be set in motion for the steam pipe was damaged. 6. They had to take a taxi so that they could arrive at the airport in time. 7. This engineer has worked at the plant since 1980. 8. In some cases friction should be taken into consideration, however small it may be, and however insignificant its results. 9. The transformer cannot be called a machine as it has no moving parts. 10. Unless you oil the moving parts regularly, they will soon wear out. 11. As long as the system of traffic control remains unchanged the safety problem will not be solved. 12. As soon as everything was ready the signal was given to start the testing. 13. Strike the iron while it is hot *(a proverb)*. 14. Although the bridge is a small structure its economic importance sometimes is very great.

Упражнение 11. *Укажите, в каких предложениях выделенные слова являются подлежащим. Переведите предложения.*

1. **These** disadvantages of the layout should be eliminated. 2. **These** are the disadvantages which should be eliminated. 3. **This** is the model of the first automobile. **It** was propelled by steam. 4. At least **one** attempt should be made. 5. While driving through the city **one** shouldn't break the speed limit. 6. **Creating** a sound transport theory requires coordination of effort of many people. 7. **Creating** an air-cushion vehicle the designers tried to make the vehicle suitable for various conditions. 8. **To explore** such a vast territory in a period so short was in itself a very difficult task. 9. **To explore** such a vast territory in a period so short we shall have to use helicopters. 10. **What** are the advantages of this mode of transport? 11. **What** mode of transport is the most popular here?

Упражнение 12. *Переведите следующие предложения, обращая внимание на способы выражения подлежащего.*

1. In the past decade a great number of new highways have been built in most major cities. 2. The problem of urban congestion is known to have become very important in recent years. 3. To eliminate traffic congestion it is necessary to

increase the use of present street capacity, build more streets and free-ways, and stimulate mass transit systems. 4. The tram, discarded by many cities before and after the war is believed to come back. The advantages of the tram are that it is considerably cheaper than other transport modes, less noisy, free from exhaust gases, and able to provide a more frequent service with more stops. It would therefore be more acceptable. 5. Aerotrains are rail cars which ride on a cushion of air. This will make possible an almost frictionless ride and allow high speeds over short distance. 6. We admire the practical achievements of the early technologists and engineers. Their huge pyramids and other creations still fill us with admiration. During the Renaissance engineering and technology continued to develop. Leonardo da Vinci, who is known to most of us today as a great artist, was actually and even greater architect, engineer, and inventor. Leonardo seemed to have painted with the same ease with which he constructed fortresses, canals, bridges and harbors. 7. The Moscow Metro is considered the fastest and most convenient mode of transport. During the rush hours trains leave the stations at intervals of 80 seconds. The top speed is 90 km per second. Automatic route indicators are installed at each station.

Упражнение 13. *а) Прочтите текст и назовите в каждом предложении подлежащее или группу подлежащего.*

I. Men created the city in response to their need in a primitive agricultural society for an information and control centre.

II. The further invention such as printing increased its importance as a centre of enlightenment.

III. Although comparing a city to a spaceship may seem absurd both are inventions produced by men.

IV. The spaceship is just a combination of systems and subsystems.

V. The city, too, consists of systems and subsystems.

VI. It has systems for assuring people's health, mobility and cleanliness, systems for fighting fires, enforcing laws, and education, and entertaining its population.

VII. All of them interact with each other.

VIII. A city, of course, is a much more complicated combination of systems and subsystems than a spaceship.

IX. The city must accommodate all kinds of people, grant privacy to families and help them realize their hopes.

X. Just as a spaceship, a city is a product of man's thinking that can be overhauled, rebuilt and improved.

б) Просмотрите текст еще раз и укажите номера предложений, которые, на ваш взгляд, передают наиболее важную информацию.

Упражнение 14. *Переведите текст письменно.*

COLOURED ROADS

Imagine a city with its main transport arteries coloured lilac, yellow, white, blue, green. Fantasy? Not at all.

The State Research Institute of Glass in Moscow has developed a new asphalt filler. The addition of an appropriate dye can make it any colour of the rainbow.

This filler has been created by Soviet scientists. The new material is light, wear-resistant and porous which eases the strain on car and truck tires in braking. Furthermore, it is an excellent reflector of light, especially at night, when it has a phosphorescent effect.

The asphalt filler will be used, above all, in marking dividing strips, gradients and street crossings.

TEXT 14B

Задание I. *Прочтите текст, стараясь понять основное содержание. (Заметьте время начала и окончания чтения. Этот текст нужно прочесть за 4 минуты, из расчета 110 слов в минуту.)*

LOS ANGELES

Los Angeles is California's biggest city both in population and territory which is 457,5 square miles. The city's population is third largest in the USA being 3 million people within the city limits and 7 million with suburbs.

The place was first visited in 1769 by a Spanish expedition. In 1781 Governor Filippe de Nave with 11 families founded the village of Our Lady the Queen of the Angeles. In the early nineteenth century the city served as a capital of the Mexican province. It was the last place to surrender (сдаваться) to the United States in 1847.

Growth was slow at first. By the 1800s the mission friars (монахи) were complaining that the people of L. A. were paying more attention to gambling (играть в карты) and playing the guitar than to tilling (обрабатывать) their land and edu-

cating their children possibly because of the good climate which was and is so favourable.

More recently the city's growth has been due to the development of the fruit industry and the film production. More than 2/3d of all the films produced in the USA come from Hollywood. This made L.A. the entertainment (развлечение) centre of the USA. In addition the city thrives (процветать) on tourism, world trade and highly developed industry of which some of the most important elements are the oil, electronics, aircraft and space industries.

Los Angeles is hardly a city in the old sense of the word with relatively distinct limits. It consists of different communities (населенный пункт) with individual character. For example, Hollywood, film-making capital of the nation, lies entirely within the Los Angeles city limits. You can go 25 miles from the centre and still remain within the city; on the other hand, you can be within 5 miles of the city centre and be in an entirely separate town. This situation arouse at least in part from Los Angeles water supply project in the early part of the century. Towns that wanted to take advantage of water piped to Los Angeles from the Owens River had to become part of the city. The communities that refused to join the project remained separate from L.A. but in some cases found themselves entirely surrounded by it. Officially the name of L.A. refers to the city and the county (округ).

L.A. gained popularity as the city which is in love with automobiles. It has more passenger cars than any other American city. About 1/3 of the central area is devoted to parking lots (стоянки) one of which will take nothing but Rolls Royces. 21 million passenger trips totalling 112 million vehicle miles are made in private cars every days.

Задание II. *Выберите утверждения, соответствующие содержанию текста.*

1. The first visitors to the place in 1769 were:
   1) Britains; 2) Spaniards; 3) Germans.
2. L.A. became the entertainment centre of the USA due to:
   1) picture exhibitions; 2) car races; 3) the motion pictures.
3. L.A. consists of different communities due to:
   1) the geographical conditions; 2) the L.A. water supply project; 3) the location of the Owens River.
4. L.A. gained popularity as the city which is in love with:
   1) automobiles; 2) art; 3) sports.

Задание III. *Прочтите текст еще раз, обращая внимание на даты и цифры и связанные с ними факты.*

Задание IV. *Расскажите о Лос-Анджелесе, используя следующие выражения.*

1. The population of Los Angeles is . . .; 2. The territory of L.A. is . . .; 3. It was founded in . . . by . . .; 4. The most important branches of industry are . . .; 5. It is famous for . . .; 6. It consists of . . .; 7. L.A. gained popularity as the city . . .

TEXT 14C

Задание I. *Прочтите текст, отыскивая в нем ответы на поставленные вопросы.*

MAN, MOVEMENT, AND TOMORROW CITIES

What are the advantages of mass transport over the automobiles?

1. Not many years ago we looked at the automobile as a symbol of advanced civilization and we thought it necessary to adjust our cities to automobile use. Today, however, there is increasing concern about the automobiles social cost and people began to think of the advantages of other means of transport. But despite these changes the fact remains that the number of motor vehicles continues to grow.

What does the future hold for the automobile and for our cities? Will the automobile in cities be replaced by mass transport? Or will the automobile increase in numbers until our cities suffocate from traffic paralysis?

Simplistic as it sounds, the urge to move is deeply rooted in man's existence in time and space.

What are the disadvantages of railroads?

2. All human activities take time, and a person has only a limited number of hours in a day. Consequently people try to minimize the time needed for movement while maximizing the time available for other activities.

This essential truth underlies all technological progress in transportation since the second half of the eighteenth century. With invention of the steam engine, the first thing people wanted was a steam-powered vehicle to replace the

horse and buggy. But development of such a vehicle was impossible in an age when there were no steering mechanisms, rubber tyres, or paved roads. The steam engine was instead put in a vehicle running on tracks, and the nineteenth century became the age of the railroad. Yet people were never completely satisfied with the railroad, with its fixed routes and inconvenient transferring to and from stations. In the 1880's the internal combustion engine was invented, and as a result the twentieth century became the age of the automobile.

What would happen if everyone in the city had a car?

3. In the big cities, however, the automobile has created problems. When used in small numbers in cities, the automobile can be the fastest form of urban transportation. But as more people travelled by car in the city, cars began getting in the way of each other, traffic began to move slower. Urban traffic became so heavy that people began regarding the automobile incompatible with city life.

If the citizens of the past in Paris or Tokyo had known what we know about the automobile, they would have built very different cities than the ones we see today. Yet even if they had built cities ideal for the automobile, the automobile alone could not satisfy all urban transport needs. Since automobiles occupy space, no one could move at all if everyone used them to travel in the densely populated areas of our cities. Los Angeles has taught us the bitter lesson that limited city space rules out unlimited use of the automobile. We thus have no choice but to rely to some extent on more efficient modes of transportation — ones that accommodate more people per given unit of space than the automobile.

Why is public transport network still inferior to the automobile?

4. During rush hours people can commute to and from the centre faster by trains and subway than by cars. But at other times of the day, or in other areas rail transportation is less convenient. Door-to-door travel in the central business district during midday is actually faster by car than by subway.

Pushing for better public transportation facilities and working to develop new public transport systems is thus meaningless unless we first recognize this fact.

Even the most comprehensive transport network is inferior to the automobile because of the time, however small, required to get to and from stations or stops.

Any attempt to force public transportation on society by removing or limiting the automobile from our streets despite its clear advantages in speed and convenience will only meet with opposition.

The automobile is here to stay, for after centuries of walking and pedalling, the public will not agree to turn back the clock and do away with the automobile.

Задание II. *Прочтите текст еще раз и выберите предложения, характеризующие преимущества и недостатки общественного транспорта по сравнению с личным транспортом.*

ЗАДАНИЕ К ТЕКСТАМ 14-ГО УРОКА

Пользуясь информацией, полученной из текстов урока, расскажите о перечисленных ниже видах городского транспорта с точки зрения их преимуществ и недостатков, а также выскажите свою точку зрения о том, какие новые виды транспорта вы считаете наиболее перспективными и почему:

1. automobiles;
2. buses in a demand-activated mode (dial-a-bus);
3. monorails or automatically controlled trams;
4. minitrams;
5. moving pavements.

КОНТРОЛЬНЫЙ СЛОВАРЬ

1. acceptable (*a*); 2. annual (*a*); 3. apart (*adv*); 4. attempt (*n*, *v*); 5. below (*prp*); 6. brief (*a*); 7. broaden (*v*); 8. but (*cj*, *prp*); 9. cheap (*a*); 10. congestion (*n*); 11. create (*v*); 12. cushion (*n*); 13. decade (*n*); 14. disadvantage (*n*); 15. face (*v*); 16. growth (*n*); 17. human (*a*); 18. journey (*n*); 19. labour (*n*); 20. lack (*n*); 21. layout (*n*); 22. limit (*n*, *v*); 23. mode (*n*); 24. noise (*n*); 25. ownership (*n*); 26. pedestrian (*n*); 27. pleasant (*a*); 28. propel (*v*); 29. propose (*v*); 30. push (*n*, *v*); 31. reduce (*v*); 32. regard (*v*); 33. reserved (*a*); 34. rule (*n*); 35. rush (*n*, *v*); 36. suburb (*n*); 37. set (*v*); 38. travel (*n*, *v*); 39. track (*n*, *v*); 40. tyre (*n*)

LESSON FIFTEEN

Грамматика: Определение.
Основной текст 15А: Automobile.

Способы выражения определения

Прилагательное	**vast** territory
Существительное	the **city** suburbs the **city transport** problems my **friend's** sister the rules **of traffic**
Местоимение	**our** country
Причастие	an engine **consuming** petrol highly **developed** industry the methods **employed**
Герундий	the idea **of limiting** speed
Инфинитив	the first thing **to do** the question **to be considered** the article **for you to translate**

Упражнение 1. *Укажите, чем выражено определение в следующих предложениях, и переведите их.*

1. **Pedestrian safety** problems were the subject of discussion. 2. By-products **of combustion** are expelled from the engine. 3. For **safe** driving at night the paint **reflecting** light was used on the highway. 4. The **reduced** traffic in the centre was one of the measures **proposed.** 5. The plan **to broaden** the old road was proposed and found acceptable. 6. These are the facts **to be** always **remembered.** 7. The room **facing** the street was reserved for designers. 8. The **fuel** consumption per kilometre **travelled** indicates the efficiency of the engine. 9. The consequences **of population growth to be taken into consideration** were pointed out in the report. 10. The places **to be visited** and the places **to be avoided** were carefully marked on the map.

VOCABULARY NOTES

Упражнение 2. *Переведите данные ниже словосочетания.*

1. **boil** *v, n* — кипеть, кипятить; кипение
   to boil water, boiling point, to boil under high pressure
2. **however** *cj* — однако, тем не менее
   In spite of the disadvantages of the gasoline engine it will, however, dominate in the near future.
3. **ignite** *v* — зажигать, воспламенять(ся), загораться
   to ignite the fuel-air mixture, the ignited fuel, to propose an improved ignition system
4. **stroke** *n* — удар; ход (такт) поршня
   a stroke of a hammer, a four-stroke cycle engine, the length of the piston stroke
5. **sure** *a* — уверенный
   to be sure of one's actions, to feel sure, to move slowly but surely
6. **conventional** *a* — стандартный, традиционный
   to use conventional engines, the advantages of the new designs over conventional ones, a conventional layout of the main unit
7. **lie (lay, lain)** *v* — лежать, находиться
   to lie in the sun, the territory lying below sea-level, to lie in the distance of five miles
8. **continue** *v* — продолжать
   to continue the journey, to continue one's research, the continuation of scientific progress
9. **draw (drew, drawn)** *v* — втягивать, всасывать; тащить
   to draw the air into the engine, the fuel drawn into cylinder, a four-wheeled cart drawn by a horse
10. **compress** *v* — сжимать
    to compress the fuel-air mixture, compression stroke, a compressed spring
11. **pressure** *n* — давление
    to increase pressure, the pressure produced by combustion, the pressure developed at high temperatures
12. **heavy** *a* — тяжелый (*о весе*)
    the disadvantages of a large and heavy engine, to carry a heavy bag, to use heavy metals
13. **performance** *n* — работа (*машины*), действие
    the engine characterized by noise and slow performance, to develop a unit with highly efficient performance, owing to bad performance of the ignition system
14. **accustomed** *a* — привычный, обычный
    to be accustomed to get up early, to get accustomed to

the life in the North, drivers accustomed to conventional gasoline car engines

15. **liquid** *n*, *a* — жидкость; жидкий
to convert liquid into gas, to use liquid fuels, to work on cheap liquid fuel
16. **alloy** *n* — сплав
made of aluminium alloy, they use new steel alloys, the advantages of light alloys
17. **durability** *n* — прочность, долговечность
to solve the problem of durability and cost of gas-turbine cars, made of durable and light metals, to achieve greater durability
18. **hold (held, held)** *v* — держать
to hold the first place, to hold a heavy box, to hold the child by the hand
19. **key** *n* — ключ
the key to the solution of the problem, the key to the door
20. **favour** (*Amer.* **favor**) *v*, *n* — относиться благосклонно, одобрять; расположение
to favour changes, favourable conditions, the layout favoured by most designers
21. **concept** *n* — понятие, идея, представление
the concept of mass production of common parts, the concept of friendly cooperation between different countries, new concepts in bridge construction
22. **external** *a* — внешний, наружный
external force, an external combustion engine, external trade
23. **virtually** *adv* — фактически, в сущности
to run on virtually any kind of fuel, to be virtually universal, to receive virtually no help
24. **adjacent** *a* — смежный, прилегающий
two adjacent cylinders, to ignite fuel in the adjacent cylinder, a flat with two adjacent rooms
25. **quiet** *a* — тихий, спокойный
on a quiet summer evening, to talk quietly, a quiet performance
26. **perhaps** *adv* — возможно
perhaps not earlier than in 1995, perhaps more efficient, it is perhaps too late for changing the plan
27. **save** *v* — экономить, беречь
to save fuel, to save time, to save money
28. **opinion** *n* — мнение
to have a good opinion of somebody, in the opinion of experts, to ignore one's opinion

29. **circumstance** *n* — обстоятельство, условие
to consider all the circumstances, under no circumstances, unless the circumstances change

Упражнение 3. (Работа со словарем.) *Определите, к какой части речи относятся выделенные слова, найдите в словаре нужные значения этих слов и переведите предложения.*

1. **power**
1. How much **power** does this plant consume? 2. It was not in his **power** to help us. 3. A four-stroke engine **powers** most of the modern automobiles.
2. **rear**
1. In some motor cars engine is placed in the **rear.** 2. **Rear** parts of motor car were damaged in the road accident. 3. Red **rear** lights signal that the driver is braking.
3. **spark**
1. His words left me a **spark** of hope. 2. **Sparks** were coming out of the chimney. 3. Electricity is used **to spark** fuel in the cylinder.
4. **perfect**
1. He is a **perfect** stranger to me. 2. The engineers are still on the way to a **perfect** engine. 3. They **perfect** and improve their creation.
5. **exhaust**
1. **Exhaust** gases of the automobiles are a source of atmosphere pollution. 2. Automobiles **exhaust** gases into atmosphere thereby polluting it. 3. I'll have to get an **exhaust** pipe for my automobile.
6. **desire**
1. What do you **desire** most of all? 2. According to his **desires** he was given all the necessary materials. 3. He **desires** to work in the field of designing miniature transistors.
7. **far**
1. Science fiction writers try to describe the society of the **far** future. 2. It happened **far** back in the past. 3. They put a pipe **farther** into the ground.
8. **promise**
1. Don't give a **promise** if you can't keep it. 2. He **promises** readily, but not always keeps his **promises.** 3. His teachers say he gives great **promise.**
9. **cool**
1. Stop the engine and let it **cool.** 2. It gets very **cool** in the mountains in the evening. 3. Air **cools** faster than water.

10. **since**

1. I have been here **since** 5 o'clock. 2. Ever **since** I remember him he was interested in mechanics. 3. You must stay here for a while **since** the car is out of order.

11. **sign**

1. The agreement was **signed** last year. 2. These sounds are a **sign** of the lack of fuel in the engine. 3. What **signs** are used in arithmetic?

Упражнение 4. *Прочтите следующие интернациональные слова и дайте все русские эквиваленты этих слов, где это возможно.*

automobile, mechanical, model, gas, alternative, gallon, turbine, temperature, cylinder, moment, peak, gasoline, potential, company, period, exotic, metal, expert, patent, modern, equivalent, universal, to dominate, to dictate

ЗАДАНИЯ К ТЕКСТУ 15А

Задание I. *Просмотрите текст 15А и найдите ответы на следующие вопросы.*

1. The information you have got about Nickolas Cugnot, Kulibin, Trevithick, Rudolf Diesel, Robert Stirling: a) When and in what countries did they live? b) What inventions are their names connected with? 2. What were the main ways of the vehicle development? 3. What are the advantages of the Stirling engine?

Задание II. *Переведите текст 15А, обращая внимание на новые слова и способы выражения определения.*

TEXT 15A

AUTOMOBILE

1. The history of the automobile goes back several hundred years. One of the earliest attempts to propel a vehicle by mechanical power was suggested by Sir Isaac Newton about 1680. It was little more than a toy consisting of a steam boiler supplying a steam jet turned to the rear.

However, the credit for building the first self-propelled road vehicle must undoubtedly go to the French military engineer, Nickolas Cugnot (Кюньо). Between 1763 and 1769 two steam-driven carriages were built and tried.

In 1784 the Russian inventor Kulibin built a three-wheeled carriage. In his vehicle he used for the first time such new elements as brakes, rollers and a gear-box.

The first Englishman to build a full-size self-propelled vehicle for use on the roads and to obtain practical results was Trevithick (Тревитик). Between 1798-1800 he built several working models.

Up to 1860 most all road vehicles were powered by steam engines which ran at slow speeds. In 1860 Lenoir (Ленуар) of Paris built an internal combustion engine which ran on city gas, the gas being ignited by an electric spark. In 1866, Otto invented the type of four-stroke cycle engine which is used today.

2. Slowly but surely the auto industry is perfecting a number of alternatives to the conventional engines found in almost all of today's passenger cars.

Two prime factors lie behind the search for different engines — the necessity to reduce air pollution by requiring cleaner auto exhaust and the desire to produce cars that will run farther on a gallon of fuel.

While basic research is continuing on electric and steam-powered engines, it is the diesel, turbine and Stirling that are current industry favourites.

Diesels get better mileage than gasoline engines, and the fuel is usually cheaper.

In 1890's, Rudolf Diesel, a German, invented the engine that bears his name. As air is drawn into the engine and compressed internal temperatures rise, and pressures reach two to three times those in a gasoline engine. The extreme pressures have meant that diesels usually are much larger and heavier than gasoline engines of the same power potential.

The disadvantages of diesels as passenger-car engines are slow performance, noise and smoke.

All the companies investigating diesels are trying to reduce noise and smoke, but the problems are not yet entirely solved. Even the 28,000-dollar Mercedes clatters when started on a cold morning. And the warm up period for all diesels seems too long to drivers accustomed to gasoline models.

3. The turbine and Stirling are multifuel engines, capable of running on any liquid that will burn, including such exotic types as peanut oil and perfume. This would be a major advantage if severe petroleum shortages develop.

The turbine cars now operating are hand-built models

that cost more than 1 million dollars each. Alloys of precious metals of high durability are still required for certain vital turbine parts. Engineers believe that progress in ceramics holds the key to making turbines practical alternatives to present-day engines.

4. Experts say that the Stirling is the most promising among the three favoured engines.

The Stirling concept, first offered more than 150 years ago by a Scottish clergyman, involves external instead of internal combustion.

In 1816 Robert Stirling patented a new engine for pumping water out of mines and quarries. It could run on almost any fuel, he boasted — including whisky. Indeed the parson had such faith in his engine that he often cut his Sunday sermons short to work on it. However, when Stirling died in 1878 at the age of 88, his engine was still unperfected. Soon it was totally overshadowed by the newer gasoline-powered internal combustion engine.

Unlike typical internal combustion engines, the Stirling engine is powered by heat from an external source. In the new design, hydrogen gas is heated by a burner, which can run on virtually all kinds of fuel. Hydrogen then expands, enters one cylinder and pushes a sliding piston. As piston moves, it forces gas out of the other end of the cylinder; the emerging gas is cooled and then moves towards an adjacent cylinder where heat is applied once more and the process is repeated.

Engineers point out that a Stirling engine would be quieter than an equivalent internal combustion engine, would emit less toxic gases, and would use fuel more economically. Having no need for valves or cams, it would also have fewer parts. Stirling's old dream might yet become reality — perhaps by the end of the twentieth century.

Now, since experts seek fuel-saving, less-polluting alternatives to the modern auto engine, Stirling's machine has started a new life, they show great interest in the work of a giant Dutch electronics firm, which has tested Stirling prototypes in boats, large pumps (to help dry out Holland during 1952's floods) and even buses. In 1972, Ford signed an agreement with the firm for joint development of a Stirling engine for passenger cars.

5. As for electric cars, several types of small battery-powered vehicles are in production, but it is most unlikely that they will replace more conventional vehicles.

Yet, there is still opinion in the auto industry that the conventional gasoline powered engine — the type in almost

universal use now — will continue to do minate until outside circumstances dictate otherwise.

Задание III. *Ответьте на вопросы к тексту 15А.*

1. What idea of propelling a vehicle did Isaac Newton suggest? (1) 2. Who built the first self-propelled road vehicle? (1) 3. What kind of carriage did a Russian inventor Kulibin build in 1784? (1) 4. Who built several working models of the self-propelled vehicle at the end of the 18th century? (1) 5. When was the four-stroke cycle engine invented? (1) 6. What are the main factors that are important in the search for different engines? Why are these factors very important? (2) 7. What are the advantages of diesels over gasoline engines? (2) 8. What are the disadvantages of diesels? (2) 9. Will the turbine cars be widely used in the near future? (3) 10. When was the Stirling engine invented? (4) 11. Where is the Stirling engine being used now? (4) 12. Will electric cars replace the conventional vehicles? (5) 13. What kind of engine will dominate in the near future? (5)

Задание IV. *Соотнесите факты, относящиеся к истории развития автомобильного двигателя, о которых говорится в тексте 15А, с датами, приведенными ниже.*

1680, 1763, 1784, 1798, 1860, 1866, 1890

Упражнение 5. *Переведите следующие группы слов.*

an attempt to use the power of the sun; the power of flowing water; to ignite fuel; the advantages of a four-stroke cycle engine; conventional layout; conventional mode of transportation; to continue attempts; to draw fuel; water drawn from the lake; to compress gas; air compressed in the reservoir; under the pressure of external forces; to keep the liquid under pressure; heavy alloy; thick glass; quiet performance; virtually noiseless performance; the attempt to improve performance; to be accustomed to such conditions; liquid fuel; the state of liquidity; to continue to increase durability; durability of the alloy; to be made of aluminium alloys; to hold key positions; the key to the room; among other benefits; among young people; the concept of development; external atmosphere; safety glass; to save time; adjacent room; to repeat the attempt; to repeat rules; quiet operation; to live in a quiet suburban house; private opinion; brief exchange of opinions

Упражнение 6. *Заполните пропуски соответствующими словами.*

quiet	exhausted	among
alloy	opinion	promise
liquid	accustomed	circumstances
cooled	rear	compressed
signs	continued	conventional

1. Gradually he got . . . to physical labour. 2. The . . . of the two metals proved to be very strong. 3. He had to drive very slowly as there were many small children . . . the passengers. 4. Will you tell me under what . . . the accident has occurred? 5. This device works with the help of . . . air. 6. He . . . his attempts to perfect the design. 7. The wheel was of a . . . size. 8. Can an engine be . . . with cold water? 9. The article says that the resources of some minerals are about to be . . . . 10. This engine works on . . . fuel. 11. He is a very skilled engineer and we have a high . . . of his work. 12. Plus and minus are the . . . used in arithmetic. 13. I can't . . . anything but I'll try to help you. 14. There was no wind and the river seemed . . . . 15. The . . . wheel must be changed if you don't want to get into an accident.

Упражнение 7. *Назовите слова, от которых образованы следующие производные слова, и переведите их.*

cooler, compression, conventionally, continually, desirable, durability, favourable, heavily, ignition, perfection, performance, powerful, quietly, signature, surely, virtually, externally, savings

Упражнение 8. *Переведите следующие цепочки слов.*

1. private car ownership increase; 2. traffic noise reduction; 3. rush hours congestion; 4. urban speed limits; 5. rubber and glass components; 6. car maintenance improvement; 7. pedal transport increase; 8. air-cushion vehicle advantages; 9. water travel disadvantages; 10. two decade development plan; 11. pedestrian safety problems; 12. rear engine layout vehicle; 13. bus fleet uniformity trend; 14. rubber tyre wear; 15. below zero temperature; 16. spare parts output; 17. track transport limitations; 18. atmosphere pollution source

Упражнение 9. *Заполните пропуски словами* **for, during** *или* **since** *и переведите предложения.*

1. . . . many years they wrote to one another every month. 2. The child has been ill . . . seven days. 3. . . . the whole

season the weather was very bad. 4. Where have you been . . . you came from your trip abroad? 5. No buses have been running . . . the strike began. 6. They knew each other . . . their childhood days. 7. If the car is well maintained, it will not need any repair . . . several years. 8. They have been great friends . . . the war. 9. . . . his stay in Leningrad he visited almost all the museums and exhibitions.

Упражнение 10. *Переведите следующие предложения, обращая внимание на способы выражения определения.*

1. Although the performance of the modified engine is far better than that of the old one, it is interesting that maximum power speeds are similar in both engines. 2. Large tyres to be tested were brought to the inspection department. 3. The track to measure high speed stability will be completed next year. 4. This review surveys the problem of the ignition taking place inside the automobile petrol engine. 5. Spark ignition is known to be one of conventional means of igniting fuel-air mixture. 6. According to experts' opinion advances made in turbine application to highway trucks may open the way to gas turbine application. 7. The proposed design has certain advantages over conventional V-six cylinder engine. 8. This alloy covered material can be pressed in virtually the same way as steel. 9. The alloy is claimed to have characteristics that make it perfect for use at low temperatures. 10. Considerable weight savings has been achieved compared with most other cars of similar size. 11. Compression is the reduction in volume of a mass of material due to externally applied pressure. 12. The cooling system proposed by the designers proved to be inefficient. 13. To prevent heat from destroying the engine an improved cooling system is to be devised. 14. The simplest method of cooling an engine is to allow the air stream caused by the motion of the vehicle to carry the heat away by radiation. 15. Energy crisis holds the key to the development of new more efficient engines with less fuel consumption. Among such engines Stirling holds the first place. 16. Stirling engine is regarded as the most promising future engine prospect, and is predicted to be mass produced by the end of the 20th century. 17. Stirling's rivals are steam, diesels and electric cars. But steam engines are too heavy, expensive and inefficient convertors of energy; diesels are heavy, noisy and expensive; and the electric car could be substituted for the petrol car in the 21st century when atomic energy begins to replace oil and coal in the generation of power. 18. In the Stirling engine power is achieved

by applying heat to a cylinder containing gas which expands, drives pistons and then escapes into another chamber to be cooled and reused.

Упражнение 11. *а) Прочтите текст и назовите в каждом предложении определение или группу определения.*

POLLUTION-FREE ELECTRIC CAR

I. A Japanese automobile firm has announced successful development of three-wheel electric light van for pickup and delivery service and has started production of the car for full-scale marketing.

II. Recently, development work on electric cars has been accelerated in Japan as a principal means of eliminating environmental damage caused by automobiles through air pollution and noise. The electric car will be the first to be used on the streets.

III. This car will be employed mainly for delivery of newspapers, mail and milk, as well as for light loads in a limited area, such as factory premises.

IV. It has a motor and four 12-volt improved lead batteries as the power source.

V. The vehicle, seating only the driver, has maximum speed of 40 kilometres per hour.

VI. The batteries can be charged with home electricity.

VII. With each charging, which takes eight hours, the electric van can run for 40 kilometres.

VIII. The price is about twice that of conventional gasoline cars of a similar type.

б) Просмотрите текст еще раз и назовите номера предложений, в которых дается описание электромобиля, разрабатываемого японской фирмой.

Упражнение 12. *Переведите текст письменно.*

TAXI!

Do you know what a London taxi looks like? Of course you do. Their special shape and their black colour is famous all over the world. The black caps, as they are called, have become a symbol of London. But soon the London taxi is going to change. Already taxi drivers are allowed to have their cabs in different colours — red, green, even silver. And soon the shape is going to change too. The authorities have

decided to use a new kind of car — a Range Rover. In 10 years or so the old black car will be part of history.

It isn't easy to become a London taxi driver. First you have to go and register with the Public Carriage Office, the police department which is responsible for London taxis. There they give you the Blue Book. Actually, the book isn't blue at all but it is very important. It contains all the routes you have to know before you can become a London cabbie.

After that you have to go back to the Public Carriage Office every month. They ask you questions about the routes and you have to answer them perfectly. When they are sure you know all the routes in the Blue Book they give you a green badge and you are a cabbie. But it usually takes about two years to train, or "to do the knowledge", as it is called.

How do you do the knowledge? Well, some people try and memorize the maps in the Blue Book. But this doesn't usually work because they can ask you not only how to get somewhere, but to name all the important buildings on the way. So, most people get a motobike and ride round and round London until they know all the routes perfectly, and all the hospitals, and art galleries, and museums, and . . .

TEXT 15B

Задание I. *Прочтите текст, стараясь понять основное содержание. (Заметьте время начала и окончания чтения. Этот текст нужно прочесть за 4 минуты, из расчета 120 слов в минуту.)*

THE CAR OF THE FUTURE

It is safe to predict that in the near future most cars will use the internal combustion engine and burn petrol. At the present rate of production oil supplies will run out rather soon, and we will have to look for other sources of energy. That is one of the most important aspects of the problem, another being the damage that exhaust fumes do to the environment (окружающая среда) and health, especially in the towns.

What kind of vehicle will eventually dominate? At present there is a lot of talks about electric cars, for they have the advantage of giving off no exhaust gases. The electric car has a long history. The first cars were built at the end

of the last century, but they could not compete (конкурировать) against the internal combustion engine.

They have several disadvantages. First, we have no really suitable batteries — they are too heavy, take a long time to charge (заряжать), have too small a capacity and a relatively short life.

For a while the fuel cell (элемент) looked very hopeful. This does not have to be charged, it generates its own energy from a chemical reaction. But this, too, proved too large and expensive.

An electric car would have to run 200-250 km on one charge to compete with the conventional car which can do about 200 km on a full tank.

So scientists and engineers are looking for better storage batteries or cells, and ways of using energy more economically.

There are many different electric cars around the world. Some can run 100 km and longer on one charge. This is quite sufficient for town traffic, where cars do not cover such long distances. Electric vans can have their storage batteries recharged while being loaded or unloaded.

The first electric cars have already been used in Moscow and in several other cities. So far there are few of them. They are used for local deliveries, post offices and the services. Specialists think that in future these cars will be used for urban transportation.

But will the electric car ever become a universal means of transport? Hardly.

Today there are several hundred million cars in the world not to mention millions of motorcycles. It is estimated that if these changed over to electricity, they would require six million kilowatt hours, and all the power stations in the world now generate only a little over a third of that. This means that tremendous efforts will have to be made in future to increase the power output.

Задание II. *Выберите утверждения, соответствующие содержанию текста.*

1. Present oil resources will be exhausted in:
   1) half a century; 2) a century; 3) fifty thousand years.
2. Electric cars appeared:
   1) in the 18th century; 2) in the 19th century; 3) in the 20th century.
3. The weak point of the electric car is:
   1) the body; 2) the battery; 3) the brakes.

4. Electric cars cover over 100 kilometres on one charge and that makes them suitable for:
   1) city passenger transport; 2) town goods transport; 3) highway passenger transport.
5. For the electric cars to become universally used it is necessary:
   1) to increase their production; 2) to perfect their design; 3) to generate more electricity.

TEXT 15C

Задание I. *Прочтите текст, отыскивая в нем ответы на поставленные вопросы.*

WHAT IS AHEAD OF THE AUTOMOTIVE INDUSTRY?

Will the speed of the automobile continue to increase?

1. A large group of experts was invited to give their opinion on the problem of "what is ahead of the automotive industry?". They were asked to cover two basic areas: technical improvements and environmental and energy problems.

All experts agree that automotive industry is now going through a change period. According to the survey of opinions during the last few years the idea has developed that faster is not necessarily better, which greatly influences the technology of the car. The idea of speed limitation makes itself felt in general economic and political structure. But experts believe that despite environmental and sociological considerations an interesting future lies ahead for the automotive industry.

What is a possible alternative to a totally electrical system?

2. An improved version of the electric car will be technically perfected and economically possible and in widespread use by 2000. Success of this application depends on development of light weight battery, capable of being recharged quickly, and the availability of electric energy. A hybrid system where electric batteries for city driving would be recharged in highway driving with gasoline fuel is an alternative to the totally electrical system.

When is automatic control of cars and trucks on highways expected to become a practical reality?

3. Automobile computers, now used in some cars to locate engine problems, will be economically possible as a standard feature by the end of the century. This device should substantially reduce time for servicing. Another electronically controlled system now being adopted is fuel injection.

Automatic control of automobiles and trucks on highways is expected to be a possibility in the next decade, but not a practical reality until the middle of the 21st century.

What changes in the passenger cars are expected to appear by the end of the century?

4. General vehicle configuration will be a very important area of change. By 2000, most of the passenger cars, including luxury vehicle, is expected to be radically smaller, lighter and more efficient. This will require improved technology and ride control. Passenger and luggage compartment will be more efficient and new engine layouts will appear.

What is the problem of using hydrogen as a substitute fuel?

5. Low pollution automotive emissions are technologically possible now, but estimates are that it will be some more years before such controls will be economically possible, and several more years before they can be widespread.

Wood, coal, electricity have been commercially used for driving automobiles in the past, but were driven out by petroleum. Synthetic fuels from coal are likely to find widespread use.

One expert felt that hydrogen would be the most likely substitute fuel because of the amount available from water. The problem includes extracting hydrogen in an economical manner and storing the gas for use.

According to one expert with the indirect use of nuclear energy through batteries, electrification of urban transportation and production of synthetic fuel can be expected.

Задание II. *Сделайте сообщение о том, что вы узнали в тексте С и других текстах урока 15 об электрическом автомобиле и что вы думаете о перспективах его использования в будущем.*

ЗАДАНИЕ К ТЕКСТАМ 15-ГО УРОКА

Перечертите таблицу в тетрадь и заполните графы, пользуясь информацией, полученной из текстов урока.

The name of the engine	Advantages	Disadvantages
Diesel engine		
Turbine		
Stirling engine		
Electric motor		

КОНТРОЛЬНЫЙ СЛОВАРЬ

1. accustomed (*a*); 2. adjacent (*a*); 3. alloy (*n*); 4. boil (*v*, *n*); 5. circumstance (*n*); 6. compress (*v*); 7. concept (*n*); 8. continue (*v*); 9. conventional (*a*); 10. cool (*v*, *a*); 11. desire (*n*, *v*); 12. draw (*v*); 13. durability (*n*); 14. exhaust (*n*); 15. external (*a*); 16. far (*a*, *adv*); 17. favour (*v*, *n*); 18. heavy (*a*); 19. hold (*v*); 20. however (*cj*); 21. ignite (*v*); 22. key (*n*); 23. lie (*v*); 24. liquid (*n*, *a*); 25. opinion (*n*); 26. perfect (*v*, *a*); 27. performance (*n*); 28. perhaps (*adv*); 29. power (*n*, *v*); 30. pressure (*n*); 31. promise (*n*, *v*); 32. quiet (*a*); 33. rear (*n*, *a*); 34. save (*v*); 35. sign (*v*, *n*); 36. since (*prp*, *cj*); 37. spark (*n*, *v*); 38. stroke (*n*); 39. sure (*a*); 40. virtually (*adv*)

LESSON SIXTEEN

Грамматика: Дополнение.
Основной текст 16А: Roads.

Способы выражения дополнения

Существительное	Car builders employ new **materials** for motor-car bodies.
Местоимение	Motor-car builders employ **them** widely.
Инфинитив	Road builders started **to broaden** the highway.
Существительное (местоимение) + инфинитив	The designers wanted **the engine to consume** less fuel. They watched **the pedestrians cross** the street.
Герундий	I remember **travelling** in the Far East with a geological expedition.

Упражнение 1. *Переведите следующие предложения, обращая внимание на способы выражения дополнения.*

1. The designer wanted the pedal to be installed on the left. 2. We should like the professor to describe his concept of the problem. 3. He ordered the engine to be repaired by the end of the week. 4. We expect the work on improving the efficiency of the engine to be continued. 5. We consider the new tyre to have certain disadvantages. 6. We believe the speed limit to be the key factor of traffic safety. 7. We know motor car engines to be exhausting by-products of combustion into the atmosphere. 8. They watched the liquid cool. 9. He suggested continuing work on perfecting the engine. 10. He informed us of employing new materials in car-making. 11. They wanted to repeat grammar rules before the examination. 12. The authorities wanted to limit speed within the city centre.

VOCABULARY NOTES

Упражнение 2. *Переведите данные ниже словосочетания.*

1. **road** *n* — дорога
   the existing system of roads, a road accident, road traffic rules, the importance of good roads
2. **whenever** *cj* — всякий раз когда, когда бы ни
   whenever something happens, whenever a student fails in his examination, whenever one of the components is lacking
3. **hazard** *n* — опасность, риск
   hazards created by fast driving, to avoid hazards, hazardous road
4. **manner** *n* — способ, образ действий
   to function in the same manner, to do something in a different manner, to behave in a strange manner
5. **serious** *a* — серьезный
   to cause serious hazards, to be seriously damaged, a high percentage of serious accidents
6. **danger** *n* — опасность
   to be the source of constant danger, to be dangerous to pedestrians, to be of no danger to people
7. **eliminate** *v* — устранять, исключать
   to eliminate congestion during rush hours, to minimize the risk of accidents by eliminating the old vehicles from roads, the elimination of hazards to health

8. **ensure** *v* — обеспечивать, гарантировать
to ensure maximum safety, to ensure regular maintenance of highways
9. **profound** *a* — глубокий
to have a profound effect on the economic development of the country, to know the subject profoundly
10. **contribute** *v* — способствовать, содействовать
to contribute to the development of new road systems, a great contribution to the cause of peace, to contribute to the growth of large cities
11. **fulfil** *v* — выполнять, осуществлять
to fulfil an important function, to fulfil the production plan, the fulfilment of the construction program
12. **together** *adv* — вместе
to link people together, together with all progressive people
13. **medium** *n, a* — средство, способ; средний; **through (by) medium** — посредством
the medium of mass communication, to promote friendly relations among the peoples through the medium of travel, a box of medium size
14. **possess** *v* — владеть, обладать
to possess a house in the suburbs, to possess a car of a new make, the engine possessing numerous advantages
15. **principal** *a* — главный
the principal sources of energy, the principal changes in economy
16. **anticipate** *v* — предвидеть, ожидать
to anticipate the changes of the city transportation, according to the anticipated growth of the population, anticipation of the consequences of the energy crisis
17. **slight** *a* — незначительный, легкий, слабый
a slight bend of the road, a slightly damaged car, to make a slight noise
18. **visibility** *n* — видимость
to provide good visibility, within the driver's visibility, not to be visible at night
19. **hinder** *v* — препятствовать, мешать
not to hinder the visibility, to work without any hindrance, to avoid hindrances
20. **clear** *a* — ясный; свободный
a clear sky, a clear space, to be clearly visible
21. **provision** *n* — обеспечение; **to make provision for** — обеспечить, позаботиться о
provision of energy, provision of safety for pedestrians,

to make provision of food and equipment for the expedition

22. **arrange** *v* — располагать, устраивать; организовывать
to arrange everything for the expedition, the arrangement of engine cylinders
23. **beneath** *prp, adv* — под, ниже; внизу
a reliable foundation beneath a building, beneath the ground surface, the importance of the subsoil beneath a road
24. **nowadays** *adv* — в наше время, теперь
Nowadays subsoil is regarded as a part of the road. The aeroplane is an ordinary means of travel nowadays.
25. **integral** *a* — неотъемлемый, существенный
to be an integral part of the road, an integral part of the work
26. **devise** *v* — придумывать, изобретать, разрабатывать
to devise various ways to improve stability of soil, a new method of calculation devised by a young engineer, a device for regulating pressure
27. **case** *n* — случай
in case of bad weather conditions, a difficult case, in many different cases
28. **retain** *v* — удерживать, сохранять
to retain high efficiency in all conditions, to retain high temperatures, to retain the original level
29. **sufficient** *a* — достаточный
to achieve sufficient durability, to produce a sufficient number of tyres, to make the alloy sufficiently hard
30. **moisture** *n* — влажность, сырость, влага
to retain moisture in the soil, the moisture contained in the plants, reduction of moisture
31. **alternatively** *adv* — альтернативно, в качестве альтернативы
Alternatively, durability can be achieved by adding different substances.
32. **harden** *v* — затвердевать, придавать твердость, закалять
to harden the soil by adding cement, to harden the metal at high temperature
33. **auxiliary** *a* — дополнительный, вспомогательный
to be provided with auxiliary parts, to build numerous auxiliary structures, to know the auxiliary verbs well

Упражнение 3. (Работа со словарем.) *Определите, к какой части речи относятся выделенные слова, найдите в словаре нужные значения этих слов и переведите предложения.*

1. **just**
   1. You have come **just** in time. 2. We have **just** repeated the dates. 3. The engine consumes **just** the same amount of fuel as has been anticipated.
2. **alignment**
   1. The **alignment** of the instrument took several days. 2. The **alignment** of the road is one of the most difficult operations. 3. This is the apparatus for the **alignment** of the wheels.
3. **meet**
   1. I shall **meet** you outside the railway station at the bus stop. 2. The tubes produced by the plant **meet** the highest standards. 3. The existing roads in many countries have been changed to **meet** modern requirements.
4. **volume**
   1. The Lenin Library is known to possess millions of **volumes** of books. 2. The **volume** of traffic is anticipated to grow. 3. The **volume** of engine cylinders is an important characteristic.
5. **likely**
   1. The new car is **likely** to appear on the market in the near future. 2. He will **likely** be there too. 3. He is a **likely** person to be sent there.
6. **bend**
   1. The road **bends** eastward at that point. 2. Numerous **bends** made driving difficult. 3. The material **bends** easily.
7. **plant**
   1. He has a collection of exotic **plants** in his garden. 2. The **plant** producing car bodies is part of the car building complex. 3. Every spring he **plants** different kinds of flowers.

Упражнение 4. *Прочтите следующие интернациональные слова и дайте все русские эквиваленты этих слов, где это возможно.*

component, statistics, fatal, constant, risk, to minimize, periodical, inspection, maximum, geometry, vertical, horizontal, national, effect, commercial, progressive, international, monotony, method, stabilization, material, climate, cement, project, tunnel

ЗАДАНИЯ К ТЕКСТУ 16А

Задание I. *Просмотрите текст 16А и найдите ответы на следующие вопросы.*

1. What main problems of transportation are discussed in the text? 2. What is the role of roads of modern society? 3. What is the modern trend in road construction?

Задание II. *Переведите текст 16А, обращая внимание на новые слова и способы выражения дополнения.*

TEXT 16A

ROADS

1. Transportation is a system consisting essentially of three components: 1) driver, 2) vehicle, 3) road. Whenever any one of these three components of the system fails, the whole system would fail, and conditions of hazards would be created on the road. If therefore it is desired to provide a safe and efficient transportation systems it is necessary that all these three components should function efficiently in a well coordinated manner.

2. **Driver.** Of all the above-mentioned components driver is the most powerful component influencing safety on a road. Studies have shown that 86% of the serious accidents are caused by drivers.

3. **Vehicle.** This component also plays a vital part in determining safety on roads. Just like an unsafe driver, an unsafe vehicle is a source of constant danger in a road transportation system. With the growing percentage of old vehicles the risk of accidents on roads has also been growing considerably. This risk could be minimized by eliminating unsafe vehicles from roads. One way of doing it is to carry out periodical inspection of old vehicles.

4. **Road.** To ensure maximum safety for the transportation system, it is very necessary to plan and design highways on sound engineering techniques. It is possible to obtain maximum safety on highways by controlling their geometry, by alignment of vertical and horizontal curves and providing adequate sight distances for the speeds which it is desirable to obtain on these highways.

The traffic on the road has completely altered within the last twenty-five years and therefore the existing system of roads in many countries should also be changed, in order to meet modern requirements. The modern trend is undoubtedly towards national and consequently uniform planning, design and construction.

5. The efficiency of a country's road network has a profound effect on its prosperity. The ability of roads to enable traffic to flow freely and safely between the industrial and commercial centres contributes enormously towards a progressive economy. Motorways, besides serving each individual country, fulfil the desirable function of linking countries more closely together. Through the medium of travel, they help to promote cordial relations among the peoples of the various nations. In fact, the importance of good roads, both nationally and internationally, cannot be overstressed.

6. In order to serve their purpose in the best possible manner, modern roads should, as far as possible, possess the following principal features:

1) They should be designed according to the anticipated volume and speed of the traffic likely to use them.

2) Bends and gradients, where necessary, should always be slight.

3) Visibility should not be hindered.

4) They should be well and clearly signposted.

5) Adequate provision should be made for both cyclists and pedestrians with regard to their safety.

6) They should be well lit, where necessary.

7) Hedge and tree planting on the sides and central reservations should be arranged to provide a pleasant and interesting outlook for the road user, to avoid monotony and boredom.

7. In modern road construction, there is a much greater recognition of the importance of the subsoil beneath a road than years ago. It is regarded nowadays as an integral part of the road, and no longer as merely the formation on which to build a road. As a result of this various methods have been devised in recent years to improve its quality and consequently its stability. Stabilization can be achieved in a number of ways, the most simple being mechanical.

In case of mechanical stabilization granular or cohesive materials are added to the subsoil. In particularly dry climates it is often found necessary to add substances helping to retain sufficient moisture. Alternatively, stabilization can be effectively carried out by adding substances that harden the soil, and greatly increase its compressive strength.

8. The constantly increasing volume of modern traffic, especially in the towns, indicate that there is an urgent need for countless road construction projects in the near future. This involves the construction of numerous auxiliary structures, such as bridges, fly-overs, tunnels and underpasses.

It is mainly these structures that will present problems for the engineers.

Задание III. *Ответьте на вопросы к тексту 16А.*

1. What are the three main components of transportation? (1) 2. Why is it necessary that all these components should function in a well coordinated manner? (1) 3. Which of the three components is considered to be the most important? (2) 4. Why is it necessary to inspect the old vehicles periodically? (3) 5. How should highways be designed to ensure safety? (4) 6. Why should the existing system of roads be changed? (4) 7. What are the main functions of motorways? (5) 8. What principal features should modern roads possess? (6) 9. What is supposed to be of great importance in modern road construction? (7) 10. What does mechanical stabilization consist in? (7) 11. Why is there an urgent need for a great number of road construction projects? (8)

Задание IV. *Найдите в тексте подтверждения следующим положениям.*

1. Безопасность движения по дорогам зависит от сочетания ряда факторов, каждый из которых имеет большое значение.
2. Чтобы выполнять свое назначение эффективно, дороги должны отвечать определенным требованиям.

Упражнение 5. *Переведите следующие словосочетания.*

principal roads; to avoid hazards; to eliminate danger; to eliminate disadvantages; to ensure good maintenance; to ensure good performance; to contribute to traffic safety; to contribute to pollution reduction; to possess land; to anticipate changes in the layout; to behave in a strange manner; a slight damage; good visibility; to limit visibility; to hinder development; clear atmosphere; beneath the ground surface; integral part; sufficient information; sufficient time; to retain moisture in the soil; a slight bend; clear sky; auxiliary components; to harden steel; to meet requirements; profound changes; to fulfil our duties; to perform in the same manner; to have just been accepted; the alignment of the road; to align the wheels; the alignment of the adjacent parts; to anticipate the volume and speed of the traffic; the volume of car production; a bend of the road; to bend an iron bar; to eliminate road bends wherever possible; to meet the needs of the workers

Упражнение 6. *Заполните пропуски подходящими по смыслу словами.*

just	hazard	fulfilled
anticipated	contributed	retain
eliminate	volume	sufficient
bends	visibility	beneath
devised	danger	

1. A careless driver is a . . . in the road transportation system. 2. Before going on an expedition they tried to . . . any possibility of the failure. 3. He is . . . the man to help us. 4. He spoke about the . . . changes in the development of the country's road network. 5. His desire to become a scientist has been . . . . 6. The . . . of the liquid had to be measured. 7. There were many . . . on the road, so they could not drive very fast. 8. One must not drive quickly when . . . is poor. 9. They . . . a plan of improving the quality of stabilization. 10. A huge dam was constructed to . . . the spring waters. 11. Smoking is a . . . to health. 12. The dam could retain a . . . amount of water. 13. Repin . . . greatly to the development of national art. 14. They were resting . . . a large tree.

Упражнение 7. *Назовите слова, от которых образованы следующие производные слова, и переведите их.*

seriously, dangerous, elimination, ensurance, alignment, profoundly, contribution, fulfilment, possession, anticipation, slightly, visibility, hindrance, clearly, arrangement, integrally, sufficiently, alternatively

Упражнение 8. *Выберите соответствующий перевод следующих английских слов.*

1. alignment — регулировать; отрегулировать; регулировка
2. anticipation — предвидеть; предвидимый; предвидение
3. arrangement — устройство; устроенный; устраивать
4. clearly — ясный; ясность; ясно
5. possession — владение; владеть; владеющий
6. visible — видимый; видимость; видеть
7. visibility — видимый; видимость; видеть
8. contribution — вклад; вкладывать; вложенный
9. elimination — устранять; устраненный; устранение
10. fulfilment — выполнять; выполнение; выполняющий

Упражнение 9. *Заполните пропуски соответствующими однокорневыми словами.*

anticipate, anticipations, anticipated

1. Severe winter colds are . . . this year. 2. He spoke of the . . . connected with the discovery. 3. We . . . that these powerful, fast and reliable computers will find wide application.

arrange, arrangement, arranged

1. Annual symposium is . . . to begin in September. 2. The . . . of parts in the engine was conventional. 3. Let's . . . the words in the alphabetical order.

visible, visibility

1. A poor . . . prevented the pilot from landing at the appointed place. 2. The stars were not . . . in the dark sky. 3. In good . . . conditions we can see distant mountains from here.

possesses, possession, possessing

1. The material . . . the required qualities was found at last. 2. Can you describe the qualities which this mineral . . .? 3. Two halves of an ancient vase were in . . . of two different people, and it took years before a museum managed to buy both of them.

fulfils, fulfilment, fulfil

1. They promised to . . . the task in a week. 2. He is a man who always . . . his promises. 3. The . . . of the plan depended on the coordinated efforts of many people.

contribution, contributes

1. The policy of the Soviet government . . . greatly to the development of friendly cooperation between countries. 2. Leo Tolstoy's. . . to the development of Russian literature cannot be over-estimated.

Упражнение 10. *Заполните пропуски предлогами* **in, to, into, by, with, for, on, of, during, before, after.**

1. This plant is equipped . . . machinery made . . . the Soviet Union. 2. They worked . . . room 25 . . . the third floor. 3. The house was destroyed . . . fire. 4. The idea . . . heating houses . . . the warmth . . . the Sun has become popular in the last few years. 5. This street leads . . . the centre.

6. I cannot give this book . . . you as I need it myself. 7. The solar cell converts sunlight directly . . . electricity. 8. The great number . . . cars in the streets of a modern town is responsible . . . pollution of the atmosphere. 9. . . . rush hours trains of the Moscow Metro leave the stations at intervals . . . 80 seconds. 10. Trams, which disappeared in many cities . . . and . . . the war, may come back. 11. . . . the last few years we have made great progress in car manufacture. 12. The research work must be completed . . . the end of the month. 13. He left the office . . . the contract had been signed. 14. He studied at the Institute . . . 5 years.

Упражнение 11. *Переведите следующие цепочки слов.*

1. principal roads layout; 2. water volume increase; 3. poor visibility conditions; 4. poor visibility hazard; 5. serious danger elimination; 6. profound changes anticipation; 7. profound safety studies; 8. clear visibility provision; 9. roadside plants arrangement; 10. steel alloy hardening

Упражнение 12. *Переведите следующие предложения, обращая внимание на способы выражения дополнения.*

1. Nowadays drivers expect the road signs to be highly visible, understandable and uniform. 2. Proper alignment of the road together with slight bends are supposed to contribute to safe driving. 3. Speeding is found to be one of the factors increasing the hazard of motor-car accidents on the road. 4. A complex of measures to ensure safe driving is anticipated to appear in the near future. 5. Simple arrangement of lights on the rear of a car indicate speed changes to the following driver. 6. Experts believe that volume of congestion is likely to become worse in future. 7. Visibility in the clear mountain air was so good that they could see the smallest details of the village beneath. 8. All the machine parts should be inspected with the purpose of finding out and eliminating all defective parts. 9. The many different types of traffic require almost as many different types of roads. Examples of purposely planned roads can be found in many parts of the world. 10. In Italy, speed roads connecting important centres are built for fast traffic and it is not possible to enter or leave them except at terminal points. No animal-drawn, self-propelled traffic or pedestrians are allowed. In the United States, many of the highways are divided into definite lanes: centre tracks are provided for fast through traffic, and side tracks for local traffic, etc.

Упражнение 13. *а) Прочтите текст и назовите в каждом предложении дополнение или группу дополнения.*

I. Many scientists consider Romans to be the first road builders, but there is evidence that Egypt had well-made roads long before the time of the Romans.

II. According to Herodotus, the oldest stone-paved road was made by the Egyptian King Cheops in about 3000 before our era to facilitate the transportation of huge stone blocks for the building of the Great Pyramid.

III. It took ten years to make this road for the transportation of the stones, and it is considered not much inferior to the Pyramid itself.

IV. The road was built of polished stone and covered with carvings of animals.

V. Scientists believe the earliest tracks in Great Britain to be made during Bronze Age.

VI. The Romans had developed a national system of fine roads before their conquest of Britain, and it was during their occupation that the first regular roads were built in the countr/.

VII. They built them mainly for military purposes.

VIII. They were required primarily for men on foot, and so these routes ran straight from camp to camp about 20 miles apart.

IX. These roads were not surpassed for many hundreds of years.

X. Stretches of them are still in use today.

б) Просмотрите текст еще раз и укажите номера предложений, которые, на ваш взгляд, передают наиболее интересную информацию.

Упражнение 14. *Переведите текст письменно.*

THE INFLUENCE OF BAD ROADS

The influence of inadequate road system on the cost of living and on the price of manufactured goods is enormous. It needs to be realized that out-of-date roads are a dangerous brake upon the development of national productivity.

There have been many attempts to count the cost of poor roads, and the fact is that the totals are astronomical. The basic facts are simple enough. The effective life of a vehicle is considerably shortened by wear caused by bad road surfaces and the need for frequent braking. Repairs and re-

placements are expensive. Petrol consumption increases rapidly when the vehicle cannot move at the most economical speed. Throughout the working day vast quantity of fuel and many man-hours are wasted in the traffic blocks that occur all over the country because roads have long ago ceased to be able to carry all the traffic put on them.

TEXT 16B

Задание I. *Прочтите текст, стараясь понять основное содержание. (Заметьте время начала и окончания чтения. Этот текст нужно прочесть за 3,5 минуты, из расчета 120 слов в минуту.)*

ROAD SAFETY

The problem to make highways safer is how to keep pavement from freezing (замерзание) under unfavourable weather conditions. The answer: heat, of course, but not that generated by costly and impractical conventional fuels. Instead, engineers use heat from the earth-geothermal heat, that is free, inexhaustible (неисчерпаемый) and available everywhere. Heat pipes containing small amounts of ammonia (аммиак) under pressure, are placed about every six inches in the roadway surface and extend some 30 to 60 feet into the ground. Heat from the earth conducted through the sealed (герметический) pipe, evaporates the ammonia at the lower end, causing the warmed gas to rise toward the roadway surface. Heat from the gas is exchanged through the pipe into the pavement. Result: a heated pavement.

As the warm gas cools at the top of the pipe, it becomes a liquid and goes back to the bottom to be reheated. The process is continuous and, best of all, requires no other source to operate. The test conducted on 24-by-12 foot wide slabs (плита) of pavement showed that where snow and ice built up on the unheated, conventional slab, the geothermally heated piece remained watery, but clear.

Under extremely cold conditions it may be necessary to add another type of heater (electricity, gas, coal, etc.) to get the desired results, but even in these special areas, the heat pipes will reduce the amount of energy required. The geothermal system can be built into any new highway while it's being constructed, and could possibly be added to older roads as they are resurfaced. Any heating system, including

geothermal, would at first be used in such dangerous areas as steep hills and sharp curves.

A new system of removing snow and ice from city streets by using electric heat has been tested in Moscow. Heating elements have been installed under a layer of concrete beneath asphalt road surface. The heating elements are connected by cable to a transformer substation. Special sensors (датчик) turn the heat on and off as necessary.

At first, only certain streets in Moscow will be heated by the new method, such as inclined roads and tunnel exits (выход) and entrances, which are especially dangerous to vehicles and pedestrians when covered with ice. Specialists estimate that the relatively small expenditure of electric energy will make the new system cheaper than snow plowing (снегоочистка).

Задание II. *Выберите утверждения, соответствующие содержанию текста.*

1. The most efficient way to keep pavements from freezing is to use:
   1) heat generated by conventional fuels; 2) heat generated by nuclear devices; 3) heat from the earth.
2. The test conducted on slabs of pavement showed that the geothermally heated slabs:
   1) were absolutely dry; 2) were covered with thin layer of snow; 3) were covered with a thin layer of water.
3. A new system tested in Moscow for removing ice from city streets uses:
   1) heat generated by conventional fuels; 2) geothermal heat; 3) electric heat.
4. A new heating system would at first be used:
   1) in central areas; 2) on straight highways; 3) on inclined roads, sharp curves, tunnel exits and entrances.
5. The new system of heating streets in Moscow will cost:
   1) a little more than snow plowing (снегоочистка); 2) less than snow plowing; 3) practically the same as snow plowing.

Задание III. *Прочтите текст еще раз и ответьте на следующие вопросы.*

1. What methods of keeping pavement from freezing are described in the article? 2. What do heat pipes of the system using geothermal heat contain and how far do they extend into the ground? 3. Through what kind of pipes is heat conducted from the earth? 4. What results from the evaporation of ammonia? 5. What happens to the warm gas after it is cooled

at the top of the pipe? 6. Is the process continuous or does it require any other source to operate? 7. Which of the methods described here will, in your opinion, most probably be used in future?

TEXT 16C

Задание I. *Прочтите текст, отыскивая в нем ответы на поставленные вопросы.*

ROADS IN JAPAN

When do national expressways become free of charge roads?

1. Highway networks in Japan consist of national expressways, [1] national highways, and municipal roads.

As a general rule, all roads should be available free of charges to all users and administered by national municipal government. But there are also toll roads [2] such as national expressways and other similar roads, constructed and administered by Japan Highway Public Corporation, local public corporations and local governments. These roads are to be free of charges after all the funds utilized to construct them are repaid by way of users' fees.

What is the function of national highways and expressways?

2. National expressways are trunk-roads [3] which form the backbone of Japan's traffic network. National highways together with national expressways connect the main cities industrial areas and other important junctions with each other.

The length of municipal roads in Japan is nearly 900,000 km. This length is about 85% of the total length of Japanese roads.

According to the long-term plan for road improvement roads must be developed as a whole system. During this period will be carried out the construction of trunk expressways consisting of 10,000 km of national expressways and bridges between the two islands Honshu and Shikoku and across Tokyo Bay, so that big Japanese cities will be connected with one another, and almost all the outlying districts will come within a limit of a day's trip from these cities.

What increases the constructional cost of national expressways?

3. All the national expressways in Japan have been constructed and operated as a toll road, primarily for the reason of financing. The present roll rates for national expressways are unified across the country.

The national expressways which are fully access controlled must be frequently separated from other crossing roads. Therefore the national expressways are essentially made up of series of embankments, cuts, viaducts, bridges and tunnels, thus requiring high construction cost.

As the national expressways are based upon the toll road system, toll gates are installed at each of the interchanges which are located at about 15 km interval. Also service areas equipped with fuel and repair stations, rest-houses and restaurants are located at about 50 km interval, and parking areas at about 20 km.

Sufficient traffic safety facilities, such as guide signs, remote control signals are provided, while an emergency telephone for the expressway user is installed at every one kilometre.

Gigantic structures such as the Kanmon Suspension Bridge (1,068 m), the Evasan Tunnel (8,489 m) and the Tanigava Tunnel (10,900 m) are incorporated in the 7600 km network.

Traffic volumes are steadily increasing.

What transportation systems are being constructed and developed?

4. In cities and their suburban areas where demand for transportation is growing the present situation of automobiles, railways and other conventional transportation means is far from being sufficient. In order to clear this situation and effectively meet the demand for transportation means in cities it is of vital importance to introduce a new and highly efficient public transportation system suited for the scale, structure, environment and other conditions of each city sphere.

Under the circumstances, the Ministry of Construction accelerates the construction of monorails in cities, and develops new road transportation systems including the guideway [4] bus system, designed to run on the guideway for computer controlled and self-operating vehicles carrying 20-

60 persons at a speed of 30-40 km an hour. Capable of carrying 500-15,000 persons per hour the system is suited to medium distance and medium capacity transportation.

NOTES TO THE TEXT

1. **expressway** — скоростная дорога с ограниченным доступом
2. **toll road** — платная дорога
3. **trunk-road** — магистральная дорога
4. **guideway** — направляющая, направляющая кулиса

Задание II. *Прочтите текст еще раз и выпишите данные о дорогах Японии, которые, по вашему мнению, представляют интерес для специалиста в этой области. Назовите самые интересные для вас факты. Есть ли в этой статье новая для вас информация?*

ЗАДАНИЕ К ТЕКСТАМ 16-ГО УРОКА

Пользуясь информацией, полученной из текстов урока, расскажите о том, как влияют дороги на: 1) уровень жизни людей; 2) продолжительность работы транспортных средств; 3) развитие сотрудничества между странами, а также какие нововведения в области строительства дорог вы считаете наиболее актуальными в настоящее время.

КОНТРОЛЬНЫЙ СЛОВАРЬ

1. alignment *(n)*; 2. alternatively *(adv)*; 3. anticipate *(v)*; 4. arrange *(v)*; 5. auxiliary *(a)*; 6. bend *(n, v)*; 7. beneath *(adv)*; 8. case *(n)*; 9. clear *(a)*; 10. contribute *(v)*; 11. danger *(n)*; 12. devise *(v)*; 13. eliminate *(v)*; 14. ensure *(v)*; 15. fulfil *(v)*; 16. harden *(v)*; 17. hazard *(n)*; 18. hinder *(v)*; 19. integral *(a)*; 20. just *(adv)*; 21. likely *(adv)*; 22. manner *(n)*; 23. medium *(n, a)*; 24. meet *(v)*; 25. moisture *(n)*; 26. nowadays *(adv)*; 27. plant *(n, v)*; 28. possess *(v)*; 29. principal *(a)*; 30. profound *(a)*; 31. provision *(n)*; 32. retain *(v)*; 33. road *(n)*; 34. serious *(a)*; 35. slight *(a)*; 36. sufficient *(a)*; 37. together *(adv)*; 38. visibility *(n)*; 39. volume *(n)*; 40. whenever *(adv)*

LESSON SEVENTEEN

Грамматика: Обстоятельство.
Основной текст 17А: Tunnels and Bridges.

Способы выражения обстоятельства

Наречие	He lives and studies **here.**
Существительное с предлогом	I shall go **to the library.**
Герундий с предлогом	**After selecting** the equipment we started testing it. Speedometer is used **for measuring** speed.
Инфинитив	They worked hard **to eliminate** the mistakes in the program.
Причастие	**Travelling** in the East he collected many local legends. **Having employed** alloys instead of steel the designers reduced the cost of the device. **Hardened** in fire, steel becomes stronger.

Упражнение 1. *Переведите следующие предложения, обращая внимание на способы выражения обстоятельства.*

1. To save time spent on washing a motor car special substance was added to the water. 2. Using the most advanced methods, equipment and techniques for producing better tyres efficiently and economically the firm has won high prestige in the world. 3. The engineers of the firm are well qualified to give you expert recommendations. 4. Rubber products of the firm are carefully designed to fit your requirements. 5. Equipped according to the latest trend in tyre production the firm produces high quality products. 6. Having opened a new production line for producing stainless steel, we have solved many problems of automobile manufacture. 7. After testing the material by advanced methods the researcher found it to possess all the qualities needed.

Упражнение 2. *Переведите данные ниже словосочетания.*

1. **immense** *a* — огромный
   an immense building, immense responsibility, an immense contribution to the struggle for peace
2. **indeed** *adv* — в самом деле
   Indeed, the performance of the new engine is excellent. Indeed, the new project seemed to have no disadvantages.
3. **mind** *n* — ум, разум; мнение
   to come into one's mind, the great minds of our age, to my mind he is right
4. **undertake (undertook, undertaken)** *v* — предпринимать
   to undertake a long travel, to undertake the construction of a gigantic plant, dangerous undertaking
5. **initial** *a* — первоначальный
   at the initial stage, to drive with an initial speed of 5 km/h, according to the initial plan
6. **ahead** *adv* — вперед, впереди
   to go ahead, ahead of time, ahead of schedule
7. **path** *n* — путь, дорога, тропа
   to take the path leading to the village, to move along a narrow path, the proposed path of a road
8. **obstruct** *v* — препятствовать
   to obstruct the traffic, an obstruction made by a fallen tree, to meet no obstructions on the road
9. **obstacle** *n* — препятствие
   to construct a tunnel under or through an obstacle, to overcome all the obstacles, to stop before an obstacle
10. **worth** *a* — стоящий, заслуживающий
    to be worth serious consideration, to be worth attention, to be worth reading
11. **divert** *v* — отводить
    to divert traffic from the central areas, to be diverted from the main route, diversion of through traffic
12. **ease** *v, n* — ослаблять, облегчать; легкость
    to ease the situation, to do everything with ease, to reach the opposite bank of the river easily
13. **network** *n* — сеть *(железнодорожная и т. п.)*
    to increase the underground railway networks, to have an efficient road network, the effect of road networks on the country's economy
14. **excessive** *a* — чрезмерный
    an excessive price, to reduce the excessive weight, an excessively heavy traffic

15. **over** *prp* — над, через, сверх, свыше
a motorway to be constructed over a river, to build a tunnel over 30 miles in length
16. **choice** *n* — выбор
a wide choice of goods, to have no choice, to make one's choice, at one's own choice
17. **immerse** *v* — погружать, окунать
to immerse a piece of metal in solution, to watch the immersion of a submarine
18. **join** *v* — соединять, присоединяться к
the road joining the two towns, to join the demonstration, the joined efforts in the struggle for peace
19. **lane** *n* — полоса движéния
a wide lane, a bridge consisting of six traffic lanes, to use the central lane for transit traffic
20. **explode** *v* — взрывать, взрываться
to explode rocks for driving tunnels, to use dynamite for explosion work, the explosion of an atomic bomb over Hiroshima
21. **insist (on, upon)** *v* — настаивать
to insist on accepting a new project, to insist on an immediate decision, to act with great insistence
22. **fairly** *adv* — довольно, весьма
to know the English language fairly well, to be fairly well provided with all the necessary supplies, light but fairly strong alloy
23. **tight** *a* — непроницаемый, плотный
a watertight material, an air-tight tube, to press tightly against the cylinder wall
24. **attractive** *a* — привлекательный, притягательный
to have an attractive appearance, to be attracted by a strange noise, to attract one's attention, magnetic attraction
25. **obvious** *a* — очевидный, ясный
to have an obvious advantage over the old cars, to have no obvious reasons for a refusal, he is obviously very ill
26. **predict** *v* — предсказывать
to predict the consequences of air pollution, to predict the future development of the economy, prediction of new trends in architecture.
27. **bore** *v, n* — бурить, сверлить; просверленное отверстие
to use air compressors or drills to bore rocks, to build a great number of bored tunnels, the diameter of the bore
28. **sink (sank, sunk)** *v* — опускать(ся), топить, погружать; тонуть

a new method of sinking pipes, the ship sank, old ships sunk on the sea bottom

Упражнение 3. (Работа со словарем.) *Определите, к какой части речи относятся выделенные слова, найдите в словаре нужные значения этих слов и переведите предложения.*

1. **encounter**
   1. Such difficulties are often **encountered** with when crossing rivers in cold climatic conditions. 2. In the airport I **encountered** a friend of mine with whom I had studied at the Institute. 3. The **encounter** of the two teams was televised.
2. **firm**
   1. He headed the **firm** for almost twenty years. 2. The foundation of the house should be **firm**. 3. **Firm** measures were taken to eliminate the consequences of the flood.
3. **hollow**
   1. **Hollow** tubes were used in the construction. 2. There was a **hollow** in the cylinder wall. 3. The ancient people **hollowed** a tree to make a boat.
4. **seal**
   1. The tube was air-tight because of a good **seal**. 2. Oil acts as a **seal**. 3. Gas was kept in a **sealed** tube.
5. **environment**
   1. Home **environment** is an important factor in forming a child's character. 2. Nuclear tests in all **environments** should be stopped. 3. **Environmental** factors should always be considered.
6. **crude**
   1. **Crude** materials are in some cases transported over long distances for manufacture. 2. His **crude** manners irritated people around him. 3. It was **a crude** scheme, and it didn't bring them any success.
7. **rate**
   1. The **rate** of flow under the bridge was exceptionally high. 2. The **rate** of population growth is increasing. 3. This is a first-**rate** orchestra.
8. **twin**
   1. The **twin** columns support the structure. 2. The **twins**, Mary and Jane, were the youngest in the family.
9. **assurance**
   1. The opposition he met with didn't shake his **assurance**. 2. He was given **assurances** of support.
10. **strict**
    1. **Strict** seismic requirements are applied to the bridge.

2. **Strictly** speaking, his arguments were not convincing.
3. A **strict** system of measures was proposed.

11. **exceptional**
1. He is a man of **exceptional** talent. 2. Every member of the group, without an **exception**, must be present at the meeting. 3. This is an **exceptionally** interesting article.

12. **tension**
1. An instrument for registration of **tension** in the bridge girders was installed. 2. The policy of the USSR is to ease international **tension**.

Упражнение 4. *Прочтите следующие интернациональные слова и дайте все русские эквиваленты этих слов, где это возможно.*

alternative, barrier, triumph, nature, gigantic, dynamite, construction, practice, block, atomic, bomb, army, military, diameter, ideal

ЗАДАНИЯ К ТЕКСТУ 17А

Задание I. *Просмотрите текст 17А и найдите ответы на следующие вопросы.*

1. What technique is used for constructing a tunnel? 2. What does the engineer have to decide when the road comes against a waterway or a mountain? 3. Why are underground railways necessary in large cities? 4. What are the three existing means of crossing a waterway? 5. What future is predicted for tunnels?

Задание II. *Переведите текст 17А, обращая внимание на новые слова и способы выражения обстоятельства.*

TEXT 17A

TUNNELS AND BRIDGES

1. The construction of tunnels presents the civil engineer with some of his most difficult problems.

Few people realize the immense courage and experience needed to pierce the barriers of mountains with long railway tunnels. Indeed, their construction has demanded every resource of mind, body and spirit. The story of these great works is a saga of human spirit triumphing over the forces of nature.

The tunnel construction dates back to 1857, when French and Italian engineers combined to undertake the gigantic task of building the Mont Ceris tunnel. It carries the main railway lines from south-eastern France to north-western Italy. The tunnel is nearly 8 miles long and is of great technical interest, because air compressors and rock drills operated by compressed air were first used on this work. It was also probably the first large project on which dynamite was employed for breaking the rock. But when it was started, drilling was done by hand. Black gunpowder was used for breaking the rock. At first progress was very slow, and if it had continued at the initial rate, it would have taken 75 years to complete it. In fact for the first 4 years the tunnel advanced only 9 in. a day on each side. With the introduction of compressed air drills and dynamite, progress went ahead and was accelerated to 6 ft a day.

Traffic Tunnels.

2. Whenever the proposed path of a road or railway is obstructed by a hill, a waterway, or some form of construction, the engineer designing the project has to decide whether to construct a tunnel through or under the obstacle. In making his decision, he has not only to consider the economic aspect, but must also weigh up all the constructional advantages and disadvantages of both tunnelling and the alternative method of either passing around or over the obstacle. In practice it is often found that tunnelling, although costly, proves to be less expensive than any alternative system.

3. The inability of the existing road system of many large towns to cope with modern traffic requirements has made tunnel construction a possibility worth serious consideration. To some extent flyovers and underpasses, being the first steps to speed up and divert traffic, have eased the situation, but a considerable contribution towards a satisfactory solution can be made by underground railway networks.

Many of larger cities of the world have been successfully served by underground railways for years, and most of them are still extending their networks, while other cities have introduced them for the first time to reduce excessive traffic congestion.

Bridge or Tunnel?

4. Should a motorway pass under or over a large waterway? For a narrow waterway there is no problem, the water is always bridged. Until 1960 only two alternatives existed,

bridging over or tunnelling under the waterway, but now a third choice is available, the immersed tube is made of pipes of great length lowered into a trench in the bed of the river and joined under water.

The main considerations in the decision are now generally traffic capacity, gradient, obstruction of shipping, costs of construction and maintenance, speed of completion, possible later widening and so on.

The choice often falls on a bridge because it can carry more vehicles per hour and its capacity is more easily extended by widening or by adding a deck.

One of the largest bridges in the world, with twelve traffic lanes, six on each of its two decks, is the Verrazano-Narrows Bridge in New York. For many years the United States Army engineers would not allow a bridge to be constructed at this site because its destruction in war time could block the harbour, and they insisted on building a tunnel. But after the first atomic bombs had been exploded, the US Army saw that it was purposeless to continue to insist on a tunnel.

5. In the eightieth of the last century, also for military reasons, the British Government would not allow further work on the tunnel under the English Channel to France although the preliminary work was by then so advanced that lengths of 1 km of pilot tunnel of some 2 m diameter had already been driven from each shore. These lengths were still in perfect condition when inspected eighty years later, because they had been driven through a chalk rock which is ideal for tunnelling, being fairly watertight and just strong enough.

The ever increasing motor traffic needs an ever growing number of highways, which will have to cross important waterways, with also increasing shipping. In several cases tunnels will not only be the cheapest solution, but also the best with regard to weather conditions (no ice or snow, no wind or rain), maintenance, danger of collision with a ship, aesthetic reasons, etc.

Bridge/tunnel combinations form attractive and often obvious solution for crossings of great length.

It is easy to predict that in the next decades an ever increasing number of important and interesting tunnels—submerged or bored—will be built, and that the existing methods of building, sinking, etc. will be improved and perfected and new and astonishing techniques will be developed.

Задание III. *Ответьте на вопросы к тексту 17А.*

1. What countries were connected by the Mont Ceris tun-

nel? (1) 2. Why is that tunnel of great technical interest? (1) 3. Why was the process of building the tunnel very slow at the beginning? (1) 4. What factors must the engineer consider in making his decision to construct a tunnel through or under the obstacle? (2) 5. In what way can tunnels help to solve the problem of traffic congestion in large cities? (3) 6. What factors must be taken into consideration when deciding the construction of a bridge or a tunnel? (4) 7. In what cases is a bridge preferred to a tunnel? (4) 8. Why more and more tunnels should be built in future? (5) 9. What are the main advantages of tunnelling? (5) 10. What kinds of tunnels will be built in the near future? (5) 11. What are the prospects for tunnel building? (5)

Задание IV. *Сделайте сообщение о мосте через Нью-Йоркскую гавань и о туннеле под Ла-Маншем, закончив следующие предложения.*

1. One of the largest bridges in the world is . . . . 2. For many years the US Army engineers did not allow the construction of a bridge because . . . . 3. They insisted on building . . . . 4. They stopped insisting on a tunnel after . . . . 5. In the eightieth of the last century the British Government stopped the construction . . . . 6. By that time the preliminary work was so advanced that . . . . 7. In eighty years these lengths of the tunnel were still in perfect condition because . . . .

Упражнение 5. *Переведите следующие словосочетания.*

an efficiency of a country's road network; to obstruct the free flow of vehicles; a wide choice of modern electronic equipment; to join the pipes under the water; the necessity of diverting traffic from central areas; to divert traffic with the help of flyovers and underpasses; to use a watertight seal; to have an attractive face; to complete the preliminary tests; to sink into an armchair; to do everything with ease; to achieve fairly good results; a hollow cylinder; a firm ground; an obvious mistake; to export crude oil; to observe the traffic rules strictly; to increase the rate of car production; to encounter danger bravely; the obstacles encountered on the road; to ease tension; to work in exceptionally bad conditions; to carry out the investigation of the environment; during the initial period; ahead of schedule; to avoid an excessive consumption of fuel; to insist on accepting a new programme; to speak with assurance; to predict the new trends in economic development

of the country; to undertake the construction of a new tunnel; to use twin columns

Упражнение 6. *Заполните пропуски подходящими по смыслу словами.*

excessively	tension	firm
choice	obstructed	obstacles
exceptional	rate	ahead
initial	diverted	worth
crude	obvious	joined
lanes	tightly	predict

1. The . . . cost of the construction has been decreased twice. 2. The course of the road has been . . . to reduce congestion. 3. I could not buy the picture as the price was . . . high. 4. It was pleasant to feel a . . . ground after many days of sailing. 5. . . . material was delivered to the factory. 6. On their way to the finish the sportsmen had to overcome many . . . . 7. A fallen tree . . . the road. 8. The ends of the two pipes had to be . . . . 9. The piston is pressed . . . against the cylinder walls. 10. The result was . . . the time spent. 11. They worked hard and completed their research . . . of time. 12. In his report he showed an . . . importance of the problem discussed. 13. Can one . . . the number of cars for the year 2000? 14. The impulses on the screen followed at the . . . of 10 per second. 15. The . . . of muscles can be measured by a special device. 16. One of the longest bridges with 12 traffic . . . is in the USA. 17. There was a wide . . . of different stamps. 18. The advantages of the new device were . . . .

Упражнение 7. *Назовите слова, от которых образованы следующие производные слова, и переведите их.*

excessively, environmental, assurance, strictly, attractive, explosion, obviously, tightly, obstruction, immensely, insistent, firmly, immersion, initially, diversion, predictor

Упражнение 8. *Выберите соответствующий перевод следующих английских слов.*

1. assurance — уверенность; уверять; уверенный
2. attraction — притягивать; притяжение; притягательный
3. excessive — избыточно; избыточность; избыточный
4. firmly — твердо; твердость; твердый
5. obstruction — препятствовать; препятствующий; препятствие

6. obvious — очевидно; очевидный; очевидность
7. prediction — предсказывать; предсказание; предсказанный
8. tightly — плотность; плотно; уплотнять

Упражнение 9. *Заполните пропуски соответствующими однокорневыми словами.*

initial, initially

1. This technique was developed . . . for metallurgy. 2. The device makes possible to measure the . . . speed of the body. 3. The . . . form of the object was hard to reconstruct.

insists, insistence, insisting

1. He . . . on the initial plan. 2. Why are you . . . on this plan? 3. He tried to prove his point with great . . . .

obstruct, obstruction

1. The car stopped because of the . . . on the road made by a fallen tree. 2. There was an . . . in the middle of the road and the transport had to pass around it, causing congestion. 3. Underpasses for people are used not to . . . the flow of traffic along the roads.

predicted, prediction, predict

1. No safe methods to . . . an earthquake have been so far devised. 2. After the appearance of sputniks weather . . . has became easier. 3. The consequences of the spring flood couldn't be . . . .

strict, strictly

1. We . . . followed your instructions. 2. Airport pavement surface must satisfy . . . requirements. 3. He was given . . . orders which he couldn't disobey.

assured, assurance, assuring

1. He said they could not give any . . . . 2. He . . . me that everything would be fine. 3. I got a letter from him . . . me that everything was ready.

excess, excessive, excessively

1. . . . strain proved fatal for the bridge. 2. The walls of the castle became . . . thin with ages. 3. . . . of information is a great strain on people.

exploded, explosion, explosive

1. The noise of . . . was heard miles around. 2. This is a highly . . . substance. Be careful! 3. Dynamite charges will be . . . there.

obvious, obviously

1. It was quite . . . that the plane would not arrive in time. 2. He was . . . to busy to consider the problem thoroughly. 3. His deep knowledge of the subject was . . . .

firmly, firm

1. A pier had to be sunk through the sand until it reached . . . rock. 2. He . . . promised me his help. 3. Columns sunk into the ground provided a . . . foundation for the building.

Упражнение 10. *Переведите следующие предложения, обращая внимание на способы выражения обстоятельства.*

1. The proposed network of roads in the country several million dollars worth was put up for the consideration of provincial highway authorities. 2. After the construction of the new stretch of the road the traffic diverted from it during this period was returned. 3. By passing the route under the railway the obstruction to traffic was overcome. 4. To predict the changes in the character of the districts through which the route will pass immense study program was begun. 5. Before making a choice between the elevated or underground roadway all aspects of their effect on the environment should be studied. 6. Many city planners insist that a tunnel or subway is more attractive in a residential or commercial district than an elevated roadway. 7. The effects of traffic on air pollution is not fully known. It is therefore difficult to predict the consequences of air pollution from different types of vehicles. 8. Any urban area—large or small—may want to reduce unnecessary automobile traffic in residential districts and in congested central areas. 9. It may seem strange to find that parking was a problem in the cities in the Middle Ages because towns had been built at a time when there were no coaches, so that when these vehicles began to appear in large numbers the old narrow streets and lanes were soon obstructed and congested. 10. When there is an obstruction for a road or railway, the engineer has to decide whether to build a tunnel through or under the obstacle. There are instances however when the engineer has no choice but pass round or over the obstacle. For example, very hard rock might make tunnelling extremely difficult and too costly.

Упражнение 11. *Переведите следующие предложения, обращая внимание на перевод инфинитива в различных синтаксических функциях.*

1. The new material is said to eliminate costly operations. 2. The plan to manufacture semiconductors was proposed by a group of leading experts. 3. The journey was expected to be brief and pleasant. 4. The performance of the new pump has proved to be excellent. 5. Chemists created a number of new plastics to be used for automobile bodies. 6. The designers found fiberglass to be ideal for sports car body because of its strength, ease of repair, and resistance to corrosion. 7. To use more glass in a modern motor vehicle means improvement of visibility. 8. The designer spoke about scientific discoveries to be applied in automotive industry. 9. Motor-car designers supposed these factors to contribute to the improvement of the motor-car appearance. 10. To make a motor-car really comfortable a motor-car designer has to take into consideration the position of the human body with respect to the vehicle.

Упражнение 12. *а) Прочтите текст и назовите в каждом предложении обстоятельство или группу обстоятельства.*

THE CHESAPEAKE BAY CROSSING

I. The Chesapeake Bay Crossing, several miles long on the Atlantic coast of North America, is an interesting combination of tunnel and bridge.

II. Its advantage is that it keeps the main shipping lanes free from the obstruction made by bridges, by providing tunnels under the deepest sections of sea bed.

III. A combination of tunnel and bridge is not possible for a short crossing because of the considerable difference in level between any tunnel and any bridge.

IV. The bridge must be well above high tide level, and the tunnel should be in strong ground, deep enough below the bed to be fairly dry.

V. The difference in level between the road surface in the tunnel and that on the bridge can hardly be less than 10 metres.

б) Просмотрите текст еще раз и укажите номера предложений, которые передают новую для вас информацию.

Упражнение 13. *Переведите текст письменно.*

THE COLLAPSE OF THE BRIDGE

In the first decade of the century at the Canadian city of Quebec, work began on one of the engineering wonders of the age. It was the Quebec Bridge, with a center span 1880 ft (549 m). That was to be a world record, 100 ft (30 m) longer than the main spans of Scotland's beautiful Forth Bridge, completed in 1890.

But Quebec Bridge had to be designed, fabricated and erected twice. On August 29, 1907, when the first half of the main span was nearing completion, it collapsed, killing 74 men.

How could so serious mistake happen? A number of design errors have been mentioned in the Government report. The official report said: "The professional knowledge of the present day concerning the action of steel columns under load is not sufficient to enable engineers to economically design such structures as the Quebec Bridge. To build a bridge of the adopted span a considerably larger amount of metal would have to be used than might be required if our knowledge were more exact."

TEXT 17B

Задание I. *Прочтите текст, стараясь понять основное содержание. (Заметьте время начала и окончания чтения. Этот текст нужно прочесть за 3,5 минуты, из расчета 130 слов в минуту.)*

THE SAN-FRANCISCO-OAKLAND BAY BRIDGE

In 1923 a thorough study showed to authorities that a bridge across the bay (залив) between San-Francisco and Oakland could never be built. Eight miles long, the bay was the longest span (пространство) of navigable water man has ever dreamed of spanning with a bridge. Also it was an earthquake (землетрясение) area. In an earthquake a bridge pier (бык) would break like a pencil.

How do you build that massive pier in this bay, where you have to go as far as 200 feet down in some places to reach the bedrock (a 16-storey building placed in a hole like that would still be under water)? How do you dig a hole deeper than any bridge builders have ever attempted and fill it with more concrete than was used on the Empire State Building,

all this in a swift current in the middle of one of the world's busiest harbours rushed over by storms and tides (прилив)? No, no, it would be a foolish mistake to try.

Ten years later the work began. A caisson (кессон) half an acre in area and 77 1/2 feet high was brought to the bay and anchored by 24 concrete anchors (якорь).

The caisson had been designed like a ship, with a number of watertight compartments. By manipulating the water pressure and air pressure the huge structure was made to descend.

Even before the caisson was in place, its sides were built up high again. It was like putting up a building by building up the walls as it sank into the earth. So the caisson went down to become the main foundation of the 75 million dollar San-Francisco-Oakland Bay Bridge.

The bridge has six lanes for automobiles on the upper deck and, on the lower deck, three for trucks and two for trains. It tunnels through a hill on the one of the islands. The tunnel had to be bored. It's big enough for a four-storey house to ride through on wheels. To hold up a suspension span (пролет) 71,000 miles of wire were needed to make cables. This made a pretty problem for engineers. A rise of one degree in the temperature in San-Francisco increases the length of wire by nearly half a mile, a fall of one degree contracts (сокращаться) it that much, and the weight of the spans alone has stretched the wire 140 miles.

Задание II. *Выберите утверждения, соответствующие содержанию текста.*

1. The San-Francisco-Oakland bridge was to carry traffic across:
   1) a wide river; 2) a sea bay; 3) a deep canyon.
2. The construction of the bridge between San-Francisco and Oakland presented difficulties:
   1) because it was the first bridge of such length in the world; 2) because the construction materials were not reliable enough; 3) because authorities were against its construction.
3. The construction of the bridge began:
   1) in nineteen twenty-three; 2) in nineteen thirty-three; 3) in nineteen forty-three.
4. The upper deck of the bridge is:
   1) for passenger motor-cars; 2) for trucks; 3) for trains.
5. The suspension span of the bridge presented a special problem for engineers because:
   1) the wire holding the span changed its length under the in-

fluence of weight and temperature; 2) the wire of the necessary length is impossible to produce; 3) the wire of the necessary strength was not produced at that time.

Задание III. *Прочтите текст еще раз и ответьте на вопросы.*

1. Why could a bridge pier easily break in that area? 2. How was the caisson made to descend? 3. What did caisson resemble (напоминать)?

TEXT 17C

Задание I. *Прочтите текст, отыскивая в нем ответы на поставленные вопросы.*

TWO BRIDGES

How do climatic conditions in this region vary from season to season?

1. A bridge across the Amur River, a structure on the Baikal-Amur railway in the East of the Soviet Union is reported to be the first of its size in the world to have the foundations for its piers built without caissons. Indeed, during the construction of bridges in this railway Soviet specialists have to solve technical problems not previously encountered in world practice.

The route of the Baikal-Amur railway crosses about 3,200 water barriers, the rivers being turbulent, with flows of up to 4.5 m/sec. In winter, ice thickness reaches 3 m; in spring there are excessive floods. Even small rivers transform into torrents twice a year and therefore need not just ordinary bridges but such that are capable of withstanding all whims of the nature in all seasons.

Bridge builders also have to consider the characteristics of permafrost. It is necessary to ensure that bridge piers stand firm both in winter when the soil is ice-bound and therefore hard and in summer when it transforms into a mass with a zero loadbearing capacity.

Why are bridges in the permafrost areas designed with large spans?

2. The bridge across the Amur River near the city of Komsomolsk is 1,450 m long and is said to be the most complex

installation of any that Soviet bridge builders have yet had to construct, not only because of its size and, consequently, the enormous volume of work but also because the local conditions are quite unusual.

The difference of water levels in the Amur River in winter and summer reaches 8 m. Ice-drifting periods occur twice every year in spring and in autumn, each continuing for a month. Added to this is a water depth of 20 m, a rapid flow, heavy frosts and strong wind.

This combination of conditions demanded investigations of quite new technical solutions. For example, to avoid the need for sealed caissons, concrete hollow tubes several metres long were lowered vertically to the river bottom.

In the permafrost areas along the route the bridges are designed with large spans so as to reduce the number of piers because of the difficulties of constructing foundations.

When did the construction of the roadway to the oil-rich North Slope become possible?

3. The Yukon River, one of the largest in North America, springs from the snows of the mountains of British Columbia, and flows through Alaska to the Bering Sea. This waterway has long been an important transportation artery. At the end of the century, prospectors and miners used the river to reach rich Alaskan and Canadian gold-fields. Until recently, the Yukon River was a major obstacle in constructing a roadway to the oil-rich North Slope.

But on October 10, 1975, that obstacle was overcome when the first bridge across the Yukon River in Alaska was opened to traffic. This new crossing is located 50 miles (80 km) south of Arctic Circle. Now a person can drive from Florida to the shores of the Arctic Ocean without a single ferry-boat.

The new bridge is an integral part of the Alaskan Pipeline project as well as a major link in Alaska transportation system. For the first time, it makes possible year-round surface transportation to the Arctic Ocean and the oil-fields near Prudhow Bay.

What was the reason for unusual design and construction of the bridge?

4. It was a remarkable engineering problem. The bridge site's remote location, extremely cold climate, and other environmental factors called for unusual design and construction.

Twin steel girders support a 30 ft (9.1 m) wide roadway. Later, the bridge will carry two 48 m crude oil pipelines and possibly, a large diameter gas pipelines.

In this huge river, a flow rate at the bridge site is very high water depths are 65-81 ft (20-25 m). Winter ice on the river reaches thickness of 6 ft (1.5 m), ice near the shore can be as much as 10 ft (3 m) thick. Therefore special protection was used for the piers of the bridge which will provide assurance against unknown movements of the ice.

Why did engineers have to use exceptionally tough steel for all the supports?

5. Although earthquake magnitudes in this locality are minor compared with active areas near South Alaska coast seismic requirements for the pipeline are very strict. And since the bridge will be carrying the pipeline the same strict seismic requirements were applied to the bridge. The bridge was designed for a Richter Magnitude 7.5 earthquake.

Because of the very low temperatures at this site (mean annual minimum temperature — 60° F) fracture was of great concern. Exceptionally tough steel was used in all main tension areas of supports. In the words of one engineer, toughness requirements were unprecedented in design.

The design provides a reserve for vehicles to cross the bridge even if one of the girders is fractured. The design was complicated by the addition of the 48 in. (1220 mm) oil pipeline on each side of the bridge, with one or both pipes full.

Задание 11. *Прочтите текст 17С еще раз и отметьте черты сходства и различия мостов через реки Амур и Юкон по следующим аспектам: 1) географическое местоположение; 2) климатические условия; 3) назначение; 4) особенности конструкции.*

ЗАДАНИЕ К ТЕКСТАМ 17-ГО УРОКА

Пользуясь информацией, полученной из текстов урока, расскажите о конструкционных особенностях перечисленных ниже мостов и какой из них, на ваш взгляд, представляет собою наиболее оригинальное инженерное решение:

1. Verrazano-Narrows Bridge;
2. Quebec Bridge;
3. The Chesapeake Bay Crossing;
4. The San-Francisco-Oakland Bay Bridge;
5. The Bridge across the Amur River;
6. The Bridge across the Yukon River.

КОНТРОЛЬНЫЙ СЛОВАРЬ

1. ahead *(adv)*; 2. assurance *(n)*; 3. attractive *(a)*; 4. bore *(v, n)*; 5. choice *(n)*; 6. crude *(a)*; 7. divert *(v)*; 8. ease *(v)*; 9. encounter *(v)*; 10. environment *(n)*; 11. exceptional *(a)*; 12. excessive *(a)*; 13. explode *(v)*; 14. fairly *(adv)*; 15. firm *(a)*; 16. hollow *(a)*; 17. immense *(a)*; 18. immerse *(v)*; 19. indeed *(adv)*; 20. initial *(a)*; 21. insist *(v)*; 22. join *(v)*; 23. lane *(n)*; 24. mind *(n)*; 25. network *(n)*; 26. obstacle *(n)*; 27. obstruct *(v)*; 28. obvious *(a)*; 29. over *(prp)*; 30. path *(n)*; 31. predict *(v)*; 32. rate *(n)*; 33. seal *(v, n)*; 34. sink *(v)*; 35. strict *(a)*; 36. tension *(n)*; 37. tight *(a)*; 38. twin *(a, n)*; 39. undertake *(v)*; 40. worth *(a)*

LESSON EIGHTEEN

Грамматика: Дополнительные, определительные и обстоятельственные придаточные предложения.
Основной текст 18A: Machines of the 20th Century.

Виды придаточных предложений

Дополнительные придаточные предложения	We understood **that the durability of the surface depended upon the uniformity of the mix.** The engineer wanted to know **if (whether) the alignment of the road was already done.**
Придаточные предложения обстоятельства времени	He has worked at the plant **since he came to the town.**
Придаточные предложения причины	He couldn't come to the lecture **since he was ill.**
Придаточные предложения цели	**In order that there should be no obstacles to traffic** a tunnel was built.
Придаточные предложения условия	No accidents will happen **provided you observe the traffic rules strictly.**
Придаточные предложения определительные	He perfected the system **that ignited the mixture.** The layout of the engine **which we are discussing** has a number of disadvantages.

Упражнение 1. *Переведите следующие предложения, обращая внимание на виды придаточных предложений.*

1. He explained that network of roads covered the whole country. 2. He explained that the network of roads that covered the country was mainly concentrated in the Eastern part. 3. If the scientists could predict the earthquake in an area the population would be evacuated from the district in time. 4. He asked if everything was arranged for the meeting. 5. He asked him whether he had taken part in the conference. 6. Since the speed limit was introduced the traffic moved at the speed of 60 km an hour. 7. Since this road was broadened it has become the main traffic artery in the area. 8. Unless the alloy possessed the required qualities it could not be used in rocket engineering. 9. The attempt to improve the performance of the engine will be successful provided you take into consideration all factors. 10. The access to the airport will not be safe if the obstacle that obstructs the view is not eliminated.

VOCABULARY NOTES

Упражнение 2. *Переведите данные ниже словосочетания.*

1. **sequence** *n* — последовательность
   a logical sequence of operations, the sequence of events
2. **artificial** *a* — искусственный
   artificial flowers, made of artificial materials, to learn to create artificial climate
3. **obviate** *v* — устранять, избегать
   to obviate taking too much medicine, to obviate the usage of expensive fuels, to obviate danger
4. **underline** *v* — подчеркивать
   to underline the main idea, to underline the advantages of the new design
5. **management** *n* — управление, руководство
   the changes in the field of management, the transportation management problem, the management of a gigantic plant
6. **enumerate** *v* — перечислять
   to enumerate all the facts concerning the matter, the enumeration of the latest achievements in industry, to enumerate the last week's sports events
7. **essence** *n* — сущность
   the essence of the system of automatic control, to receive essential information, to realize the essence of social changes in the country

8. **emit** *v* — испускать, издавать *(звук)*, выделять, излучать
to emit light, signals emitted by a special device, sound emitter
9. **alarm** *n, v* — сигнал, тревога; поднять тревогу, встревожить
alarm signal, a false alarm, to be alarmed by the boy's strange behaviour, alarming news
10. **put out** *v* — выпускать
to put out the production of the highest quality, to be put out in time
11. **dig (dug, dug)** *v* — копать
to dig a deep hole, to use a rotary excavator for digging operation, to be able to dig 12,000 cubic metres of earth per hour
12. **remove** *v* — убирать; передвигать
to remove the old parts and replace them by new ones, to design an excavator for digging and removing great amounts of earth, to remove the furniture
13. **a lot (of)** — много, масса
to receive a lot of useful information, to free man of a lot of unnecessary operations, to know a lot about robots
14. **raise** *v* — поднимать(ся)
to raise the speed, to raise the production rates, the material basis for raising living standards
15. **true** *a* — истинный, правильный, верный
to present the true facts of the events, to witness truely fantastic changes, a true description of the workers' life
16. **hardly** *adv* — едва, вряд ли
Their terms were hardly acceptable to us. The experiment under such conditions was hardly possible. He was so tired that he could hardly walk
17. **imagine** *v* — воображать, представлять себе
not to be able to imagine all the consequences, to imagine the future perspectives, to have rich imagination
18. **cope (with)** *v* — справляться
to help to cope with the new task, to be able to cope with the increase of the traffic
19. **as well** *adv* — также
The device can perform simple and complex operations as well. He is a talented singer and a good composer as well.
20. **law** *n* — закон
according to the laws of logics, to act against the law, to break the laws of the country

21. **deal (dealt, dealt) (with)** *v* — иметь дело, заниматься чем-либо
to deal with logical problems, to deal with different kinds of people
22. **partial** *a* — частичный
a partial solution of the problem, to be used partially, to be in partial use
23. **decrease** *v, n* — уменьшать(ся), убывать; уменьшение
to decrease the weight and size of the machine, a decrease in production
24. **aggravate** *v* — усугублять, ухудшать
to aggravate the conditions, to aggravate the city traffic situation
25. **intend** *v* — намереваться; предназначать
to intend to do something, to have good intentions, a device intended to check the oil pressure
26. **memory** *n* — память
to have a good memory, to keep everything in memory, to refresh the dates in one's memory
27. **vision** *n* — зрение; видение
to possess good vision, to be in the field of vision, to be well visible from any point
28. **sense** *n* — чувство; значение, смысл
a sense of hearing, a sense of vision, to have no sense of humour, not to understand the sense of the sentence
29. **differentiate** *v* — различать, отличать
to be able to differentiate colours, to differentiate the frequency of transmitted waves, to differentiate sounds
30. **feel (felt, felt)** *v* — чувствовать, осязать
to feel well, to feel sad, to be able to feel an object
31. **point out** *v* — указывать, подчеркивать
to point out one's mistakes, to point out the main facts, to point out the defects
32. **exclude** *v* — исключать
to exclude any mistake, to be excluded from the team, without exclusion
33. **instance** *n* — случай, пример
in several instances, in this instance, for instance
34. **compete** *v* — соревноваться, состязаться, конкурировать
to compete with an artificial intellect system, to take part in the chess competition
35. **peculiarity** *n* — специфичность, особенность
due to some peculiarities, the peculiarities of the human organism, a peculiarly looking man

Упражнение 3. (Работа со словарем.) *Определите, к какой части речи относятся выделенные слова, найдите в словаре нужные значения этих слов и переведите предложения.*

1. **transfer**
   1. His desk was **transferred** nearer to the window. 2. He got a **transfer** to a large city in the North. 3. The goods were **transferred** there in trucks.
2. **trade**
   1. His father was a shoe-maker by **trade**. 2. The volume of foreign **trade** of our country is very great. 3. We are **trading** with many countries of the world.
3. **issue**
   1. They began to **issue** a daily newspaper. 2. The magazine is **issued** monthly. 3. The **issue** of the magazine was started twenty years ago.
4. **manual**
   1. The publishing house issues textbooks and **manuals**. 2. Automation makes **manual** labour unnecessary. 3. The spaceship has both automatic and **manual** control.
5. **touch**
   1. He felt a cold **touch** on his hand. 2. The player didn't **touch** the ball with his hand. 3. We didn't **touch** this problem in our talk.

Упражнение 4. *Прочтите следующие интернациональные слова и дайте все русские эквиваленты этих слов, где это возможно.*

activity, privilege, machine, instrument, complex, logical, sort, medicine, stimulator, apparatus, organ, signal, paradox, metallurgical, cubic, metre, fantastic, robot, talent, culture, category, chemical, radioactive, manipulator, mobile, element, intellect, magnetic, gravitation, physiology, organism

ЗАДАНИЯ К ТЕКСТУ 18А

Задание I. *Просмотрите текст 18А и найдите ответы на следующие вопросы.*

1. What are the latest technical achievements of the Soviet Union in industry and agriculture? 2. In what way will the material wealth be chiefly produced in future? 3. What properties will machines with artificial intellect possess that man lacks?

Задание II. *Переведите текст 18А, обращая внимание на новые слова и придаточные предложения.*

TEXT 18A

MACHINES OF THE 20th CENTURY

Fantastic Changes.

1. It is rather hard to find today a field of human activity where technological devices serving the most diverse purposes are not employed. Functions which used to be the privilege of humans have been transferred to machines. Mechanical instruments perform with enviable speed the most complex calculations, logical sequences of operations, and all sorts of forecasts. Modern engineering presented medicine with an artificial heart, lungs and kidneys, heart activity stimulators and apparatus which obviate the use of sleeping pills.

2. It is repeatedly underlined in many scientific works that by the end of the present century the vast majority of people will be working in the fields of science, education, trade, management and the services industry. Only some 15 per cent of all the employed will be concerned directly with material production. Machines and automatons will be the chief producers of material wealth. The Soviet Union is already working out such machines. Here we enumerate some of them.

3. Driverless trains are operating at the Tashtagol ore mine. Soviet specialists have designed a system for automatic control of mine trams. What is its essence? The tram is equipped with a logical device which issues commands and controls movement. In case of a breakdown, the tram stops and a special transmitter emits an alarm signal. Only one dispatcher is needed to keep the tram traffic under observation.

4. The TU-144 planes have appeared in the skies. Their speed is 2,520 kph. This plane covers the distance from Moscow to Delhi in only 2.5 hours, and to Paris or London in 1.5 hours. Whenever the TU-144 flies westwards, a paradox develops: if the machine takes off in Moscow at noon it will land in London before noon, i. e. it will seemingly travel at a greater speed than the revolution of the Earth.

5. A rotary excavating complex put out recently is able to dig and remove 12,000 cubic metres of earth per hour. Modern technology frees man of a lot of unnecessary operations, and helps him to build the material basis for raising living standards and producing cheaper goods. We are now witnessing truly fantastic changes in industry, transport and agriculture, without which we can hardly imagine life.

6. Various social processes underlie most of the problems now facing science. The most important among them is the one connected with people's activities, the correlation between man and production, between man and machines.

Let's consider this problem, which is both technological and social. The essence of the problem is, firstly, that our understanding of people's well-being is based on the concept of their living standards. Secondly, it concerns the facilitation of human labour. Thirdly, it is connected with the extension of opportunities of developing human talents in culture, education, etc.

The task, therefore, is to build machines, systems and devices which will help to cope with these problems. One way to achieve this is by automating production, by introducing automatic machines, and not only automatons as such, but automatic plants and systems which will perform all sorts of complex operations. This includes the automation not merely of manual labour, but of man's intellectual work as well. It became possible only after the appearance of a special category of machines, which we call "logical", i. e. operating according to certain laws of logics and dealing with various logical problems.

7. At present, for example, there still exist quite a number of hard jobs in which man is directly involved. These include metallurgical production, forge, foundry and chemical shops, radioactive media and finally, the mining industry. Who will be able to take man out from underground? It is a job for robots, manipulators and mobile systems which will not only perform operations on storing, moving, etc., but will possess elements of an artificial intellect. Some of them are already in partial use and are called industrial robots.

The number of people available for employment in production is steadily decreasing. This problem will be greatly aggravated in the future.

That's why scientists are now working on systems which will fully replace man in his conventional activities. Today this is done only in the reproduction of corresponding mechanical motions. In the future it is intended to supply the machine with an artificial intellect. We want it to have a good "memory". We also want the machine to possess vision—the main informative sense and be able to differentiate colours, volumes and configurations. It must have a sense of hearing

so that it could be controlled by voice, and be able to "feel" an object.

Besides all that, we can equip a machine with senses which man lacks, for example, make it sensitive to the magnetic field. Also, man lacks the sense of heat, strictly speaking, because you cannot tell whether something is hot or cold until you touch it. A robot can also have a sense of the gravitation field. This would be an advantage in space exploration, underground work and in solving the mysteries of the oceans.

8. However, it must be pointed out that man is not being completely excluded. Artificial intellect will be applied in instances when it would be more efficient than human intellect. In other words in such cases when human physiology cannot compete with an artificial intellect system, when simply due to its peculiarities the human organism cannot react to the information which an artificial intellect can process. For some time yet these systems may require an operator who in case of an emergency will deal with them on the basis of human experience.

A large collective of scientists is working on these systems in various research and educational institutes in our country and abroad.

Задание III. *Ответьте на вопросы к тексту 18А.*

1. What achievements of modern engineering are used in everyday life of society? 2. In what fields will the majority of people work by the end of the century? 3. Who will be the chief producers of material wealth by the end of the 20th century? 4. What is the essence of the automatic control system of mine trams? 5. How much time does it take the TU-144 to cover the distance from Moscow to Paris? 6. What is the efficiency of a rotary excavating complex? 7. What kind of machines can we call "logical"? 8. What are the most strenuous jobs in which man is still involved? 9. What kind of operations can robots and mobile systems perform? 10. What features will automatic machines possess that will enable them to replace man in his conventional activities? 11. What senses does man lack which a machine can be equipped with? 12. In what cases will artificial intellect be applied?

Задание IV. *Выполните данные ниже задания к тексту 18А.*

1. "Functions which used to be the privilege of humans have been transferred to machines."

What do you think of this problem? What particular functions of humans can be performed by machines?

2. "Machines and automatons will be the chief producers of material wealth."

Do you agree with the author? Give your reasons.

3. How can you explain the following paradox: "If the TU-144 takes off in Moscow at noon it will land in London before noon."?

4. "The number of people available for employment in production is steadily decreasing."

What is meant here?

5. Discuss the author's statement: "Artificial intellect will be applied in instances when it would be more efficient than human intellect."

Упражнение 5. *Переведите следующие группы слов.*

a good memory; a short memory; to obviate a difficulty; to obviate danger; the peculiarity of his nature; a true story; to be a true friend; true to his word; artificial daylight; artificial ice; artificial smile; to dig a hole; to dig a tunnel through a mountain; to deal with facts; to deal with foreign trade firms; to aggravate illness; the essence of the proposal; enumerated points; she is hardly twenty; it is hardly possible; according to the law; the force of law; within the law; to have rich imagination; to cope with difficulties; to cope with danger; to intend to do something; the book intended for children; to compete with others for a prize; in order to decrease the number of road accidents; to trade with a lot of foreign countries

Упражнение 6. *Заполните пропуски подходящими по смыслу словами.*

enumerated	pointed	a lot of
artificial	partially	vision
underline	intend	dig
hardly	aggravated	decreasing
imagine	peculiarities	
raise	removed	

1. When you want to remember a word better you must . . . it in the text. 2. We receive . . . information from radio and television. 3. The number of people available for employment in production is steadily . . . . 4. His failure can be . . . explained by the lack of time. 5. He . . . out that there were certain formalities to be observed. 6. Certain . . . of speech

are characteristic of this region. 7. The piano was . . . to the corner. 8. After they had crossed the mountains the sea was no longer within their . . . . 9. If you want to speak, please . . . your hand. 10. In summer . . . ice is used for skating. 11. He . . . the details shown in the design. 12. It took them much time to . . . a deep hole in the frozen ground. 13. The box was so heavy that he could . . . raise it. 14. His catching cold . . . his illness. 15. What do you . . . to do improve your knowledge of chemistry? 16. They had to cross a wide river, but could not . . . how they would do it.

Упражнение 7. *Назовите слова, от которых образованы следующие производные слова, и переведите их.*

artificially, manager, emission, imaginable, manually, lawful, partially, intention, memorial, sensitive, exclusive, competitive, peculiarity

Упражнение 8. *Выберите соответствующий перевод следующих английских слов.*

1. aggravation — ухудшенный; ухудшать; ухудшение
2. enumeration — перечисление; перечисленный; перечислять
3. exclusion — исключительный; исключение; исключительно
4. imagination — воображать; воображение; воображаемый
5. partially — частично; частичный; частность
6. peculiarity — особенно; особенность; особенный

Упражнение 9. *Заполните пропуски соответствующими однокорневыми словами.*

managing, manager, management

1. The . . . of the factory thoroughly analysed the situation. 2. He said he wanted to speak to the . . . . 3. The correspondents wanted to speak to the person who was . . . the farm.

enumerated, enumeration, enumerate

1. Where can I find the . . . of the firms we are trading with? 2. Can you . . . the mistakes found in the program? 3. The old man quickly . . . the plants found on the island.

essence, essential

1. The . . . of the proposal consists in the following. 2. Water is . . . to life.

imagination, imagine

1. We couldn't . . . how they would do it. 2. He is a man of great . . . . 3. . . . is essential to writers.

aggravation, aggravated, aggravate

1. Unfavourable weather conditions . . . the situation. 2. We tried to analyse the reasons of sudden . . . . 3. You should act so as not to . . . the difficult situation.

differentiating, differentiate, differentiation

1. . . . of labour appeared very early in human history. 2. You must learn to . . . between these two factors. 3. He studied features . . . the two objects.

compete, competition, competing

1. He took part in swimming . . . . 2. The teams were . . . for the prize. 3. The two firms . . . on the market.

peculiarity, peculiar

1. The problem is of . . . interest. 2. These plants are . . . to the island. 2. He studied the . . . of animal life in the mountains.

Упражнение 10. *Переведите предложения, выбрав подходящее по смыслу слово из трех слов, данных в скобках.*

1. The Soviet atomic ice-breaker "Arktika" was the first ship to reach the North Pole. She made 2,809 miles (above, under, through) fields of very thick ice. 2. The expedition was followed by the world with great interest (because of, for, although) it was the first expedition in history which reached the North Pole by water. 3. This design is ideal (in case of, instead of, because of) its simplicity and convenience. 4. The climate of most of Canada differs (beyond, from, against) that of the British Isles, though large parts of Canada are in the same latitude. 5. Automobiles have mirrors for the driver to see what is going on (behind, in front of, towards) him. 6. It is reasonable to assume that (with, within, without) a few years the average car will weigh at least 500 pounds less than today's models. 7. (According to, thanks to, owing to) the information received by us, the steamer will arrive in two days. 8. They could not get there in time (in order to, owing to, instead of) a severe storm. 9. Some people like travelling by plane (as well as, so far as, whereas) others prefer going by train. 10. They were in a hurry to complete the tests

of the new model (so that, unless, while) they could start its mass production. 11. Interest in transport problems has extended far (among, beyond, between) the specialists. 12. This bus makes regular trips (out of, among, between) the city centre and the suburb.

Упражнение 11. *а) Прочтите текст и назовите номера предложений, в которых встречаются придаточные предложения.*

COMPUTERS

I. When Charles Babbage, a professor of mathematics at Cambridge University, invented the first calculating machine in 1812 he could hardly have imagined the situation in which we find ourselves today.

II. Nearly everything that we do in the modern world is helped, or even controlled by computers, the complicated descendants of his simple machine.

III. Computers are being used more and more extensively in the world today, for the simple reason that they are far more efficient than human beings.

IV. They have much better memories and can store huge amounts of information, and they can do calculations in a fraction of the time needed by a human mathematician.

V. No man alive can do 500,000 sums in one second, but an advanced computer can.

VI. In fact, computers can do many of the things which we do, but faster and better.

VII. They can pay wages, reserve seats on planes, control machines in factories, work out tomorrow's weather, and even play chess, write poetry, or compose music.

б) Просмотрите текст еще раз и назовите номера предложений, в которых говорится о некоторых преимуществах компьютера над человеком.

Упражнение 12. *Переведите текст письменно.*

ROBOTS

Today's generation of robots can be very effective in monotonous or hazardous jobs. Without the ability to "see" or "feel" objects present-day robots can pick up or place parts only if they are accurately placed. If a part is not within a millimeter or so of where it is supposed to be, or if it is turned more than a few degrees from the proper orientation, mishaps are likely.

New systems allow a robot to take a part, "look" at it to determine correct orientation and load the part into the machine.

Next step will be to "teach" robots new professions. Even colour differentiation may be possible judging from experimental work in Japan, where a semiconductor device is reported to be extremely sensitive to colours which are being tested.

Eventually these robots will have artificial intelligence in the form of algorithms which will allow computerized robot to reprogram themselves. Robot with this sort of intelligence will set the stage for total automation and should be widely used in the near future.

TEXT 18B

Задание I. *Прочтите текст, стараясь понять основное содержание. (Заметьте время начала и окончания чтения. Этот текст нужно прочесть за 3 минуты, из расчета 130 слов в минуту.)*

MACHINES THAT CAN TALK AND THINK

No science fiction story these days is without a computer able to speak and able to think for itself. While at the moment no such "complete" artificial brain (мозг) exists, it is fantasy on the way to reality.

There is one machine, for instance, which can understand about 300 spoken words and pronounce fifty words in reply. Another can read texts typed in either Russian or English plain languages, not a special computer language. It can cope with many grammatical constructions, understand the meaning of words and whole phrases, and build up connections between concepts.

Similar principles underlie programmes for the control of robots. Present-day robots are very similar to programme control machine tools (станок) except perhaps for the mechanical hands, TV "eyes" and wheels absent in machine tools.

Robots must be able to orient themselves in an unfamiliar environment, to identify and classify objects, to plan their own actions and to learn in the process of work. They must be capable of "reasoning" and action.

With the aid of a programme known as RITA (drawing, text, analysis) devised by mathematician Alexander Nari-

niani in collaboration with Igor Melchick, RITA can describe what it sees, and see what it is asked to look at.

A dialogue with a robot can be carried out (naturally, in a natural language) also with the aid of DILOS (dialogue information logical system). By analysing a semantic model of a problem DILOS can furnish man not only with general information but also with a useful piece of advice. It can explain what a man should do, and what he should not.

DILOS is a typical adviser. More, it is a universal adviser: any information about any field of human activity can be put into the model which it will analyse.

A similar system built at the Massachusetts Institute of Technology is used to run supermarkets (универсам). For what applications is DILOS prepared in the first place? The touch stone (пробный камень) will probably be Tyumen. What is the best location for an oil well? How to minimize the cost of a pipeline? How to organize the work? Men will consult DILOS on such problems. There are chances the system will be used for the first time in Moscow.

Scientists at the computing centre of the Moscow City Soviet are thinking over the problem of optimising the administration of such a super complex problem as a big city, the planning of new residential areas and community services, the laying out of streets and underground communications.

This calls for an information system with a flexible (гибкий) memory, clear logic, common sense (здравый смысл) and high intellect. DILOS could provide a nucleus for such a system.

Задание II. *Выберите утверждения, соответствующие содержанию текста.*

1. A computer speaking with the operator:
   1) has become a reality; 2) does not exist now; 3) is a fantasy that will never come true.
2. With the help of a programme known as RITA a robot:
   1) can see any object and describe it; 2) can describe only the objects that come into its field of vision; 3) can look at the object which the researcher asks the robot to look at and describe it.
3. The programme called DILOS can give advice:
   1) in several definite fields of human activity; 2) in any field of human activity; 3) only in the field of oil extraction.
4. 1) DILOS is used for administration of a city. 2) DILOS cannot be used for administration of a city. 3) DILOS will be used for administration of a city in future.

Задание III. *Прочтите текст 18B еще раз и расскажите о возможных применениях компьютера в указанных в тексте областях.*

TEXT 18C

Задание I. *Прочтите текст, отыскивая в нем ответы на поставленные вопросы.*

MAN'S GREATEST PROBLEM IS HIMSELF

Why does the choice of the most important direction of scientific research become so significant?

1. Soviet scientists forecasting the future trends of scientific research see the greatest problem facing mankind as mankind himself, his impact on the environment.

While some scientists believe that the future course of science is unpredictable there is growing interest in forecasting the scientific future. The results of research in the next twenty years may exceed the entire previous scientific achievements and the time required for the introduction of scientific ideas is continually being reduced.

Thirty years passed before radio was applied on a large scale; transistors became part of our life within three years, while lazer established itself in just two months. Because of such high rates of development, the choice of the most important and far reaching direction of scientific research takes on special significance. In the USSR scientific forecasting is increasingly becoming an essential element in research and economic develop ment planning.

How is it possible to predict the areas where fundamental discoveries may appear?

2. Fundamental discoveries which speed up scientific and technological progress appear unexpectedly and, according to a majority of scientists, are unpredictable. Yet an analysis of society's economic needs, the logic of scientific development and the concentration of means and efforts in special fields can indicate the areas where new ideas are more likely to appear.

Most experts agree that biological science and research into universe as a whole will prove most productive in this respect. Achievements in genetics will make it possible to control the heredity of man as well as of plants and animals.

Science brings neither good, nor evil. It merely gives a man a set of instruments, the use of which is up to him or the social system he lives under. Consequently there is a need for greater social responsibility of scientists and for more public control over the activities of those who may utilize superior knowledge for the wrong aim.

Interesting is the study of such higher biological phenomena as thinking, memory, emotions. Ultimately these studies will make it possible to greatly increase the intellectual potential of people.

What will man be able to extract from sea bed and sea water?

3. The world ocean will play an increasingly important role in the life of mankind.

So far oceans proved to be less difficult field for explorers than cosmic space. Soviet scientists believe man will be able to explore the sea's resources to the depth of three quarters of a mile at the very least.

The extraction of mineral resources from the sea bed and from sea water will be industrialized.

Specialists in rocket engineering and space research are inclined to think that even our generation will live to see highly efficient industrial facilities, highly powerful stations, astronomical observatories, stationary research centres of various designations and large scale pilot installations working outside the planet Earth.

What is the influence of high economic development on nature?

4. As he extends his knowledge man will increasingly use the achievements of space technology for the solution of earthy problems.

How soon these problems will be solved depends on the scope of international cooperation and the pooling of resources and technical achievements. "In the past nature threatened man, now man threatens nature," said the French marine explorer Jacques Cousteau. Surprising as it may seem, today the world is faced with ecological catastrophe.

Even today the price we have to pay for the unlimited exploration of natural resources and the pollution of the air and water is rather high.

Once the well-known Soviet chemist Academician Nesmeyanov was asked the question: "What is your attitude to the problem of purification of the air and water?" "Negative," answered Nesmeyanov. "It is much more important not to pollute them."

The greater the level of economic development, the more means need to be spent for the protection of the environment.

Задание II. *Прочтите текст 18С еще раз и расскажите об основных направлениях исследований, предполагаемых на ближайшее будущее.*

ЗАДАНИЕ К ТЕКСТАМ 18-ГО УРОКА

Пользуясь информацией, полученной из текстов урока, перечислите все упомянутые компьютерные машины и их программы и расскажите, какие из них, на ваш взгляд, будут наиболее широко использоваться в ближайшем будущем и в какой области.

КОНТРОЛЬНЫЙ СЛОВАРЬ

1. aggravate *(v)*; 2. a lot; 3. alarm *(n, v)*; 4. artificial *(a)*; 5. as well *(adv)*; 6. compete *(v)*; 7. cope (with) *(v)*; 8. deal (with) *(v)*; 9. decrease *(v, n)*; 10. differentiate *(v)*; 11. dig *(v)*; 12. emit *(v)*; 13. enumerate *(v)*; 14. essence *(n)*; 15. exclude *(v)*; 16. feel *(v)*; 17. hardly *(adv)*; 18. imagine *(v)*; 19. instance *(n)*; 20. intend *(v)*; 21. issue *(v, n)*; 22. law *(n)*; 23. management *(n)*; 24. manual *(a, n)*; 25. memory *(n)*; 26. obviate *(v)*; 27. partial *(a)*; 28. peculiarity *(n)*; 29. point out *(v)*; 30. put out *(v)*; 31. raise *(v)*; 32. remove *(v)*; 33. sense *(n)*; 34. sequence *(n)*; 35. touch *(v, n)*; 36. trade *(n, v)*; 37. transfer *(v, n)*; 38. true *(a)*; 39. underline *(v)*; 40. vision *(n)*

LESSON NINETEEN

Грамматика: Бессоюзные придаточные предложения.
Основной текст 19А: Strength of Materials.

Виды бессоюзных придаточных предложений

Дополнительные придаточные предложения	He said the new model could now be used for mass production.
Определительные придаточные предложения	The article the students translated yesterday deals with the future city transport.
Придаточные предложения условия	Had the captain been less experienced he would not be able to pass his ship through that narrow canal.

Упражнение 1. *Переведите следующие сложноподчиненные предложения и определите, какие союзы пропущены.*

1. The properties of all ferrous alloys depend on the percentage of carbon they contain. 2. All of the chemical substances we know may be divided into three classes: elements, compounds and mixtures. 3. Were the temperature raised above a certain limit, the heat would cause mechanical troubles. 4. The irons and steels we use now are really alloys of iron, carbon and some other substances. 5. Experts say the electronic computers which are now in use are too big in size. 6. The dam they built in the mountains made it possible to obviate the danger of the flood. 7. He said the pictures they take from the sputniks made it possible to differentiate geological structures. 8. The results of the test proved any danger of explosion was eliminated. 9. The designer enumerated the advantages the new crane possessed and said it could successfully compete with any crane of the same class so far produced. 10. Had they raised the road-bed, it wouldn't have been flooded. 11. He pointed out that the miniature TV set the firm had produced consumed less energy than a small electric bulb. 12. Had we used the recently developed device we could have saved much time required for the analysis. 13. Were no cooling system provided, some parts of an internal combustion engine would melt from the heat of the burning gas.

VOCABULARY NOTES

Упражнение 2. *Переведите данные ниже словосочетания.*

1. **withstand (withstood, withstood)** *v* — выдерживать, противостоять
   to withstand high pressure, to produce mechanisms capable of withstanding cosmic cold and vacuum
2. **strain** *n, v* — натяжение, напряжение, нагрузка; натягивать, напрягать
   to withstand the strain of the war, the strains of cosmic flight, to strain one's memory, without strain
3. **stress** *n, v* — давление, напряжение; подчеркивать; подвергать напряжению
   to withstand the stresses of taking off and returning to the Earth, to stress the main idea, the stressed elements of the construction
4. **marked** *a* — заметный; отмеченный
   a marked progress in science and technology, to advance

in mathematics markedly, to mark the growth of efficiency

5. **complex** *a* — сложный
to build complex machines, a complex system of road traffic, the complexity of modern materials studies
6. **search** *v, n* — искать; поиск
to search new minerals, in search of new valuable properties of materials
7. **error** *n* — ошибка
to avoid errors in design and construction, an erroneous opinion, without significant errors
8. **trial** *n* — испытание
the first trial of heavy-loaded trucks, to predict the results of the final trial
9. **hide (hid, hidden)** *v* — прятать(ся)
to hide the key in a box, to be hidden in the depth of the ocean
10. **hitherto** *adv* — до сих пор
hitherto unknown materials, hitherto unpopular means of transportation
11. **square** *n, a* — квадрат, площадь; квадратный
to have the form of the square, to visit the famous Red Square, the load per square metre
12. **approach** *v, n* — приближаться, достигать; подход
to approach the city before dark, to approach the speed of the sound, a scientific approach to the problem
13. **rotate** *v* — вращаться
to rotate at a high speed, to check the rotation of the working parts, to rotate slowly
14. **tremendous** *a* — огромный
to rotate at a tremendous speed, tremendous success, under tremendous pressure
15. **extent** *n* — степень, мера
to a certain extent, the extent of one's influence, the extent of the damage caused by the storm
16. **confront** *v* — стоять перед *(лицом к лицу)*
the problems confronting experts, the confrontation of two different systems, to be confronted by a hazardous situation
17. **exceed** *v* — превышать
to exceed the conventional speed three times, not to exceed the given temperature during the experiment
18. **substantial** *a* — существенный
substantial reduction of pollution, to reduce the weight substantially, substantial improvement of the design

19. **latter** *a* — последний *(из двух названных)*; второй *(по времени)*
of the two proposals the latter seems to be more promising, the latter half of the month
20. **immediate** *a* — непосредственный; немедленный
to get immediate results, to react immediately, to offer immediate help
21. **locality** *n* — местность
to live in a seismic locality, to work in a local newspaper, the locality characterized by exceptionally heavy rains
22. **engage** *v* — заниматься; **to be engaged** — быть занятым, заниматься (чем-л.)
to be engaged in research work, to engage in teaching
23. **thorough** *a* — тщательный, совершенный, полный
a thorough analysis of the political situation, to make a thorough investigation, to do the job thoroughly
24. **destruction** *n* — разрушение
the destruction of material, to destruct the foundation, the destructive action of the explosion
25. **enable** *v* — давать возможность, делать возможным
to enable people to design machines that function reliably, to enable the increase of the output, to enable the reduction of fuel consumption
26. **ultimate** *a* — окончательный, конечный; максимальный
the ultimate result, the ultimate purpose, the ultimate output of the engine
ultimately *adv* — в конце концов

Упражнение 3. (Работа со словарем.) *Определите, к какой части речи относятся выделенные слова, найдите в словаре нужные значения этих слов и переведите предложения.*

1. **pure**
1. The problem of **pure** water and **pure** air is becoming more and more insistent. 2. Metals with a high degree of chemical **purity** free from any foreign substances were required. 3. The most advanced methods are used to **purify** drinking water.
2. **alike**
1. The three brothers were very much **alike** in appearance. 2. Their principle was to share **alike**. 3. The sisters were **alike** in beauty.
3. **resistance**
1. Special attention was given to the **resistance** of the material to cold. 2. The plant was found **to resist** un-

favourable weather conditions. 3. This plastic was chosen because of its high **resistance** to wear.

4. **ratio**

1. The **ratio** of stroke to diameter in the engine is changed. 2. In some Siberian towns the population contains a very high **ratio** of young people. 3. The distance covered by the automobile is in direct **ratio** to the time.

5. **substitute**

1. An effort was made to find a cheap **substitute** for the material. 2. Plastics are found to be reliable **substitutes** for many natural substances. 3. The doctor recommended him to **substitute** tea for coffee.

6. **shock**

1. The earthquake **shock** was sudden and violent. 2. Measures were taken to absorb the **shock**. 3. The giant wave **shocked** the port structures.

7. **friction**

1. This is a device to measure **friction**. 2. **Frictional** force may be both useful and harmful. 3. According to the information there is a certain **friction** between them over this point.

8. **overcome**

1. The doctors helped him to **overcome** his speech defects. 2. This is what we have to do to **overcome** the difficulties.
3. The obstacle was too great to **overcome**.

9. **satisfactory**

1. The results were found to be highly **satisfactory**. 2. We have completed the trial with a feeling of **satisfaction**. 3. It doesn't happen very often that he is **satisfied** with his work.

10. **dimension**

1. It was a building of huge **dimensions**. 2. It was the first three-**dimensional** film he saw. 3. He asked me to **dimension** the drawing most carefully.

11. **fatigue**

1. After that hard work I was dropping with **fatigue**. 2. The tests established the lower limit of the alloy **fatigue**. 3. Certain **fatigue** characteristics of the plastic made it impossible to use it for the purpose.

12. **displace**

1. In industry manual labour is being **displaced** by machinery. 2. He ordered the machine tools to be **displaced** to the centre line of the shop. 3. The ship **displacing** 10,000 tons is reported to be ready in June.

13. **feasible**

1. It was quite a **feasible** explanation of the fact. 2. The use of plastics in construction has made **feasible** projects that were impossible before.

14. **grade**

1. The tests demonstrated a high **grade** of intelligence of the students. 2. The engine characteristics were of high **grade**. 3. The facts were **graded** and thoroughly analysed.

Упражнение 4. *Прочтите следующие интернациональные слова и дайте все русские эквиваленты этих слов, где это возможно.*

cosmic, vacuum, mineral, tragedy, professional, wagon, expert, molecular, electricity, physics, airplane, kilometre, kilogram, polymer, synthetic, metallurgist, class, aluminium, rocket, idea, theoretical, original, seismic, geological, geophysical, mechanism

ЗАДАНИЯ К ТЕКСТУ 19А

Задание I. *Просмотрите текст 19А и найдите ответы на следующие вопросы.*

1. Why is the science of materials strength so important? 2. What are the achievements of chemists and metallurgists in the production of new materials? 3. Why is the problem of earthquake forecasting so important for our country?

Задание II. *Переведите текст 19А, обращая внимание на новые слова и бессоюзные придаточные предложения.*

TEXT 19A

STRENGTH OF MATERIALS

1. The great Galileo is considered the father of the science of materials strength, one of the basic engineering disciplines.

But before it could produce mechanisms capable of withstanding cosmic cold and vacuum, the strains and stresses of take off and return to the Earth, the science of materials strength had to cover a long and difficult path. Its progress accelerated markedly in the 19th century, when people began to lay thousands of miles of railway tracks, erect bridges and dig tunnels, build ocean-going ships and complex machines, dig into the earth in search of minerals.

2. In most cases our predecessors managed to cope with

their tasks. Many structures they built centuries ago have not only survived to our day, but remain in use.

Of course, there were also errors and tragedies when buildings fell in, machines broke down or bridges collapsed. At one time it even became a matter of professional ethics for the designer of the bridge to stand under it during the first trial run of heavy-loaded wagons.

Yet more often the cause of mishaps was not any lack of knowledge on the part of experts. The problems of strength of materials are hidden deep in the mysteries of atomic and molecular structure. It was only at the beginning of this century that research began in the physics of strength. This was none too early: mankind was entering the age of electricity, electronics, aviation, automobiles, nuclear physics and many other fields that characterize the world we know today.

3. Mankind was entering an age of high speeds, pressures, and temperatures which could be generated and withstood only with the help of new and hitherto unknown materials.

In the 1920s the top speed of an airplane was not more than 200 kilometres per hour, the load per square metre of the wing area was about 50 kilograms. The main construction material was wood. In our day, the speed of aircraft, even passenger planes, is approaching 3,000 kilometres per hour, loads may be as high as 600 kilograms per square metre of wing. The turbine that drives such an aircraft is not only a miracle of design, it is also a miracle of materials strength. Its blades, for example, rotate at a tremendous speed and at the temperature greater than 1,000° Centigrade. The given examples are sufficient to indicate the complexity of materials studies today and the extent to which progress in the near or more distant future depend on them. The problems confront experts all over the world, as well as in our country.

4. Of tremendous importance is creation of new materials. Chemists engaged in polymer research have produced the world's best synthetic rubbers. Tyres made of Soviet synthetic rubbers can cover distances several times exceeding the distance from the Earth to the Moon.

Metallurgists studying a new class of aluminium alloys have produced a very durable alloy which is being used in aircraft and rocket engineering. The alloy helps reduce the weight of apparatus substantially, thereby effecting a considerable saving of materials.

5. Today everybody has to be in the know concerning new ideas and accomplishments in their field. They are of interest to everybody. Science, the principle of design, possibilities of

modelling, including computer modelling help achieve flawless design and construction. When flaws do occur they are a consequence of gaps in theoretical knowledge or stress and strain unprovided for in the original design and construction. An example of the latter is earthquake. This is a problem of immediate concern for us: we have many seismic localities we live in, build factories and houses, subways and nuclear power plants. Our country is planning work on earthquake forecasting. At present many research establishments are engaged in these complex geological, geophysical and engineering problems. Their experiences, methods and discoveries are used in many countries. All this, of course, is but a short list of a few trends and results of the work of Soviet scientists.

6. But what about problems? What does the 21st century require of us? Firstly, theoretical works based on a thorough understanding of the destruction of material as a process. A new discipline is being created. Called "the mechanics of destruction" it will enable us to design machines, structures and mechanisms that function reliably. Further development of the very old science of materials strength will ultimately result in delicate bridges, light airy building, small but powerful machines and airplanes capable of carrying huge loads.

Задание III. *Ответьте на вопросы к тексту 19А.*

1. What made the science of materials strength progress most rapidly in the 19th century? (1) 2. What were the results of the errors the builders made because of the lack of knowledge of materials strength? (2) 3. What helped to solve the problems of materials strength at the beginning of the 20th century? (2) 4. What was the main construction material at the beginning of our century? (3) 5. What increased the requirements to the strength of materials in our day? Give examples. (3) 6. What new important materials have chemists and metallurgists created? (4) 7. What helps eliminate mistakes in design and construction today? (5) 8. What are the reasons of errors which still occur in design and construction? (5) 9. What problems are our research institutes solving concerning seismic localities? (5) 10. What new discipline is being created and why is it necessary? (6)

Задание IV. *Выполните данные ниже задания к тексту 19А.*

1. Prove or disprove the author's statement:

"In most cases our predecessors managed to cope with their tasks."

2. Discuss the author's statement:

"Mankind was entering an age of high speeds, pressures, and temperatures which could be generated and withstood only with the help of new and hitherto unknown materials."

3. What does the author want to underline saying that tyres made of Soviet synthetic rubbers could cover distances several times exceeding the distance from the Earth to the Moon?

4. Discuss the author's statements:

1) "Today everybody has to be in the know concerning new ideas and accomplishments in their field." 2) "When flaws do occur they are a consequence of gaps in theoretical knowledge or stress and strain unprovided for in the original design and construction."

Упражнение 5. *Переведите следующие словосочетания.*

destruction of materials; to be alike in colour; to be unable to approach nearer; to bring to destruction; to be of considerable dimensions; to approach the town; to exceed in strength; to exceed in height; to a great extent; fatigue limit; to hide treasure; better than hitherto achieved; the immediate future; the immediate aim; immediate contact; the latter half of the year; in the same locality; the marked pages; a marked change; pure white; pure air; to search for a lost thing; without strain; to strain one's eyes; satisfactory results; a satisfactory experiment; thorough investigation; a direct ratio; in the ratio of one to six; tremendous success; trial of strength; the ultimate load; the ultimate decision; to overcome difficulties; substantial argument; substantial improvement; the stress limit; violent shock

Упражнение 6. *Назовите слова, от которых образованы следующие производные слова, и переведите их.*

markedly, rotation, tremendously, confrontation, substantially, immediately, locality, engagement, thoroughly, destruction, ultimately, purely, resistance, substitution, displacement, complexity

Упражнение 7. *Заполните пропуски подходящими по смыслу словами.*

dimensions	rotate	extent
strain	latter	search
substitute	grade	hidden
thorough	locality	approaching
friction		

1. It is getting colder, winter is . . . . 2. These two things are alike in . . . . 3. I was amazed at the . . . of his knowledge. 4. He worked at the problem of reducing . . . to make the device more efficient. 5. For this purpose a steel of a higher . . . is needed. 6. The sun was . . . by the clouds. 7. Cosmic flights have been started in the . . . half of the 20th century. 8. Measures have been taken to prevent air pollution in populated . . . . 9. The . . . for a missing airman was successful. 10. The rope broke under the . . . . 11. His old car needs a . . . repair. 12. It did not take much power to . . . the wheel. 13. It is known that plastics effectively . . . metal in machine building.

Упражнение 8. *Выберите соответствующий перевод следующих английских слов.*

1. marked — заметный; заметно; замечать
2. rotation — вращаться; вращение; вращательный
3. immediately — немедленный; немедленно
4. destruction — разрушение; разрушенный; разрушительный
5. resistance — сопротивление; сопротивляться; сопротивляющийся
6. satisfactorily — удовлетворительный; удовлетворение; удовлетворительно
7. erroneous — ошибочный; ошибка; ошибаться
8. complexity — сложный; сложность; усложнять
9. thoroughly — тщательный; тщательно; тщательность
10. purely — чисто; чистый; чистота

Упражнение 9. *Заполните пропуски соответствующими однокорневыми словами.*

withstand, withstood, withstands

1. The material doesn't . . . high temperature. 2. We need material that . . . Arctic temperatures. 3. No other material . . . the tests so well as this one when we were conducting the experiment.

search, searched

1. The radio reported that the . . . was so far unsuccessful. 2. Several . . . parties were sent out. 3. He . . . in old manuscripts for the description of the ancient capital of the country.

square, squares, squared

1. There were several glass . . . of different colour on the table. 2. A . . . piece of glass was surrounded by a metal frame. 3. A piece of stone was . . . and polished.

approach, approaches

1. We were discussing the best . . . to the study of the problem. 2. The bridge was reported impossible to . . . . 3. I must say he . . . the problem from a different angle.

rotated, rotation, rotates

1. In the turbine the wheel is . . . by falling water. 2. In the turbine the falling water . . . the wheel. 3. Certain irregularities in the . . . of the Earth were discovered.

exceeds, exceeded, exceed

1. The task . . . his ability. 2. Some artificial fibres . . . natural materials in strength. 3. She said the reality . . . her expectations.

substantial, substantially

1. A . . . improvement in the design over previous models was noted. 2. The new program was . . . changed in comparison with the old one.

immediately, immediate

1. In these circumstances it was necessary to take . . . steps. 2. An . . . answer to the letter is required. 3. He . . . agreed to give us all necessary assistance.

destruction, destructions, destructive

1. The factors responsible for the . . . of the bridge were thoroughly analysed. 2. The . . . forces acting upon the structure must be thoroughly measured. 3. The . . . caused by the earthquake were reported to be exceedingly high.

enable, enabling, enables

1. Sputniks . . . tele- and radio communications between distant parts of the planet. 2. High strength of the plastics . . . their use in rocket engineering. 3. Northern plants possess certain qualities . . . them to grow in cold climate conditions.

Упражнение 10. *Переведите предложения, выбрав подходящее по смыслу слово из трех слов, данных в скобках.*

1. They promised to send the results of the test (for, until,

within) five days. 2. In spite of the disadvantages of the gasoline engine it will (however, although, whereas) dominate in the near future. 3. During the construction of the bridge (against, across, through) the Amur River specialists had to solve many technical problems. 4. The research centre was situated high in the mountains some three kilometres (below, under, above) sea-level. 5. The device did not work when the temperature was (under, below, over) zero. 6. They had to stop and rest every quarter of an hour (as, because of, but) the mountain path was very steep. 7. He has been working at the problem (from, till, since) last year. 8. All the workers of the shop decided to stay and wait for the results (since, till, as long as) the end of the test. 9. There were (over, in spite of, below) two hundred people at the conference. 10. Life would hardly seem possible to use (with, without, within) things made of modern synthetic materials. 11. This equipment may be used only (owing to, in case of, due to) emergency. 12. Fans are usually driven by electric motors (but, as, for) other power may be utilized where electricity is not available. 13. Everybody decided to drive to the country (so that, unless, in spite of) it rains. 14. At last the tired tourists saw a small village (before, around, beyond) the river.

Упражнение 11. *Переведите следующие предложения, обращая внимание на бессоюзные придаточные предложения.*

1. Tables, charts, and photographs showed this material could withstand tremendous stresses without destruction. 2. He said the new system was a marked improvement over the previous one which had technical difficulties in linking computers for optimum control. 3. The trial of the latest automatic smoke detection system designed to signal air pollution in the locality immediately proves it operates satisfactorily. 4. The book "The Engineer and the City" he recommended to me gives a thorough study of the problem and enables one to understand the tasks the engineer is confronted with. 5. He pointed out the complexity of the task exceeded everything hitherto known and that the ultimate result was hard to predict. 6. The book we discuss gives a profound analysis of reactor development and is of substantial interest to all engaged in the field. 7. He insisted the search of the error they were carrying out should be regarded as a matter of exceptional importance. 8. The firm announced they were replacing the filters they were so far employing by corrosion resistant filters. 9. The company reports the new grade of steel shows great potentials for compressor applications. 10. We hope you will overcome

the difficulties you are confronted with. 11. The head of the solar energy laboratory enumerated the advantages of the mechanism he has developed for simple conversion of the sun's rays into desired sources of energy. 12. The expert noted many countries poorest in natural resources were using solar energy for power sources.

Упражнение 12. *а) Прочтите текст и назовите номера предложений, в которых встречаются бессоюзные придаточные предложения и какие союзы опущены.*

THE NEXT POLYMER REVOLUTION

I. We all know, or should know that all things from nylon and other polyester fabrics have originated in the test tubes of the chemical laboratory, where chemicals are transformed into products of today's civilization.

II. Life would hardly seem possible to us without the modern synthetic materials.

III. There is conventional opinion that chemists have made just about all the compounds they can on the present basis, but in fact that is not so.

IV. The research work of the Pennsylvania State University with inorganic polymers proves that a new revolution based on inorganic polymers is about to start.

V. What is wrong with our present synthetic organic polymers?

VI. Flammability comes first on the list of their deficiencies.

VII. Besides they melt or oxidize at high temperature in the atmosphere.

VIII. Few remain flexible at low temperatures.

IX. Many soften and dissolve in gasoline and it is not difficult to see how that limits their uses.

X. The inorganic polymers they have developed at Penn State laboratory tend to avoid these disadvantages.

XI. Since the work at Penn State University began many new polymers have been made.

XII. The scientists say they promise to solve many of the technological and bio-medical problems.

б) Просмотрите текст еще раз и назовите номера предложений, в которых говорится о недостатках органических полимеров.

Упражнение 13. *Переведите текст письменно.*

MAKING PLASTIC DESTRUCTIBLE

Plastic trash is one of the most annoying of modern artifacts (остатки, артефакт). The problem is that stuff is virtually indestructible. The synthesized polymers that compose plastic stubbornly resist dissolution by water, air or sunlight and are not destroyed by microorganisms that break down natural materials. Burning doesn't solve things either as many common plastics give off toxic gases when burnt.

Many common plastics greatly outlive their usefulness: a nylon fishing line left on a beach might last for 200 years. Countless birds and mammals (млекопитающие) die each year after entangling themselves in fishing lines or devouring up bits of plastic.

The scientists are working at the problem of speeding up the destruction of plastics after they have become useless.

At the University of Maryland chemists have modified plastic polymers with the help of organic compounds called esters (сложные эфиры). Were these plastics buried in wet ground or thrown into a river, the bacteria would attack the esters leaving only two by-products: carbon dioxide and water.

The use of new silicon-based additives make plastics burn as cleanly as wood. This could be good news for ecologists and consumers.

TEXT 19B

Задание I. *Прочтите текст, стараясь понять основное содержание. (Заметьте время начала и окончания чтения. Этот текст нужно прочесть за 3,5 минуты, из расчета 130 слов в минуту.)*

CEMENT: MAN'S MIRACLE MIX

One of man's oldest building materials is finding its way into a lot of new places these days. Concrete (бетон), first discovered by the Romans, is now more widely used in construction than all other materials together.

The magic ingredient that makes concrete possible is cement, about which, according to one expert, more has been learnt in the past three decades than in the preceding 2,000 years. Concrete is a synthetic stone which can be formed while soft into practically any shape the builder wants.

Portland cement mixed with water is the paste that binds (связывать) sand, gravel, clinker (шлак) into an artificial rock that becomes harder as the years pass. Portland cement does not come from a place of that name; it was called Portland because Joseph Aspdin, the English builder who invented the first dependable, scientifically made cement about 1824, thought it resembled (напоминать) the rock excavated on the Isle of Portland on the Dorset Coast.

What's so new about cement after all these years? Several things. One item is "squeezed" (сжатый) concrete, known technically as pre-stressed (предварительно напряженный) concrete. By giving concrete a big squeeze after it has hardened, builders can increase its elasticity ten times, so that it will bend under a heavy load without breaking. This is important in building bridges, viaducts, and floors of large buildings.

The simplest way to pre-stress concrete is to put steel wires or rods in the concrete when it is poured.

An unusual American use of reinforced concrete is the floating (плавучий) highway bridge across Lake Washington. The depth of the lake made piers too expensive, so engineers built the bridge on hollow concrete pontoons anchored (укрепляться) in place by steel cables. It is the longest pontoon bridge structure on earth.

Until recently, the aim of engineers was to make concrete with as few bubbles (пузырь) as possible. Now they have come up with a new concrete that has millions of microscopic bubbles per cubic foot. It is made by adding an agent which foams (пениться) to form the bubbles when the concrete is mixed. This concrete doesn't crack when freezing. The first "air bubble" roads were built many years ago. They have stood up under winter freezes so well that today this concrete is used for new road construction.

Another discovery is "soil cement". Several years ago road builders lacking funds found that they could mix cement with soil on the site of the road, wet it and compact it, then cover it with a bitumen. The first road they built is still carrying traffic. There are miles of soil-cement secondary roads and streets in the US today. Construction goes so fast that with modern equipment a road builder can complete a mile of soil cement road in one day.

Scientists are working on research into the behaviour of cement and concrete under all kinds of conditions. Collaborating with engineers they are developing new ways of using concrete. Cement is changing the face of the Earth.

Задание II. *Выберите утверждения, соответствующие содержанию текста.*

1. Portland cement is called:
   1) after the name of the person who invented it; 2) after the name of the place it had been found; 3) after the name of the island where the mineral it is similar to was excavated.
2. Builders can increase the strength of cement by squeezing it:
   1) while it is hardening; 2) after it had been hardened; 3) before hardening.
3. The bridge across Lake Washington is supported by:
   1) stone piers; 2) concrete pontoons; 3) steel pontoons.
4. Cement with microscopic bubbles:
   1) is cheaper to produce; 2) is resistant to low temperatures; 3) cracks when freezing.
5. The main factor that stimulated the discovery of "soil cement" was to make the process of building the road:
   1) easier; 2) cheaper; 3) quicker.

Задание III. *Прочтите текст 19B еще раз и скажите, какую новую информацию о цементе вы узнали из этого текста.*

TEXT 19C

Задание I. *Прочтите текст, отыскивая в нем ответы на поставленные вопросы.*

PLASTICS

When did laboratory experiments with plastics begin?

1. Air, water, sand, salt, coal, petroleum are familiar elements in the everyday life, but they form the basic sources of the world's fastest growing industry—plastics.

Some fifty years ago plastics were little more than laboratory curiosities. Development has been so rapid since then that only the fearless would attempt to measure the progress in plastics the next fifty years will see. Yet already there is scarcely an industry—from rockets and electronics to toys and houseware—to which plastics do not make an important contribution.

Which characteristic of plastics is very important for spaceships and rockets?

2. From a purely engineering viewpoint the following characteristics of plastics explain their increasing acceptance by industries and consumers alike. These characteristics are usually shared by all plastics, but there are variations between individual materials; lightweight (sometimes high strength to weight ratio); corrosion resistance; electrical and thermal insulation; ease of fabrication; transparency in some materials; ease of colouring and economy of production. The increasingly successful application of plastics which take advantage of these characteristics have meant that plastics materials are now manufacturing materials in their own rights and not substitutes. The high strength to weight ratio of some plastics offers big field in the coming age of space travels and rockets.

The same benefits of light weight coupled with good strength and absence of corrosion offer tremendous potential as alternatives to traditional building materials. New shapes in building are absorbing the attention of the architects. Plastics offer many of the properties for these designs and their application in exotic structures is an example.

What are the fundamental characteristics of nylon?

3. The use of plastics in general industrial application has grown considerably in recent years. This growth has been due to their exceptional in-built qualities and also because they are improvement of older materials for many purposes and have opened up new fields which were not previously possible.

Metal and timber often are more difficult to fabricate than plastics materials and also may need surface protective which is not necessary with plastics. Gears made of plastics produce less noise and vibrations than metal gears. Nylon gears usually do not require lubrication, they are shock-resistant, do not deform permanently and — running in train with metal gears—they outlast them.

Nylon has been accepted as a material for the manufacture of bearings and runners of all sizes in many types of machines, earth-moving equipment and agricultural machinery due to its fundamental characteristics of low friction and good wear resistance. Nylon is very versatile material and is capable of overcoming a wide range of difficult problems. It will operate satisfactorily without lubrication in an abrasive atmosphere, it will function under water or immersed in any other liquid and being non-toxic is frequently used in food machinery.

Why are sports car bodies usually made from fiberglass reinforced plastics?

4. One of the most important consideration in the design of all forms of transport is the desire to obtain maximum strength for minimum weight ratio at the most economic cost. Plastics as a group of materials meet these requirements, and offer the additional advantages of ease of production, dimension stability, good fatigue resistance, corrosion resistance and ability to withstand variations in temperature.

Complete car bodies, mainly in the sports car field, are made from fiberglass reinforced plastics which offer not only considerable savings in weight, but also good weathering properties, ease in repairing damaged structures and reduced body vibration.

What makes plastics materials so attractive for space vehicles?

5. Plastics are employed in a number of aircraft engine applications and have successfully displaced metals in jet turbine impellers where the high fatigue resistance of the material is of great importance. If suitable higher temperature plastics were developed, it is quite feasible that jet turbines will one day be all of plastic construction.

At present a great deal of research and development is being carried out to produce special grades of plastics materials for space vehicles.

For space travel, resistance to cosmic radiation is an important consideration. Many plastics materials possess this property, and also offer the advantage of light weight. Astronaut couches, space capsules, missile fuel cases are manufactured of plastics materials.

Задание II. *1) Прочтите текст 19С еще раз и сделайте краткие сообщения о возможностях использования пластмасс в области: а) машиностроения (детали машин); б) автомобилестроения; в) космической техники. 2) Сравните пластмассы и природные материалы по следующим характеристикам.*

a) weight; b) corrosion resistance; c) ease of fabrication; d) need of surface protection; e) noise and vibration; f) friction; g) lubrication; h) resistance to radiation

В сообщениях используйте следующие выражения.

a) . . . weigh less/more than . . .
b) . . . more/less corrosion resistant than . . .

c) . . . easier/more difficult to fabricate than . . .
d) . . . need/do not need . . .
e) Parts made of . . . cause less/more noise and vibration than . . .
f) Parts made of . . . cause less/more friction than . . .
g) Parts made of . . . need/do not need lubrication.
h) . . . offer more/less resistance to radiation than . . .

ЗАДАНИЕ К ТЕКСТАМ 19-ГО УРОКА

В текстах урока даны разносторонние сведения о синтетических материалах. Пользуясь информацией, полученной из текстов, расскажите об упомянутых видах синтетических материалов с точки зрения их преимуществ и недостатков по сравнению с другими строительными материалами, а также о различных областях их применения.

КОНТРОЛЬНЫЙ СЛОВАРЬ

1. alike *(a, adv)*; 2. approach *(v, n)*; 3. complex *(a)*; 4. confront *(v)*; 5. displace *(v)*; 6. destruction *(n)*; 7. dimension *(n)*; 8. enable *(v)*; 9. engage *(v)*; 10. error *(n)*; 11. exceed *(v)*; 12. extent *(n)*; 13. fatigue *(n)*; 14. feasible *(a)*; 15. friction *(n)*; 16. grade *(n, v)*; 17. hide *(v)*; 18. hitherto *(adv)*; 19. immediate *(a)*; 20. latter *(a)*; 21. locality *(n)*; 22. marked *(a)*; 23. overcome *(v)*; 24. pure *(a)*; 25. ratio *(n)*; 26. resistance *(n)*; 27. rotate *(v)*; 28. satisfactory *(a)*; 29. search *(v, n)*; 30. shock *(n, v)*; 31. square *(n, a)*; 32. strain *(n, v)*; 33. stress *(n, v)*; 34. substantial *(a)*; 35. substitute *(v)*; 36. thorough *(a)*; 37. tremendous *(a)*; 38. trial *(n)*; 39. ultimate *(a)*; 40. withstand *(v)*

LESSON TWENTY

ЗАДАНИЯ К ТЕКСТУ 20А

Задание I. *Просмотрите текст и найдите ответы на следующие вопросы.*

1. What are the negative aspects of man's interference in nature? 2. Can nature alone fight against the destructive substances created by modern technology? 3. What does smog cause? 4. What has been proved by the Abastumani experiment?

Задание II. *Переведите текст 20А и перечислите меры, предпринимаемые учеными в борьбе со смогом.*

TEXT 20A

USSR AND USA AGAINST SMOG

With the development of civilization man's interference in nature continually increase, leading to various negative changes in the environment. Among the negative factors that result in the disfunction of ecological systems are the pollution of water and air and the destruction of natural landscapes.

Ecological imbalance has become a global problem, drawing the attention of practically all countries.

The grey mist hanging over many large industrial centres is a sad reminder of the consequences scientific and technical progress can bring.

Every year, according to statistics, the world burns 7,000 million tons of combustibles, resulting in the discharge into the atmosphere of hundreds of millions of tons of carbon monoxide, sulphur dioxide, nitrogen, oxides, aerosols and ash.

Nature's patience and its incredible efforts to eliminate the life-destroying substances created by modern technology are simply amazing. But even nature's cleansing mechanism has its limits.

For millions of years, human beings have lived in a constant atmosphere. What might happen if there is a critical change in the balance of the atmospheric components, a change going on right now? The concentration of carbon dioxide alone is increasing by 0.3 per cent every year.

Because of the smog hanging over many large cities sunrise appears to come half an hour later than is natural.

And smog kills hundreds of people, and is the cause of serious illnesses for many thousands more in cities like Tokyo, New York and London.

In centres of industry iron rusts three times faster than in cities where there is little industry and 20 times faster than in rural areas. Aluminium corrodes 100 times faster in the city than in rural areas. Wood, cotton, leather... do not last as long... Great monuments of history and culture are in danger of perishing.

How can smog be controlled?

To help find out, Soviet and American specialists did a joint experiment at the Astrophysical Observatory in Abastumani (Georgian SSR).

The Abastumani experiment is important because we have to know the secrets of nature's regulating mechanism if we want to control industrial air pollution. For three months Soviet and American scientists studied the origins and atmospheric transformation of natural substances that pollute the atmosphere.

Preliminary results show that the chemical composition, the structure of the substances and the atmospheric processes which give rise to smog are essentially the same both in urban and rural areas.

One of the principal components of smog is common soot. Though there is only one gram of soot per cubic kilometre of air it greatly influences our planet's climate in a manner comparable to carbon dioxide.

Other primary atmospheric pollutants are ammonium sulphate and organic compounds.

In general, the experiment has shown that there is no such thing as absolutely clean air. Even in Abastumani, whose air can be taken as a standard of clean air for the world, one will find natural pollution of the air basin. Some of the "pollutants" are phytocides—aromatic substances released by plants and trees.

The Abastumani experiment has led to a new understanding of the way smog is formed, which means that effective means of controlling it can be expected.

All the estimates were verified at a North Carolina laboratory, and the calculations done by Soviet scientists were found to be correct.

The Abastumani experiment was important because it helped verify a theoretical model in natural conditions. Among the upcoming experiments is an extensive and longterm study of air pollution process using laser technology.

Задание III. *Проиллюстрируйте фактами из текста следующие положения.*

1. The concentration of carbon dioxide in the atmosphere is increasing.
2. Metals corrode in cities faster than in rural areas.
3. Smog has a bad effect on people's health.
4. Absolutely clean air does not exist.

ТЕКСТ 1

Задание I. *Переведите текст устно.*

ENVIRONMENTAL PROTECTION

Everything has to be learned from nature and history...

In 1815, the Tambora volcano in Indonesia exploded, emitting such a large quantity of dust, smoke and soot into the atmosphere that the average annual temperature of the planet dropped by 1° C. This was enough for Europe and America to miss a summer and for the crop there not to ripen in 1816. A hundred years later, in 1915, there was a forest fire in Siberia. The fire, which destroyed 16 million hectares of forest, went on for several weeks, with smoke screening the Earth from the Sun. Grain crops failed and grass didn't grow over a huge expanse.

Nature has modelled a "nuclear winter", having made a tiny copy from it for our edification.

The discovery of "nuclear winter" should, by the logic of common sense, make war a thing of the past.

Nature has been suffocating from industrial pollution for a long time.

The figures of the Earth's ecological calamities are distressing. Forests are disappearing at the rate of 20 hectares per minute, or more than 500,000 hectares a year. The volume of atmospheric oxygen annually decreases by 10 billion tons—a consequence of the destruction of forests and the contamination of water reservoirs.

The planet's genetic fund has sustained irretrievable losses: hundreds of species of animals, birds, fishes and plants have disappeared forever. All these figures, one being sadder than the other, show our race to ecological catastrophe. And although this doesn't make things any easier, the understanding of the scale of calamities is one of the factors shaping a new mode of thinking suitable for our time.

Задание II. *Соотнесите факты, о которых вы узнали из текста, со следующими цифрами:*

1815, 1816, 1915, 16,000,000, 500,000

ТЕКСТ 2

Задание I. *Переведите письменно.*

LITHUANIA PARTICIPATES IN INTERNATIONAL ENVIRONMENTAL PROTECTION ACTIONS

Since ecology is a problem common for all mankind, the Soviet Union came out as an initiator and active participant in many international actions in this sphere.

Lithuania actively participates in international cooperation on the protection of the natural habitat.

The Lithuanian Republic has been participating for many years in the international convention for the protection of the Baltic Sea. Ecologically, the purity of the Baltic Sea depends on the purity of inland waters.

About 2,000 air-cleaning facilities are operating in the Republic. But there are still many problems to be solved such as, for example, air pollution by automobile exhaust fumes. Another acute problem is to reduce the amount of environmental pollution caused by chemicals used in agriculture. This includes fertilizers sprayed from the air.

Industrial enterprises have been transferred to wasteless technology and reservoirs are kept under strict control.

The Lithuanian Republic has developed a comprehensive nature protection plan which is believed to be carried out by the year 2000.

TEXT 20B

Задание I. *Прочтите текст, стараясь понять основное содержание. (Заметьте время начала и окончания чтения. Этот текст надо прочесть за 3 минуты, из расчета 140 слов в минуту.)*

POLLUTION

Few, if any, countries are as heavily polluted as Japan, where 110 million people—about half as many as live in the United States—are crammed into an area about the size of the State of Montana.

Postwar economic expansion has so befouled the country that the Japanese — many of whom expect to be wearing gas masks most of the time within 10 to 15 years — bitterly

joke that GNP (Gross National Progress) stands for "Gross National Pollution".

According to one estimate waste generated per square mile in Japan is 10 times larger than in the US.

Schoolchildren at play have been knocked out by smog. Rivers are unswimmable, and the best beaches are contaminated (загрязнять, заражать). Half the commercial fishing grounds in the seas around Japan have been ruined by industrial waters. Tokyo police use an oxygen-inhaler after one hour of directing traffic.

Deepening Trouble. The problem of filthy waters, dirty air and poisoned land is getting steadily worse.

Already, authorities contend, the mortality rate in heavily polluted areas is almost three times the normal rate.

The Prime Minister's office estimates that about 30 million people — more than one third of the urban population — have suffered from some form of pollution in the past five years.

Experts complain that industry, to a large extent, has ignored the damage it is doing, and that government at most levels has been indifferent.

They point out that sewerage (канализационная система) and waste-disposal systems in Japan are grossly inadequate. Motor vehicles have multiplied 10 times in 10 years, and now number over 21 million — 2.3 million in Tokyo alone. Yet devices to control engine emissions are installed only on automobiles for export.

Government studies show that 70 per cent of Japanese companies fail to process any of their wastes, which are piling up at the rate of 58 million tons a year. Many factories are handicapped by old equipment and out-of-date technology. Chief offenders are producers of chemicals, electric power, non-ferrous metals, petrochemicals, paper and steel.

"**Alarming Speed**". The damage to the environment, while easy to see, is impossible to estimate accurately. Pollution was ignored in Japan for years. Even today, the dangers are not fully appreciated.

"Health hazards and environmental destruction caused by pollution have been spreading with alarming speed throughout the country. Yet leaders of industrial organizations still hold the view that pollution is a 'necessary evil' (зло) and that economic progress cannot be accomplished without it."

The country was shocked some years ago when a Cabinet minister suggested that the Japanese "must have the spirit (моральная сила) to eat contaminated rice".

Many vaguely worded antipollution bills passed by Parliament have had little effect.

Задание II. *Выберите утверждения, соответствующие содержанию текста.*

1. The waste generated per square mile in Japan is:
   1) greater than in the USA; 2) the same as in the USA; 3) less than in the USA.
2. The Government of Japan:
   1) takes strict measures against the pollution caused by industry; 2) does not care much about the industrial pollution; 3) punishes the car owners driving without special pollution control devices.
3. The pollution problem in Japan:
   1) was not tackled (энергично решать) for many years; 2) was thoroughly studied; 3) has been solved.
4. Japanese Cabinet minister:
   1) suggested that the people should not eat contaminated food; 2) suggested that they should not drink contaminated water; 3) appealed to people asking them to eat contaminated rice.

TEXT 20C

Задание I. *Прочтите текст, отыскивая в нем ответы на поставленные вопросы.*

ECOLOGICAL CATASTROPHE OR HARMONY WITH NATURE

Who believes that the cause of the ecological crisis lies in the utilization of ecologically imperfect production processes?

1. Man, a creature of nature has been waging a tireless struggle against it. This struggle is not the result of man's ill — intentioned aspirations. It is highly objective and inevitable, as man could live and develop only by taking nature's diverse gifts from it to meet his vital needs. For many thousands of years, man has been weak while nature has been almighty.

However, as society developed, the correlation of forces between man and nature changed. Man grew so strong that he dared to declare himself the "king of nature" and intended conquering and remoulding nature to his liking.

Contradictions, which always existed between man and nature, were led to a conflict known as the "ecological crisis".

It was manifested by the exhaustion of unrenewable natural resources and environmental contamination. According to some capitalist scientists population and production growth were the reason for the beginning of the crisis. But the Soviet scientists are convinced (быть убежденным) that the cause of the crisis lies in the utilization of ecologically imperfect production processes.

What has become a major factor for improving the living standards of Soviet people?

2. Taking into consideration this standpoint of the Soviet scientists, the Soviet state develops and carries out in a planned way a system of measures aimed at environmental protection and the rational utilization of natural resources.

In recent years, by building gas purification works it became possible to reduce the entry of impurities into the atmosphere by more than 20 per cent. As a result, the air in seven out of ten Soviet cities has become much purer or the level of contamination has stabilized, despite the growth of production.

To protect agricultural lands from erosion the country set up field-protective belts and recultivated lands ruined by the mining industry.

Consistent environmental protection activity in the USSR has become a major factor for improving the living standards of Soviet people, their working conditions, recreation, and health protection.

What does the protection of Lake Baikal and its ecological system include?

3. Constant measures are being taken to protect Lake Baikal, the Caspian Sea and other famous Soviet lakes. However, not all problems connected with the protection of these natural reservoirs have been or are being solved in our country in a way we would like. Nevertheless, undeniable successes have been achieved in this sphere.

Some additional measures to ensure the rational utilization of the natural wealth of Lake Baikal have already been taken. Besides, a comprehensive system of measures is being carried out to protect this unique reservoir of very precious fresh water. The most perfect purification works in industry have been built at the Baikal pulp-and-paper mill — the main contaminator in the lake. Now three-four times less impurities get into the lake. A special service and an environmental protection department have been set up at the plant to ensure

effective operation of the water purifying complex and steam purifying units.

The protection of Lake Baikal and its ecological system includes concern about the sources that fill the lake, and about the purity of its shores and the vegetation around Baikal.

With the swift development rates of Siberia's wealth, the problem of preservation and reproduction of natural resources assumes greater importance, especially round Lake Baikal. The stability of the lake's hydrological regime also depends on how well forests protect the basins of rivers that discharge into it. Forests not only protect the mountain slopes from destruction and reservoirs from contamination, but also contribute to the filtration of waste water.

A protective zone with a particularly strict regime for the use of natural resources has been outlined for the area of Baikal basin. A similar system of measures is being worked out for protecting Lake Issyk-Kul.

Why do scientists have to look for new and more substantiated solutions?

4. Good intentions do not always safeguard against failures. As nature-protection programmes are extremely complicated, we sometimes come across miscalculations and failures. Therefore we have to look for new scientifically more substantiated solutions. This is inevitable because the process of interrelationships between society and nature is a dynamic and permanently changing process. The problem of harmonizing relations between man and nature cannot be solved either quickly or for good.

Society needs a purposeful regulation and control of the processes taking place in the system "man-society-production-nature" at each step of its progressive development.

ЗАДАНИЕ К ТЕКСТАМ 20-ГО УРОКА

Обобщите информацию, полученную из текстов урока, и ответьте на следующие вопросы:

1. Какие факты загрязнения воздуха, воды, растительного и животного мира приводятся в текстах?
2. Какие меры по защите окружающей среды предпринимаются и разрабатываются в Советском Союзе и за рубежом?
3. Какие меры по преодолению экологического кризиса являются, на ваш взгляд, наиболее эффективными?
4. С какими экологическими проблемами вы сможете столкнуться в своей будущей деятельности?

Lesson 1

§ 1. ГЛАГОЛ TO BE

Глагол **to be** в Present, Past и Future Indefinite имеет следующие формы:

Present Indefinite	Past Indefinite	Future Indefinite
I am	I was — был	I shall be — буду
he / she / it — is (есть)	he / she / it — was — была / было	he / she / it — will be — будет
we / you / they — are	we / you / they — were — были	we shall be — будем you / they — will be — будете / будут

В вопросительном предложении глагол **to be** ставится перед подлежащим. Например:

Was he in Africa last year?	Он был в Африке в прошлом году?
Where were you yesterday?	Где вы были вчера?

Отрицательная форма глагола **to be** в Present и Past Indefinite образуется без помощи вспомогательного глагола; отрицание **not** следует непосредственно за глаголом **to be**. Например:

The Institute is not far from the metro station.	Институт находится недалеко от станции метро.

§ 2. ГЛАГОЛ TO HAVE

Глагол **to have** в Present, Past и Future Indefinite имеет следующие формы:

Present Indefinite	Past Indefinite	Future Indefinite
I, we, you, they — have — у меня, у нас, у вас, у них he, she, it — has — у него, у нее (есть)	I, we, you, they, he, she, it — had — у меня, у нас, у вас, у них, у него, у нее (был)	I, we — shall have — у меня, у нас you, they, he, she, it — will have — у вас, у них, у него, у нее (будет)

Вопросительная форма глагола **to have** может быть образована двумя способами:

1) Путем постановки глагола **to have** перед подлежащим. Например:

Had you a lecture on philosophy yesterday?	У вас вчера была лекция по философии?

2) С помощью глагола **to do**. Например:

Did you have a lecture on philosophy yesterday?	У вас вчера была лекция по философии?

Отрицательная форма глагола **to have** может строиться двумя способами:

1) При помощи отрицательного местоимения **no** (или отрицательной группы **not any**) перед существительным. Например:

They have no car.	У них нет машины.
I have not any car.	У меня нет машины.

2) Обычным способом образования отрицательной формы глагола, т. е. при помощи вспомогательного глагола **to do**. Например:

I did not have much work to do yesterday.	Вчера у меня было немного работы.

§ 3. ОБОРОТ THERE + TO BE

Оборот **there+to be** имеет значение *есть*, *находится*, *имеется*, *существует*. Глагол **to be** ставится в личной форме **(is, are, was, were, will be)** и согласуется с последующим име-

нем существительным. Перевод таких предложений надо начинать с обстоятельства места или со сказуемого, если обстоятельство отсутствует.

1. There are many new books at the Institute library.	1. В институтской библиотеке много новых книг.
2. There are different methods of learning English words.	2. Существуют различные методы (способы) заучивания английских слов.

В вопросительном предложении глагол в личной форме ставится на первое место перед **there.**

Вопрос:

Is there a school in your street? На вашей улице есть школа?

Ответ:

Yes, there is.	Да, есть.
No, there is not.	Нет.

В полном отрицательном предложении после оборота **there** + **to be** ставится отрицательное местоимение **no.**

There will be no lecture on physics tomorrow.	Завтра лекции по физике не будет.

Перед **many, much** и числительными ставится **not** вместо **no.**

There aren't many interesting articles in this magazine.	В этом журнале мало интересных статей.

§ 4. СТЕПЕНИ СРАВНЕНИЯ ПРИЛАГАТЕЛЬНЫХ И НАРЕЧИЙ

Имена прилагательные и наречия, как и в русском языке, имеют положительную, сравнительную и превосходную степени.

I. Односложные прилагательные и наречия, двусложные с ударением на первом слоге и некоторые другие двусложные прилагательные образуют сравнительную степень с помощью суффикса **-er**, а превосходную степень с помощью суффикса **-est**. Существительное, определяемое прилагательным в превосходной степени, употребляется с определенным артиклем, а перед наречием в превосходной степени артикль не употребляется.

Положительная степень	Сравнительная степень	Превосходная степень
This building is high. Это здание высокое.	That building is higher. То здание выше.	That is the highest building in the city. Это самое высокое здание в городе.
He stood near the table. Он стоял около стола.	She came nearer to the table. Она подошла ближе к столу.	They stood nearest to the table. Они стояли ближе всех к столу.

II. Сравнительная степень многосложных прилагательных и наречий образуется при помощи слова **more**, а превосходная — при помощи слова **(the) most**. Для того чтобы выразить уменьшение качества или свойства предмета, употребляются слова **less** *менее*; **(the) least** *наименее*.

Положительная степень	Сравнительная степень	Превосходная степень
This film is interesting. Этот фильм интересный.	That film is more interesting. Тот фильм более интересный.	That is the most interesting film I saw. Это самый интересный фильм, который я видел.
This work is important. Эта работа важная.	That work is less important. Та работа менее важная.	This work is the least important. Эта работа наименее важная.

III. Некоторые прилагательные и наречия образуют степени сравнения от разных основ.

Положительная степень	Сравнительная степень	Превосходная степень
good, well хороший, хорошо	better лучше	(the) best самый лучший, лучше всего
bad, badly плохой, плохо	worse хуже	(the) worst самый худший, хуже всего
many, much много	more больше	(the) most самый большой, больше всего
little маленький, мало	less меньше	(the) least самый маленький, наименьший, меньше всего

Имеются также способы выражения сравнения с помощью союзов.

1. Для сравнения двух предметов одинакового качества прилагательное в основной форме ставится между парными союзами **as ... as,** означающими *такой же ... как.*

Для того чтобы избежать повторения существительного, употребляется местоимение **one (ones** — для множественного числа) или указательное местоимение **that (those).**

This street is as long as that one.
Эта улица такая же длинная, как та.

The days in summer are longer than those in winter.
Летом дни длиннее, чем (дни) зимой.

2. Для выражения неравной степени качества в двух сравниваемых предметах используется парный союз **not so ... as,** который на русский язык переводится *не такой ... как.*

The Dnieper is not so long as the Volga.
Днепр не такая длинная река, как Волга.

3. Парный союз **the ... the** в сочетании с прилагательным или наречием в сравнительной степени переводится на русский язык союзом *чем ... тем.*

The sooner the better.
Чем скорее, тем лучше.

4. После сравнительной степени употребляется союз **than,** который переводится словом *чем* или совсем не переводится.

Exercise 5 is easier than exercise 7.	Упражнение 5 легче (чем) упражнения (упражнение) 7.

§ 5. ВРЕМЕНА ГРУППЫ INDEFINITE ACTIVE

Глаголы в формах Indefinite относят действие к настоящему, прошедшему или будущему времени, не уточняя, как оно протекает во времени. Времена Indefinite Active образуются от инфинитива.

Present Indefinite Tense

Формы глагола в Present Indefinite совпадают с инфинитивом без частицы **to**. Лишь в 3-м лице единственного числа добавляется суффикс **-s.**

Это время употребляется для выражения обычного действия, происходящего вообще, а не в момент речи. Например:

We study at the Institute every day except Sunday.	Мы занимаемся в институте каждый день, кроме воскресенья.
His brother lives in the Far East.	Его брат живет на Дальнем Востоке.

Past Indefinite Tense

Стандартные глаголы образуют формы в Past Indefinite путем прибавления к инфинитиву (без частицы **to**) суффикса **-ed (-d)** для всех лиц единственного и множественного числа.

Например:	to ask (спрашивать)	— asked (спросил)
	to translate (переводить)	— translated (перевел)

Нестандартные глаголы образуют формы в Past Indefinite различными способами. Например:

Infinitive	Перевод	Past Indefinite	Перевод
to go	ходить	went	ходил
to write	писать	wrote	писал
to give	давать	gave	дал
to take	брать	took	взял
to come	приходить	came	пришел

Past Indefinite употребляется, когда речь идет о действии, имевшем место в прошлом:

1) Для выражения ряда последовательных действий.

He stood up, came up to the window and saw an endless stream of cars running along the street.	Он встал, подошел к окну и увидел бесконечный поток машин, едущих по улице.

2) Когда действие соотносится с обстоятельственными словами, точно обозначающими прошедшее время; к ним относятся наречия **ago** *(тому назад)*, **yesterday** *(вчера)*, словосочетания **last month (week, year)** *(в прошлом месяце, на прошлой неделе, в прошлом году)*. Это время также употребляется при обозначении часа действия, дня, недели, месяца, года.

My friends came to see me on Saturday.	Мои друзья приходили ко мне в субботу.
I took this book from the library last week.	Я взял эту книгу в библиотеке на прошлой неделе.

3) Когда интересуются временем совершения действия в прошлом, т. е. в вопросительном предложении, начинающемся с вопросительного слова **when.**

When did you see her last?	Когда вы видели ее в последний раз?

Future Indefinite Tense

Формы глагола в Future Indefinite образуются при помощи вспомогательных глаголов **shall** (для 1-го лица единственного и множественного числа), **will** (для всех других лиц) и инфинитива глагола без частицы **to.** Например:

We shall go to the country tomorrow.	Завтра мы поедем за город.

He will make his report next week.	Он будет делать доклад на следующей неделе.

Таблица времен группы Indefinite Active

Время / Форма	Present Indefinite	Past Indefinite	Future Indefinite
Утвердительная	My friends study French. He takes books from the library every week.	My friends studied French at school. He took the books from the library yesterday.	My friends will study French at the Institute. He will take books from the library tomorrow.
Вопросительная	Do your friends study French? Does he take books from the library every week?	Did your friends study French at school? Did he take the books from the library yesterday?	Will your friends study French at the Institute? Will he take books from the library tomorrow?
Отрицательная	My friends do not study French. He does not take books from the library every week.	My friends did not study French. He did not take the books from the library yesterday.	My friends will not study French at the Institute. He will not take books from the library tomorrow.

КОНСТРУКЦИЯ СПЕЦИАЛЬНЫХ ВОПРОСОВ

1. В специальных вопросах, относящихся к любому члену предложения (кроме подлежащего и его определения) и начинающихся с вопросительного слова, вспомогательный глагол стоит перед подлежащим, а основной глагол в форме инфинитива без частицы **to** сохраняет свое место после подлежащего.

Вопросительные слова	Вспомогательный глагол	Подлежащее и определение к нему	Смысловой глагол в форме инфинитива	Другие члены предложения
What	do	you	do	in the evening?
Where	did	he	go	yesterday?
When	will	your sister	return	home?

2. В вопросах, относящихся к подлежащему или его определению, вопросительное слово является подлежащим или определением подлежащего, поэтому полностью сохраняется порядок слов утвердительного предложения.

Who knows his address?
Who will help you with this work?
Whose father worked as a doctor?

ОТВЕТЫ НА ВОПРОСЫ

1. На общий вопрос дается краткий ответ.

Do you know German?	Yes, I do. No, I don't.
Did he study German at school?	Yes, he did. No, he didn't.
Will they come tomorrow?	Yes, they will. No, they won't (will not).

2. На специальный вопрос дается полный ответ.

What language did you study at school? — I studied English.
Where does your mother work? — She works at a school.
What will they do after work? — They will go home.

3. На специальный вопрос к подлежащему, как правило, дается краткий ответ.

Who will help them? — I shall.
Who saw her yesterday? — They did.
Who translates articles from foreign journals? — We do.

Lesson 2

§ 6. ВРЕМЕНА ГРУППЫ INDEFINITE PASSIVE

Залог — категория глагола, которая показывает отношение действия к субъекту или объекту.

Страдательный залог — Passive Voice — показывает, что предмет или лицо, являющееся подлежащим, подвергается действию.

The radio **was invented** by Popov.	Радио *было изобретено* Поповым.

Страдательный залог выражается сочетанием вспомогательного глагола **to be** с Participle II (причастие прошедшего времени) смыслового глагола.

На русский язык глаголы в Passive Voice могут переводиться следующими способами:

1) Сочетанием глагола *быть* (в прошедшем и будущем временах) с краткой формой причастия страдательного залога.

The article **was translated.**	Статья *была переведена.*
The article **will be translated.**	Статья *будет переведена.*

2) Глаголом с окончанием на *-ся, -сь.*

Technical articles **are translated** at every lesson.	Технические статьи *переводятся* на каждом уроке.

3) Неопределенно-личной формой, т. е. без подлежащего.

Technical articles **are translated** at every lesson.	Технические статьи *переводят* на каждом уроке.

Глагол в форме Indefinite Passive может переводиться на русский язык глаголом совершенного и несовершенного вида, так как форма Indefinite не уточняет характера действия.

Houses **are built** very quickly now.	Дома *строятся (строят)* теперь очень быстро.
These houses **are built** of concrete.	Эти дома *построены* из бетона.

В английском языке в страдательном залоге показателем времени служит глагол **to be,** который изменяется в зависимости от лица и числа подлежащего. Смысловой глагол стоит всегда в форме Participle II, т. е. остается неизменным.

New films **are shown** here every week.	Новые фильмы *показывают* здесь каждую неделю.
A new film **was shown** here yesterday.	Новый фильм *был показан* здесь вчера.

A new film **will be shown** here tomorrow.	Новый фильм *будет показан* здесь завтра.

Если указывается, кем или чем производится действие, то употребляется существительное или местоимение с предлогами **by** или **with**, выражающими отношение творительного падежа.

The new engine was designed **by** our engineers.	Новый двигатель был сконструирован нашими инженерами.
The laboratory is equipped **with** automatic machinery.	Лаборатория оборудована автоматическими механизмами.

В английском предложении за сказуемым в страдательном залоге может следовать предлог; слово, с которым этот предлог соотносится, является подлежащим. Поэтому при переводе на русский язык этот предлог ставится перед подлежащим.

The engineer was sent **for.**	*За* инженером послали.
This article is much spoken **about.**	*Об* этой статье много говорят.

Подлежащее английского предложения пассивной конструкции при переводе на русский язык может стоять не только в именительном падеже, но и в любом косвенном падеже в зависимости от контекста.

The chief engineer was sent abroad.	Главного инженера послали за границу.
The chief engineer was sent many telegrams.	Главному инженеру послали много телеграмм.
This information was referred to.	На эту информацию ссылались.

§ 7. МОДАЛЬНЫЕ ГЛАГОЛЫ И ИХ ЭКВИВАЛЕНТЫ

Модальные глаголы обозначают не само действие, а указывают на отношение к нему говорящего. Модальные глаголы выражают способность, возможность, допустимость, долженствование.

Модальные глаголы употребляются только в сочетании с инфинитивом смыслового глагола без частицы **to**. Эти глаголы часто называются недостаточными, так как они:

1. Не имеют неличных форм — инфинитива, причастия, герундия.

2. Не изменяются ни по лицам, ни по числам (не имеют окончания в 3-м лице ед. числа).

He can do it himself.	Он может сделать это сам.

3. Образуют вопросительную форму путем постановки глаголов **can, must** или **may** перед подлежащим, а отрицательную форму — путем добавления отрицания **not** после модальных глаголов.

Can you play tennis?	Вы умеете играть в теннис?
Must I translate this article?	Мне нужно переводить эту статью?
You mustn't smoke here.	Здесь нельзя курить.

Примечание. Поскольку отрицательная форма глагола **must** употребляется только для выражения запрещения, для того чтобы передать значение отсутствия необходимости *(не нужно, не надо, не должен)* употребляется модальный глагол **need** в отрицательной форме — **needn't**.

Must I translate these sentences? — No, you needn't.	Нужно ли мне переводить эти предложения? — Нет, не нужно.

4. **Can** и **may** имеют формы настоящего и прошедшего времени, глагол **must** имеет только форму настоящего времени.

Наряду с модальными глаголами **can, may, must** для выражения долженствования, допустимости, способности или возможности совершения действия используется ряд других глаголов, которые употребляются как наряду с модальными глаголами, так и вместо недостающих форм этих глаголов.

Выражение долженствования

Долженствование может быть выражено:

1) **must** + инфинитив без частицы **to** в настоящем времени во всех лицах.

I must do it at once.	Я должен сделать это немедленно.

2) **to have** + инфинитив с частицей **to** в настоящем, прошедшем и будущем времени.

To have to выражает долженствование, вытекающее из внешних условий, и часто переводится на русский язык глаголом *приходится*.

I had to work hard to pass my examination.	Я должен был (мне пришлось) много работать, чтобы сдать экзамен.

3) **to be** + инфинитив с частицей **to** в настоящем и прошедшем времени.

To be to означает долженствование, вытекающее из предварительной договоренности или плана.

We were to inspect the new engine by the end of the day.	Мы должны были тщательно осмотреть новый двигатель к концу дня.

4) **should** употребляется для выражения морального долга или совета, относящегося к настоящему или будущему времени.

You should go and see him tomorrow.	Вы должны (вам следует) навестить его завтра.

Выражение способности или возможности совершения действия

1) **can** + инфинитив без частицы **to** в настоящем времени.
could + инфинитив без частицы **to** в прошедшем времени.

I can play tennis.	Я могу (умею) играть в теннис.
He could help you.	Он мог помочь вам.

2) **to be able** + инфинитив с частицей **to** в настоящем, прошедшем и будущем времени.

We shall be able to see each other very often.	Мы сможем часто видеться.

Выражение допустимости совершения действия

1) **may** + инфинитив без частицы **to** в настоящем времени.
might + инфинитив без частицы **to** в прошедшем времени.

You may come here every day.	Вы можете приходить сюда каждый день.

2) **to be allowed** + инфинитив с частицей **to** в настоящем, прошедшем и будущем времени.

He was allowed to take books from the University library.	Ему разрешили (позволили) брать книги из университетской библиотеки.

Сводная таблица модальных глаголов и их эквивалентов

	Present	Past	Future
Долженствование	I **must** meet him. I **have to** meet him. I **am to** meet him. I **should** meet him.	— I **had to** meet him. I **was to** meet him. —	— I **shall have to** meet him. — —
Способность или возможность совершения действия	He **can** help you. He **is able to** help you.	He **could** help you. He **was able to** help you.	— He **will be able to** help you.
Допустимость совершения действия	I **may** use this device. I **am allowed to** use the device.	I **might** use the device. I **was allowed to** use the device.	— I **shall be allowed to** use the device.

Lesson 3

§ 8. ВРЕМЕНА ГРУППЫ CONTINUOUS ACTIVE И PASSIVE

Глаголы в формах Continuous употребляются, когда требуется подчеркнуть, что действие продолжается, продолжалось или будет продолжаться в то время, о котором идет речь, т. е. когда нужно выразить действие в процессе его совершения.

Present Continuous (Active и Passive) употребляется для выражения длительного действия, совершаемого в момент речи. Эти формы образуются следующим образом:

Active

to be в настоящем времени **(am, is, are)** + **Participle I** смыслового глагола.

Passive

to be в настоящем времени **(am, is, are)** + *being* + **Participle II** смыслового глагола.

Глаголы в формах Present Continuous (Active и Passive) переводятся на русский язык глаголами несовершенного вида, иногда с добавлением слова *сейчас*.

They **are translating** the new article. (Active)	Они *переводят* новую статью сейчас.
The article **is being translated.** (Passive)	Статья *переводится* сейчас. (Статью *переводят*).

Примечание. Глаголы в формах Present Continuous Passive переводятся на русский язык формами глагола только несовершенного вида с окончанием *-ся* или неопределенно-личным предложением.

Past Continuous (Active и Passive) употребляется для выражения действия, которое продолжало совершаться в определенный момент или отрезок времени в прошлом, обозначаемом либо точным указанием момента или отрезка времени, либо другим действием, выраженным глаголом в Past Indefinite.

Эти формы образуются следующим образом:

Active

to be в прошедшем времени **(was, were)** + **Participle I** смыслового глагола.

Passive

to be в прошедшем времени **(was, were)** + *being* + **Participle II** смыслового глагола.

We **were working** in the laboratory from 5 till 7 o'clock. (Active)	Мы *работали* в лаборатории с 5 до 7 часов.
He **was translating** the article when I came. (Active)	Он *переводил* статью, когда я пришел.
The article **was being translated** when I came. (Passive)	Статья *переводилась*, когда я пришел.

Future Continuous (Active) употребляется для выражения действия, которое будет совершаться в определенный момент или отрезок времени в будущем. Образуется из сочетания вспомогательного глагола **to be** в будущем времени **(shall be, will be)** + **Participle I** смыслового глагола.

I shall be reading the book all day long tomorrow. — *Я буду читать* книгу завтра целый день.

Примечание. Пассивная форма в Future Continuous не существует.

Таблица времен группы Continuous Active

Время / Форма	Present Continuous	Past Continuous	Future Continuous
Утвердительная	They are having an English lesson. He is still writing an exercise.	They were having an English lesson when I came to see them. He was writing an exercise from 6 till 8 o'clock.	They will be having an English lesson tomorrow at 9 o'clock. He will be writing an exercise from 6 till 8 o'clock tomorrow.
Вопросительная	Are they having an English lesson? Is he still writing an exercise?	Were they having an English lesson when I came to see them? Was he writing an exercise from 6 till 8 o'clock?	Will they be having an English lesson tomorrow at 9 o'clock? Will he be writing an exercise from 6 till 8 o'clock tomorrow?
Отрицательная	They are not having an English lesson, they are having a Russian lesson. He is not writing an exercise, he is reading a book.	They were not having an English lesson when I came to see them, they were having a Russian lesson. He was not writing an exercise from 6 till 8 o'clock, he was reading a book.	They will not be having an English lesson tomorrow at 9 o'clock, they will be having a Russian lesson. He will not be writing an exercise from 6 till 8 o'clock tomorrow, he will be reading a book.

§ 9. УСИЛИТЕЛЬНАЯ КОНСТРУКЦИЯ

It is/was ... { **who** / **that** / **when** }

В английском языке существует особая конструкция для выделения отдельных членов предложения. В русском языке в подобных случаях употребляются лексические средства усиления: *только, как раз, именно, только тогда* и т. д.

It was Nick **who** told me the news.
It is the gravitation **that** makes the satellites move round the Earth.

It was yesterday **when** we got his letter.
It was yesterday **that** I met him at the Institute.

Именно Николай и рассказал мне эту новость.
Именно сила земного притяжения и заставляет спутники вращаться вокруг Земли.
Как раз вчера мы получили его письмо.
Я встретил его в институте *только* вчера.

§ 10. ЧИСЛИТЕЛЬНОЕ (THE NUMERAL)

Количественные	*Порядковые*
1 — one	the first
2 — two	the second
3 — three	the third
4 — four	the four**th**
5 — five	the fi**fth**
6 — six	the six**th**
7 — seven	the seven**th**
8 — eight	the eigh**th**
9 — nine	the nin**th**
10 — ten	the ten**th**
11 — eleven	the eleven**th**
12 — twelve	the twel**fth**
13 — thir**teen**	the thirteen**th**
20 — twenty	the twentie**th**
21 — twenty-one	the twenty-first
100 — one (a) hundred	the hundred**th**

101 — one hundred and one (books)
1001 — one thousand and one (books)

1200 — one thousand two hundred (books) = twelve hundred (books)

2,045,328 books — two million forty-five thousand three hundred and twenty-eight books

Хронологические даты

in 1900 — in nineteen hundred	— в 1900 году
in 1905 — in nineteen five	— в 1905 году
in 1964 — in nineteen sixty-four	— в 1964 году
on the 15th of January, 1968 — on the fifteenth of January, nineteen sixty-eight	— 15 января 1968 года
on January 15, 1958 — on January fifteenth, nineteen fifty-eight	— 15 января 1958 года

Номера страниц, комнат, автобусов и т. д.

on page 305 — three hundred and five = three-[ou]-five	— на странице 305
in room 418 — four hundred and eighteen	— в комнате 418
to take the 134 bus — the one three four bus	— ехать 134-м автобусом

Дробные числа (простые и десятичные)

1/3 ton — third of a ton	— 1/3 тонны
1/2 kilometre — half of a kilometre	— 1/2 км
1/4 kilometre — a quarter of a kilometre	— 1/4 км
3/5 ton — three fifths of a ton	— 3/5 тонны
0.5 — point five	— 0,5
3.217 — three point two one seven	— 3,217
54.85 tons — fifty-four point eighty-five tons	— 54,85 тонны

Lesson 4

§ 11. ВРЕМЕНА ГРУППЫ PERFECT ACTIVE И PASSIVE

Глаголы в формах Perfect указывают, что действие закончено или закончится к определенному моменту времени в настоящем, прошедшем или будущем.

Глаголы в формах Perfect обычно переводятся на русский язык глаголами в форме прошедшего или будущего времени совершенного вида, чем и подчеркивается завершенность действия.

Present Perfect (Active и Passive) употребляется:

1) Для выражения завершившегося действия, когда время не указано.

I **have seen** a new film. (Active)	Я *видел* новый фильм.
The letter **has been sent.** (Passive)	Письмо *отправлено.*

2) С обстоятельствами, выражающими период времени, не закончившийся до настоящего момента **(today, this week, this month, this year).**

They **have completed** the work this week. (Active)	Они *закончили* работу на этой неделе.
The work **has been completed** this month. (Passive)	Работа *закончена* в этом месяце.

3) С наречиями неопределенного времени, такими как:

always	всегда	**seldom**	редко
ever	когда-либо	**already**	уже
often	часто	**just**	только что
never	никогда	**not yet**	еще нет

В этом случае глагол в форме Present Perfect обычно переводится на русский язык глаголом несовершенного вида.

I **have never read** that book.	Я *никогда не читал* той книги.
He **has often been** to Minsk.	Он *часто бывал* в Минске.

4) Для обозначения действия, начавшегося в прошлом и продолжающегося в настоящем, со словами **since** *с, с тех пор как* и **for** *в течение*; в этом случае глагол в форме Present Perfect обычно переводится на русский язык глаголом в настоящем времени.

I **have known** him since 1970.	Я *знаю* его с 1970 года.
He **has lived** here for many years.	Он *живет* здесь уже много лет.

Формы глагола в Present Perfect образуются следующим образом:

Active

to have в настоящем времени **(have, has)** + **Participle II** смыслового глагола.

Passive

to have в настоящем времени **(have, has)** + *been* + **Participle II** смыслового глагола.

Past Perfect (Active и Passive) употребляется для выражения действия, .закончившегося до начала другого действия или до указанного момента в прошлом.

The letter **had been written** by yesterday evening. (Passive).	Вчера к вечеру письмо *было написано.*
He **had** already **written** the letter when I came to see him. (Active)	Он уже *написал* письмо, когда я пришел к нему.

Формы глагола в Past Perfect Active образуются при помощи вспомогательного глагола **to have** в прошедшем времени **(had)** и **Participle II** смыслового глагола.

Формы глагола в Past Perfect Passive образуются следующим образом: **had**+*been*+**Participle II** смыслового глагола.

Future Perfect (Active и Passive) употребляется для выражения действия, которое закончится до начала другого действия или до указанного момента в будущем.

They **will have returned** before you come home. (Active)	Они *возвратятся* до того, как вы придете домой.
Many letters **will have been got** by the end of the week. (Passive)	Много писем *будет получено* к концу недели.

Формы глагола в Future Perfect образуются следующим образом:

Active

to have в будущем времени — **will have (shall have)** + **Participle II** смыслового глагола.

Passive

to have в будущем времени — **will have (shall have)**+ +*been*+**Participle II** смыслового глагола.

Таблица времен группы Perfect Active

Время / Форма	Present Perfect	Past Perfect	Future Perfect
Утвердительная	I **have sent** the letter.	I **had** already **sent** the letter by 6 o'clock yesterday.	I **shall have sent** the letter by tomorrow evening.
Вопросительная	**Have** you **sent** the letter?	**Had** you **sent** the letter by 6 o'clock yesterday?	**Will** you **have sent** the letter by tomorrow evening?
Отрицательная	I **have not sent** the letter yet.	I **had not sent** the letter by 6 o'clock yesterday.	I **shall not have sent** the letter by tomorrow evening.

Таблица времен Indefinite, Continuous и Perfect Passive

Время	Present	Past	Future
Indefinite	The letter **is written.** Письмо написано.	The letter **was written.** Письмо было написано.	The letter **will be written.** Письмо напишут. Письмо будет написано.
Continuous	The letter **is being written.** Письмо пишется (сейчас).	The letter **was being written** all day. Письмо писали весь день. Письмо писалось весь день.	—
Perfect	The letter **has been written.** Письмо написано.	The letter **had been written** by yesterday evening. Письмо уже было написано вчера к вечеру.	The letter **will have been written** by tomorrow evening. Письмо будет написано завтра к вечеру.

Lesson 5

§ 12. СОГЛАСОВАНИЕ ВРЕМЕН (SEQUENCE OF TENSES)

Если глагол-сказуемое главного предложения стоит в настоящем времени, то глагол-сказуемое придаточного предложения может стоять в любом, требуемом по смыслу времени.

He says that Он говорит, что	he is busy now. он занят сейчас. he was busy yesterday. он был занят вчера. he will be busy tomorrow. он будет занят завтра.

Если глагол-сказуемое главного предложения стоит в прошедшем времени, то действует правило согласования времен, которое состоит в том, что сказуемое дополнительного придаточного предложения тоже должно стоять в одном из прошедших времен.

а) Если действия обоих сказуемых совершаются одновременно, то в придаточном предложении сказуемое употребляется в форме Past Indefinite или Past Continuous, которые в данном случае переводятся на русский язык глаголом в настоящем времени.

He said that he was busy.	Он сказал, что он занят.
He said that he was translating an article from an English technical journal.	Он сказал, что он переводит статью из английского технического журнала.

б) Если действие, выраженное сказуемым придаточного предложения, предшествовало действию, выраженному сказуемым главного предложения, то в придаточном предложении глагол-сказуемое употребляется в Past Perfect и переводится на русский язык в прошедшем времени.

He said that he had been busy yesterday.	Он сказал, что он был занят вчера.

в) Если в придаточном предложении требуется выразить действие, которое произойдет в будущем, то вместо вспомогательных глаголов **shall/will** употребляются вспомогательные глаголы **should/would.** Эта форма английского гла-

гола называется Future-in-the-Past. На русский язык эта форма переводится глаголом в будущем времени.

He said that he would be busy tomorrow.	Он сказал, что он будет занят завтра.
He said Он сказал,	that he worked at a plant. что он работает на заводе. that he had worked at a plant. что он работал на заводе. that he would work at a plant. что он будет работать на заводе.

Правила согласования времен соблюдаются при переводе предложений из прямой речи в косвенную.

He says, "I am busy today."	Он говорит: «Я занят сегодня».
He says that he is busy today.	Он говорит, что он сегодня занят.
He said, "I am busy today."	Он сказал: «Я занят сегодня».
He said that he was busy that day.	Он сказал, что он занят сегодня.

Предложения, выражающие общий вопрос в прямой речи, в косвенную вводятся союзом **whether** или **if.**

He asked me: "Are you translating the article?"	Он спросил меня: «Вы переводите статью?»
He asked me **if (whether)** I was translating the article.	Он спросил меня, перевожу ли я статью.

§ 13. НЕОПРЕДЕЛЕННЫЕ МЕСТОИМЕНИЯ SOME, ANY И ОТРИЦАТЕЛЬНОЕ МЕСТОИМЕНИЕ NO

Значение неопределенных местоимений и перевод их на русский язык зависят от того, в каком предложении они употребляются — в утвердительном, вопросительном или отрицательном.

1. Местоимение **some.**

а) **some** — *некоторые, несколько* — употребляется в утвердительных предложениях:

We shall discuss **some** problems at the conference.	На конференции мы обсудим *несколько (некоторые)* вопросов.

б) если **some** стоит перед неисчисляемым существительным, заменяя артикль, оно на русский язык не переводится:

Let's have **some** tea.	Давайте выпьем чаю.

в) если **some** стоит перед числительным, оно имеет значение *приблизительно:*

There were **some** 20 people in the room.	В комнате было *около* 20 человек.

2. Местоимение **any.**

а) если **any** стоит перед исчисляемым существительным в единственном числе в утвердительном предложении, оно имеет значение *всякий, любой:*

You can get this newspaper at **any** book-stand.	Вы можете купить эту газету в *любом* киоске.

б) если **any** стоит перед существительным в вопросительном предложении, оно имеет значение *какой-либо:*

Is there **any** news from him?	От него есть *какие-либо* известия?

в) в отрицательных предложениях **any** имеет значение *никакой:*

He was not asked **any** questions.	Ему не было задано *никаких* вопросов.

г) если **any** стоит перед неисчисляемым существительным, то на русский язык оно не переводится:

There isn't **any** water in the well.	В колодце нет воды.

3. Местоимения **no** и **none.**

а) перед существительным в единственном и множественном числе **no** имеет значение *никакой, нет:*

There is **no** information on this question.	По этому вопросу нет *никакой* информации.

б) **none** употребляется взамен уже упоминавшегося существительного:

Are there any books on this problem in your library?	В вашей библиотеке есть книги по этому вопросу?
— No, there are **none.**	— Нет.

Производные слова от местоимений some, any, no, every

Местоимения **some, any, no, every** со словами **thing** (*вещь*), **body** (*субъект*), **one** (*некто*), **where** (*где, куда*) образуют сложные местоимения.

Таблица производных слов от *some, any, no, every*

Местоимения	+ thing	+ {body / one}	+ where	Употребляются
some *некоторый, какой-то, какой-нибудь, несколько*	**something** *что-то, что-нибудь*	**somebody, someone** *кто-то, кто-нибудь*	**somewhere** *где-то, куда-то, где-нибудь, куда-нибудь*	в утверд. предл.
any 1) *всякий, любой* 2) *какой-нибудь*	**anything** 1) *всё,* 2) *что-то,* 3) *что-нибудь*	**anybody, anyone** 1) *всякий, все* 2) *кто-то, кто-нибудь*	**anywhere** 1) *везде,* 2) *где-нибудь, куда-нибудь*	1) в утверд. 2) в вопросит. предл.
no, not any *никакой + не*	**nothing (not anything)** *ничто / ничего* } + *не*	**nobody (not anybody), no one** *никто + не*	**nowhere (not anywhere)** *нигде, никуда + не*	в отрицат. предл.
every *всякий, каждый*	**everything** *всё*	**everybody, everyone** *все*	**everywhere** *везде, повсюду*	в утверд., вопросит. и отрицат. предл.

Lesson 6

§ 14. ПРИЧАСТИЕ (THE PARTICIPLE)

Причастие является неличной формой глагола, в которой сочетаются признаки прилагательного или наречия с признаками глагола.

В английском языке существуют два вида причастий: **Participle I** и **Participle II.**

Participle I может иметь простую **(coming)** и сложные (аналитические) формы **(having come, being read).** Participle II имеет только простую форму **(written).** Participle I и Participle II обозначают признак предмета, но, в отличие от прилагательного, признак, обозначаемый причастием, указывает на действие или состояние предмета (a moving part), а не на его качества (a small part).

Participle I

Participle I выполняет в предложении самостоятельные функции определения и обстоятельства.

Participle I в функции определения может находиться:

а) перед определяемым словом:

a shining star	*сияющая звезда*

б) после определяемого слова:

1) The stars **shining** in the dark sky seemed blue.	1) Звезды, *сиявшие* в темном небе, казались голубыми.
2) The stars **shining** in the dark sky seem blue.	2) Звезды, *сияющие* в темном небе, кажутся голубыми.

На русский язык Participle I в функции определения переводится причастием действительного залога с суффиксами-окончаниями *-щий* (*-щийся*), *-щая*, *-щее*, *-щие*, иногда *-вший*, *-вшие*.

Participle I в функции обстоятельства стоит чаще всего в начале предложения и отвечает на вопросы: *как? когда?* Переводится на русский язык деепричастием несовершенного вида, оканчивающимся на *-а*, *-я*, например, *читая*, *сидя* и т. п.

Translating the article he consulted the dictionary.	*Переводя* статью, он пользовался словарем.

Перед Participle I в функции обстоятельства часто стоят союзы **when** или **while.** Такие словосочетания переводятся на русский язык либо деепричастным оборотом с опущением союза, либо придаточным предложением, которое начинается с союзов *когда*, *в то время как*. В качестве подлежа-

щего этого предложения употребляется существительное, стоящее за этим оборотом, или заменяющее его личное местоимение.

While translating the article the student consulted the dictionary.

1) Переводя статью, студент пользовался словарем.
2) Когда студент переводил статью, он пользовался словарем.

Participle II

Participle II выполняет в предложении функции определения и обстоятельства.

Participle II в функции определения отвечает на вопрос *какой?, какая?, какое?* и может стоять:

а) перед определяемым словом:

They used the **improved** methods of work.

Они использовали *улучшенные* методы работы.

б) после определяемого слова:

The theatre **built** in the last century needed reconstruction.

Театр, *построенный* в прошлом веке, нуждался в реконструкции.

На русский язык Participle II в функции определения переводится причастиями страдательного залога совершенного и несовершенного вида с суффиксами-окончаниями *-нный, -емый, -имый, -тый:* **invented** — *изобретенный, изобретаемый.*

Перед Participle II в функции обстоятельства иногда могут стоять союзы **if, unless, when.** В таком случае конструкция переводится на русский язык чаще всего безличным обстоятельственным придаточным предложением, в котором подлежащее то же, что и в главном предложении.

When asked this question, the student could not answer it at once.

Когда студенту задали этот вопрос, он не смог ответить на него сразу.

Сложные формы причастий

Participle I Indefinite Passive выполняет функции:

1) определения; переводится на русский язык причастием настоящего времени действительного или страдательного залога или определительным придаточным предложением:

The bridge **being built** across the river is very beautiful.	Мост, *строящийся (который строится)* через реку, очень красивый.

2) обстоятельства (времени, причины); переводится на русский язык обстоятельственным придаточным предложением:

Being built of wood the bridge could not carry heavy loads.	Так как мост был *построен (будучи построенным)* из дерева, он не мог выдержать тяжелых нагрузок.

Perfect Participle Active выражает действие, предшествовавшее действию, выраженному сказуемым, и переводится на русский язык деепричастием совершенного вида.

Having finished the experiment the students left the laboratory.	*Закончив* эксперимент, студенты ушли из лаборатории.

Perfect Participle Passive, выполняя функцию обстоятельства (времени, причины), выражает действие, предшествовавшее действию сказуемого, и переводится на русский язык обстоятельственным придаточным предложением. При этом в качестве подлежащего русского придаточного предложения употребляется подлежащее английского предложения.

Having been translated into many languages Pushkin's books became known all over the world.	После того как книги Пушкина *были переведены* на многие языки, они стали известны во всем мире.

Таблица форм причастий

	Participle I		Participle II
	Active	Passive	changed
Indefinite	**changing** 1) определение: *изменяющий (ся) (-вший) (ся)* 2) обстоятельство: *изменяя (сь)*	**being changed** 1) определение: *изменяющийся, изменяемый, который изменяется* 2) обстоятельство: *будучи измененным*	1) определение: *изменяемый, измененный* 2) обстоятельство: *когда (его) изменили, так как (его) изменили*
Perfect	**having changed** обстоятельство: *изменив (шись)*	**having been changed** обстоятельство: *когда (его) изменили, после того как (его) изменили*	

§ 15. НЕЗАВИСИМЫЙ ПРИЧАСТНЫЙ ОБОРОТ (THE ABSOLUTE PARTICIPLE CONSTRUCTION)

«Независимый причастный оборот» в отличие от зависимого причастного оборота имеет собственное подлежащее, выраженное существительным в общем падеже или личным местоимением в форме именительного падежа. На русский язык этот оборот переводится придаточным обстоятельственным предложением, начинающимся союзами *если, так как, когда, после того как* и др., если оборот предшествует подлежащему со сказуемым, выраженным личной формой глагола.

His father being very ill, he had to send for the doctor.

Так как его отец был очень болен, он должен был послать за доктором.

Предложение с «Независимым причастным оборотом», стоящим в конце предложения, чаще всего переводится на русский язык сложносочиненным предложением с союзами *причем, а, и, но.*

Mendeleyev discovered the Periodic Law of elements,

Менделеев открыл периодический закон элемен-

the table of elements bearing his name.	тов, и таблица элементов носит его имя.

Если действие, выраженное причастием «Независимого причастного оборота», предшествовало действию глагола-сказуемого предложения, то употребляется Perfect Participle.

The article having been translated, the student showed it to the teacher.	Когда статья была переведена, студент показал ее преподавателю.

Формальные признаки «Независимого причастного оборота»:

1) перед причастием стоит существительное без предлога или местоимение в именительном падеже;
2) «Независимый причастный оборот» всегда отделен запятой.

Lesson 7

§ 16. ГЕРУНДИЙ (THE GERUND)

Герундий — неличная форма глагола, имеющая грамматические особенности как глагола, так и существительного и всегда выражающая действие как процесс. Например:

increasing — увеличение
obtaining — получение
heating — нагревание и т. д.

Таблица форм герундия

	Active	Passive
Indefinite	**writing**	**being written**
Perfect	**having written**	**having been written**

Синтаксические функции герундия в предложении и способы его перевода на русский язык

Функция	Пример	Перевод
1. Подлежащее	1. **Smoking** is not allowed here.	1. **Курить** (курение) здесь не разрешается.
2. Именная часть составного сказуемого	2. His hobby is **driving** a car.	2. Его любимое **занятие** — водить (**вождение**) машину.
3. Дополнение:		
а) прямое	3а. The car needs **repairing.**	3а. Машина нуждается **в ремонте.**
б) предложное	3b. They spoke about their **travelling** to the North.	3б. Они говорили **о поездке на север.**
4. Определение	4. There are different ways of **obtaining** this substance.	4. Существуют различные способы **получения** этого вещества.
5. Обстоятельство	5. After **receiving** good results they stopped experiments.	5. **Получив** (после того как получили) хорошие результаты, они прекратили эксперименты.

Выводы:

1. В функции подлежащего, определения, именной части сказуемого и прямого дополнения герундий переводится существительным или инфинитивом (см. примеры 1, 2, 3а, 4).
2. В функции предложного дополнения герундий переводится существительным или придаточным предложением (см. пример 3b).
3. В функции обстоятельства герундий переводится существительным с предлогом, деепричастием или придаточным предложением (см. пример 5).
4. Сложные формы герундия чаще всего переводятся придаточным предложением.

I know of his **having been appointed** to a new job.

Я знаю, что его назначили на новую работу.

§ 17. КОНВЕРСИЯ

Конверсия — это одна из форм словообразования. При конверсии от существующего слова без изменения его графической формы образуется новое слово, относящееся к другой части речи. Например, от существительного могут быть образованы глаголы:

place — место	to place — помещать
house — дом	to house — вмещать
seal — изоляция	to seal — изолировать

Нередко встречаются совпадающие по форме прилагательные и глаголы:

clean — чистый	to clean — чистить
empty — пустой	to empty — опустошать
free — свободный	to free — освобождать

В некоторых случаях совпадение форм встречается у нескольких частей речи. Например, **back** может быть существительным со значением *спина*, прилагательным со значением *задний*, глаголом со значением *поддерживать* и наречием со значением *обратно*.

Показателями того, к какой части речи относится данное слово, являются служебные слова (артикли и частицы) и порядок слов.

The bright **light** came in through the window.	Яркий *свет* проникал через окно.
He stopped **to light** a cigarette.	Он остановился, *чтобы зажечь* сигарету.

Lesson 8

§ 18. ИНФИНИТИВ (THE INFINITIVE)

Инфинитив, являясь неличной формой глагола, имеет свойства как существительного, так и глагола.

Инфинитив может выполнять функции подлежащего, дополнения, обстоятельства, определения, а также может быть именной частью составного сказуемого.

To read English is a great pleasure. (в функции подлежащего)	Читать по-английски — большое удовольствие.
He likes **to read** English. (в функции дополнения)	Ему нравится читать по-английски.
His task was **to complete** the work in time. (функции именной части сказуемого)	Его задача состояла в том, чтобы закончить работу вовремя.
To know a foreign language well you must learn many words. (в функции обстоятельства цели)	Чтобы хорошо знать иностранный язык, надо выучить много слов.

В функции обстоятельства цели инфинитив может стоять в начале или в конце предложения. Перед ним иногда стоят союзы **in order, so as** *чтобы, для того чтобы.*

They went there (in order) **to help** you.	Они поехали туда (чтобы) помочь вам.
They went there early in the morning so as **not to be** late.	Они поехали туда утром пораньше, чтобы не опоздать.

Если определение выражено инфинитивом в пассивной форме, то на русский язык оно переводится придаточным определительным предложением с оттенком будущности и долженствования.

The material **to be employed** has been carefully tested. (в функции определения)	Вещество, которое должно быть использовано, было тщательно исследовано.

Инфинитив в функции определения после слов **the first, the last** и т. п. переводится на русский язык глаголом в личной форме в том времени, в каком стоит глагол-сказуемое английского предложения.

He was the first **to come.**	Он пришел первым.

Употребление форм инфинитива

Инфинитив может выражать характер действия (длительность, законченность) и имеет залог.

1. Indefinite Infinitive (Active и Passive) обозначает действие, одновременное действию, выраженному глаголом-сказуемым.

I want **to show** you a new picture. (Active)	Я хочу *показать* вам новую картину.
I want **to be shown** a new picture. (Passive)	Я хочу, чтобы мне *показали* новую картину.

2. Continuous Infinitive (Active) обозначает действие, которое развивается одновременно с действием, выраженным глаголом-сказуемым.

I **know** her **to be translating** an English article.	Я *знаю*, что она *переводит* английскую статью.

3. Perfect Infinitive (Active и Passive) обозначает действие, предшествовавшее действию, выраженному глаголом-сказуемым.

I **know** him **to have sent** the letter. (Active)	Я *знаю*, что он *послал* письмо.
I **know** the letter **to have been sent** yesterday. (Passive)	Я *знаю*, что письмо *было послано* вчера.

Таблица форм инфинитива

	Active	Passive
Indefinite	He is glad **to help** his friend. Он рад *помочь* своему другу.	He is glad **to be helped.** Он рад, что *ему помогают.*
Continuous	He is glad **to be helping** his friend. Он рад, что *помогает* своему другу (сейчас).	—
Perfect	He is glad **to have helped** his friend. Он рад, что *помог* своему другу.	He is glad **to have been helped.** Он рад, что *ему помогли.*

§ 19. ЦЕПОЧКА ОПРЕДЕЛЕНИЙ

Если между артиклем (или другим определителем) и существительным, к которому он относится, стоит несколько существительных, они образуют цепочку определений, а существительное, к которому относится артикль, является по отношению к ним опорным. С него рекомендуется начинать перевод цепочки определений.

a steam engine **car**	автомобиль с паровым двигателем
the car speed calculation **problem**	проблема вычисления скорости (движения) автомобиля

Lesson 9

§ 20. ОБЪЕКТНЫЙ ИНФИНИТИВНЫЙ ОБОРОТ (THE OBJECTIVE INFINITIVE CONSTRUCTION)

«Объектный инфинитивный оборот» представляет собой сочетание имени существительного в общем падеже или местоимения в объектном падеже с инфинитивом глагола.

I know him to work at this problem.	Я знаю, что он работает над этой проблемой.
I know Professor Petrov to work at this problem.	Я знаю, что профессор Петров работает над этой проблемой.

«Объектный инфинитивный оборот» равнозначен придаточному предложению и поэтому имеет два элемента: 1) имя (существительное или местоимение), обозначающее лицо или предмет, которое совершает действие (соответствует подлежащему придаточного предложения), и 2) инфинитив, выражающий действие, совершаемое лицом или предметом (соответствует сказуемому придаточного предложения). Поэтому «Объектный инфинитивный оборот» переводится на русский язык придаточным дополнительным предложением, вводимым союзами *что*, *чтобы*, *как*.

I expect that she will come tomorrow. I expect her to come tomorrow.	Я ожидаю, что она придет завтра.

«Объектный инфинитивный оборот» употребляется после глаголов, выражающих:

1) желание или потребность:

to want — хотеть, требовать, нуждаться
to wish, to desire — желать
I should like — я хотел бы

He **wants** me to help him. — Он *хочет*, чтобы я помог ему.

I **wish** my friends to come on Sunday. — Я *хочу*, чтобы мои друзья пришли в воскресенье.

I **should like** you to translate this article. — Я *бы хотел*, чтобы вы перевели эту статью.

2) предположение, мнение, суждение:

to suppose — полагать, предполагать
to expect — ожидать
to consider — считать, полагать
to assume — предполагать, допускать
to prove — оказываться, доказывать
to believe — считать, полагать
to understand — понимать
to know — знать
to think — думать, считать

I **suppose** him to be informed. — Я *полагаю*, что он проинформирован.

They **expect** the ship to arrive tonight. — Они *ожидают*, что пароход прибудет сегодня вечером.

They **don't consider** him to be a good engineer. — Они *не считают*, что он хороший инженер.

I **believe** her to have been sent to Leningrad. — Я *полагаю*, что ее послали в Ленинград.

В конструкции «Объектный инфинитивный оборот» после таких глаголов, как **to consider, to think**, глагол **to be** может опускаться. Например, вместо I consider him to be a good specialist можно сказать I consider him a good specialist и на русский язык перевести буквально, а именно: *Я считаю его хорошим специалистом.*

3) физическое восприятие и ощущение:

to watch, to observe — наблюдать

to notice — замечать
to see — видеть
to hear — слышать
to feel — ощущать

После всех этих глаголов, а также после глаголов **to make, to cause** в значении *заставлять, вынудить* инфинитив употребляется без частицы **to.**

We did not see the teacher enter the room. — Мы не видели, как преподаватель вошел в комнату.

Have you heard him play the piano? — Вы слышали, как он играет на пианино?

4) знание, осведомленность, утверждение, констатацию факта:

to know — знать
to note — отмечать
to find — находить
to claim — утверждать
to state — констатировать

We know him to have taken part in that expedition. — Мы знаем, что он принимал участие в этой экспедиции.

5) принуждение, разрешение или запрет:

to make, to cause — заставлять
to force — вынуждать
to allow, to permit — позволять
to order, to command — приказывать
to enable — давать возможность

«Объектный инфинитивный оборот» после этих глаголов не переводится развернутым придаточным предложением.

Our English teacher makes us learn the words for every lesson. — Наш преподаватель английского языка заставляет нас учить слова к каждому уроку.

Инфинитив после перечисленных глаголов нередко встречается в страдательном залоге (Passive Voice). В этом случае он переводится на русский язык инфинитивом в форме действительного залога и ставится перед существительным, которое в английском предложении предшествует инфинитиву.

The chief engineer allowed *the new engine* **to be tested.**	Главный инженер разрешил **испытывать** *новый двигатель.*

§ 21. СУБЪЕКТНЫЙ ИНФИНИТИВНЫЙ ОБОРОТ (THE SUBJECTIVE INFINITIVE CONSTRUCTION)

Неопределенно-личным предложениям русского языка чаще всего в английском языке соответствуют пассивные обороты, как например:

It is said that ...	Говорят, что ...
It is reported that ...	Сообщается, что ...
It was supposed that ...	Предполагали, что ...

Сложноподчиненное предложение с главным предложением, выраженным неопределенно-личным оборотом типа **it is said** (*говорят*), **it is known** (*известно*), **it seems** (*кажется*), **it is likely** (*вероятно*), имеет свой эквивалент — простое предложение, в которое входит особая конструкция «Субъектный инфинитивный оборот». Эта конструкция, выраженная существительным в общем падеже или местоимением в именительном падеже с инфинитивом, переводится на русский язык придаточным предложением.

1 → 2 → 3 It is said that they live in Leningrad. 2 → 1 → 3 They are said to live in Leningrad.	1 2 3 Говорят, что они живут в Ленинграде.

Сказуемое английского предложения **(are said)** при переводе на русский язык преобразуется в сказуемое главного предложения, представляющее собой неопределенно-личный оборот (*говорят*), подлежащее **(they)** становится подлежащим русского придаточного предложения, а инфинитив **(to live)** — его сказуемым. Придаточное предложение в русском переводе вводится союзом *что*. «Субъектный

инфинитивный оборот» употребляется с глаголами, обозначающими утверждение, знание, физическое восприятие, просьбу, приказание, которые могут стоять в любом времени в страдательном залоге, а именно с глаголами:

to say	сказать
to know	знать
to think	думать, полагать, считать
to report	сообщать
to suppose	предполагать
to expect	ожидать, полагать
to consider	считать, полагать
to assume	допускать
to believe	полагать
to see	видеть
to hear	слышать
	и др.

She is said to know several foreign languages.	Говорят, что она знает несколько иностранных языков.
They were reported to have arrived in Moscow.	Сообщили, что они приехали в Москву.
He is known to have a large collection of pictures.	Известно, что у него большая коллекция картин.

«Субъектный инфинитивный оборот» употребляется также в сочетании с некоторыми непереходными глаголами, которые могут стоять в действительном залоге, а именно с глаголами:

to seem, to appear	— казаться
to prove, to turn out	— оказаться
to happen	— случаться

She seemed to know everybody at the plant.	Казалось, она знает на заводе всех.
This young lecturer appears to know his subject well.	Кажется (по-видимому), этот молодой лектор хорошо знает свой предмет.
I happened to be there at that time.	Случилось так, что я был там в это время.

Для выражения залоговых и видовых значений в «Субъектном инфинитивном обороте» используются различные видовые и залоговые формы инфинитива.

Indefinite Infinitive выражает действие, одновременное с действием, выраженным сказуемым предложения.

He is said to work hard at his English.	Говорят, что он упорно работает над английским.

Continuous Infinitive выражает действие как процесс, протекающий одновременно с действием, выраженным сказуемым предложения.

The weather appears to be improving.	Кажется, (что) погода улучшается.

Perfect Infinitive выражает действие, совершенное ранее действия, выраженного сказуемым, и переводится на русский язык формой глагола в прошедшем времени.

This house is said to have been built two hundred years ago.	Говорят, что этот дом был построен около двухсот лет тому назад.
The expedition was reported to have reached the North Pole.	Сообщили, что экспедиция достигла Северного полюса.

§ 22. ФУНКЦИИ И ПЕРЕВОД СЛОВА ONE (ONES)

One, стоящее перед личной формой глагола, является формальным подлежащим и указывает на то, что данное предложение является неопределенно-личным. В этом случае на русский язык **one** не переводится, а глагол в личной форме переводят обычно во 2-м лице единственного числа или в 3-м лице множественного числа.

One never knows what he can do.	*Никогда не знаешь*, что он может сделать.

One в форме притяжательного падежа переводится на русский язык местоимением *свой, своя, свое.*

One should always keep **one's** word.	Надо всегда держать *свое* слово.

One часто употребляется в сочетании с модальными глаголами.

One should be careful when working with chemical substances.
One may work in this laboratory only observing certain rules.

Нужно быть осторожным при работе с химическими веществами.
В этой лаборатории *можно* работать только при соблюдении определенных правил.

One (мн. ч. **ones**) может выступать в качестве слова-заместителя, т. е. употребляться для замены ранее упомянутого исчисляемого существительного или существительных. Переводится или словом, которое заменяет, или не переводится совсем.

I haven't got a dictionary. I must buy **one**.
Here are some books. Which **ones** would you like to take?

У меня нет словаря. Я должен купить *словарь*.
Вот несколько книг. Какие *(книги)* вы хотели бы взять?

Перед **one (ones)** может стоять артикль **(the one)**, либо другие определители и определения **(this one, another one, the black ones)**. В этом случае на русский язык **one** обычно не переводится.

I don't like this fountain pen, show me **another one**, please.
This article is easier than **the one** we translated last week.
What pencils will you take?

— The black **ones**.

Мне не нравится эта авторучка, покажите мне *другую*, пожалуйста.
Эта статья легче, чем *та*, которую мы переводили на прошлой неделе.
Какие карандаши вы возьмете?
— Черные.

§ 23. ФУНКЦИИ И ПЕРЕВОД СЛОВА THAT (THOSE)

Функции	Примеры	Перевод
1. **That** (ед. ч.) — указательное местоимение *тот, та, то* (иногда *этот*), обычно стоит перед существительным.	Give me **that** textbook, please.	Дайте мне, пожалуйста, *тот* учебник.
Those (мн. ч.) — *те*	I like **those** flowers better.	*Те* цветы мне нравятся больше.
2. **That (of), those (of)** — слова-заместители; они заменяют упомянутое существительное, переводятся или словом, которое заменяют, или совсем не переводятся.	The work of the new device is much more efficient than **that** of the old one.	Работа нового прибора гораздо более эффективна, чем *работа* старого.
3. **That** — относительное местоимение *который, -ая, -ое*; после существительного вводит определительное придаточное предложение.	Spaceships can cover distances **that** are measured in millions of kilometres.	Космические корабли могут покрывать расстояния, *которые* измеряются миллионами километров.
4. **That** — союз *что*; после глагола вводит дополнительное придаточное предложение.	He said **that** he would do his best to help them.	Он сказал, *что* сделает все возможное, чтобы помочь им.
5. **That** — союз *то, что*; вводит придаточное подлежащее и придаточное сказуемое.	**That** he failed in his examination did not surprise anybody.	*То, что* он провалился на экзамене, никого не удивило.

Lesson 10

§ 24. УСЛОВНЫЕ ПРЕДЛОЖЕНИЯ (CONDITIONAL SENTENCES)

Формы сослагательного наклонения

В отличие от изъявительного наклонения, которое обозначает действие как реальный факт, сослагательное наклонение (the Subjunctive Mood) показывает, что выра-

жаемое им действие или явление является предполагаемым или желательным, а также возможным при известных условиях.

В русском языке сослагательное наклонение выражается сочетанием глагола в форме прошедшего времени с частицей *бы* и имеет только одну форму, которая может относиться к настоящему, прошедшему или будущему времени. Например:

Если *бы* я закончил работу пораньше, я *бы* смог проводить вас на вокзал (сегодня, завтра, вчера).

В английском языке имеются аналитические и синтетические формы сослагательного наклонения. Аналитическая форма глагола в сослагательном наклонении представляет собой сочетание **should** или **would** с простым инфинитивом (Indefinite Infinitive) или перфектным инфинитивом (Perfect Infinitive) без частицы **to**.

Сочетание **should/would** + Indefinite Infinitive используется, если предполагаемое или желательное действие относится к настоящему или будущему времени.

I **should come.**	*Я бы пришел.*
He **would come.**	Он *бы пришел.*
It is necessary that the car **should be repaired** by tomorrow.	Необходимо, *чтобы* машина *была отремонтирована* к завтрашнему дню.
He demanded that the car **should be repaired** by tomorrow.	Он потребовал, *чтобы* машина *была отремонтирована* к завтрашнему дню.

Сочетание **should/would** + Perfect Infinitive используется, если предположение относится к прошедшему времени.

I **should have come** then.	*Я бы пришла* тогда.
He **would have come** then.	Он *бы пришел* тогда.

В современном английском языке имеется небольшое число синтетических форм сослагательного наклонения.

Глагол **to be** имеет формы **be** и **were** для всех лиц при выражении предположения, желания или возможности, относящихся к настоящему и будущему времени. Форма **were** употребляется для всех лиц единственного и множественного числа.

If I were ...	Если бы я был ...

Для выражения желательного, предположительного, действия, относящегося к настоящему или будущему времени, для всех других глаголов используются формы Past Indefinite, которые имеют здесь значение сослагательного наклонения.

If I came earlier, I should speak to him.	Если бы я пришел пораньше, я бы поговорил с ним.

Употребление форм изъявительного или сослагательного наклонения в условных предложениях

Условные предложения могут выражать реальные, маловероятные и нереальные условия. В зависимости от характера условия условные предложения принято подразделять на условные предложения первого типа (реальные), второго типа (нереальные или маловероятные условия, относящиеся к настоящему или будущему времени) и третьего типа (нереальные условия, относящиеся к прошедшему времени).

Условные предложения первого типа

Условие, содержащееся в условном придаточном предложении, рассматривается говорящим как реально предполагаемый факт, относящийся к настоящему, прошедшему или будущему времени. В этом случае сказуемые главного и придаточного предложений выражаются глаголами в формах изъявительного наклонения.

If the weather is good, we shall go skiing.	Если погода будет хорошей, мы пойдем кататься на лыжах.
If the weather was good, we went skiing.	Если погода была хорошей, мы ходили кататься на лыжах.
If the weather is good, we go skiing.	Если погода хорошая, мы ходим кататься на лыжах.

Условные предложения второго типа

Условие, содержащееся в условном придаточном предложении, рассматривается говорящим как маловероятное. Для выражения малой вероятности осуществления дейст-

вия в настоящем или будущем сказуемое главного предложения употребляется в форме сослагательного наклонения — **should/would** + Indefinite Infinitive без **to**, а сказуемое придаточного предложения — в форме сослагательного наклонения, аналогичной форме Past Indefinite или **were** для всех лиц от глагола **to be.**

На русский язык глагол-сказуемое придаточного предложения переводится глаголом в сослагательном наклонении с частицей *бы.*

If the plane landed, they would let us know about it.
If he were here, I should speak to him.

Если бы самолет приземлился, они бы нам сообщили об этом.
Если бы он был здесь, я бы с ним поговорил.

Условные предложения третьего типа

Условие, содержащееся в условном придаточном предложении, рассматривается говорящим как неосуществимое, так как относится к прошлому. Для выражения нереального условия, относящегося к прошедшему времени, сказуемое главного предложения употребляется в форме сослагательного наклонения — **should/would** + Perfect Infinitive, а сказуемое придаточного предложения — в форме сослагательного наклонения, аналогичной форме Past Perfect.

На русский язык глагол-сказуемое придаточного предложения переводится глаголом в сослагательном наклонении с частицей *бы* (в русском языке не отличается от условного придаточного предложения второго типа).

If the weather conditions had been favourable, the construction of the bridge would have been completed in time.

Если бы погодные условия были благоприятными, строительство моста было закончено своевременно.

Инверсия в условных придаточных предложениях

В условных придаточных предложениях второго и третьего типа союзы **if, provided** могут быть опущены, в этом случае в придаточном предложении вспомогательный глагол (**could, had, were** и др.) ставится перед подлежащим.

Had the engine been repaired yesterday, we should have left the port.
Если бы двигатель был отремонтирован вчера, мы бы покинули порт.

Were there any letters from him, his sister would telephone me.
Если бы от него были письма, его сестра позвонила бы мне.

Союзы условных придаточных предложений

Основными союзами условных предложений являются:

if — *если*

If you wait for me, we shall go there together.
Если вы подождете меня, мы пойдем туда вместе.

unless — *если ... не*

He will not finish his work in time unless you help him.
Он не закончит свою работу вовремя, если вы ему не поможете.

provided (providing) — *(при условии) если*

We shall start out at 7 sharp, provided everybody comes in time.
Мы выйдем точно в 7 часов, (при условии) если все соберутся вовремя.

Lesson 11

§ 25. МНОГОЗНАЧНОСТЬ ГЛАГОЛОВ SHALL, WILL, SHOULD, WOULD, TO BE, TO HAVE

Функции глагола shall

1. Вспомогательный глагол для обозначения глагольных форм будущего времени в 1-м лице ед. и мн. числа.

We shall take an examination in physics in June.
Мы будем сдавать экзамен по физике в июне.

2. Модальный глагол со значением долженствования в утвердительном и отрицательном предложениях во 2-м и 3-м лицах.

You shall not say so.	Вы этого не скажете (не должны так говорить).

Функции глагола will

1. Вспомогательный глагол для образования глагольных форм будущего времени во 2-м и 3-м лицах ед. и мн. числа.

He will go there tomorrow.	Он пойдет туда завтра.

2. Модальный глагол со значением *хотеть* (в 1-м лице).

I will help you.	Я вам помогу (хочу вам помочь).

3. Употребляется для выражения повторных привычных действий в отношении настоящего и будущего времени.

He will sit for hours without saying a word.	Он сидит часами, не говоря ни слова.

Функции глагола should

1. Модальный глагол, выражающий долженствование (во всех лицах ед. и мн. числа).

You should do this work again.	Вам нужно сделать эту работу еще раз.

2. Вспомогательный глагол в формах сослагательного наклонения.

If I knew his address I should write to him.	Если бы я знал его адрес, я бы написал ему.

3. Вспомогательный глагол для образования глагольных форм Future-in-the-Past (в 1-м лице ед. и мн. числа).

I said I should help him in the laboratory work.	Я сказал, что буду помогать ему в лабораторной работе.

Функции глагола would

1. Вспомогательный глагол в формах сослагательного наклонения.

He would answer the question if he knew it.	Он бы ответил на вопрос, если бы знал.

2. Вспомогательный глагол для образования глагольных форм Future-in-the-Past (во 2-м и 3-м лицах ед. и мн. числа).

He said he would enter the University.	Он сказал, что будет поступать в университет.

3. Употребляется для выражения повторных действий в прошлом.

In summer she would go swimming.	Летом она обычно плавала.

4. Модальный глагол, выражающий отказ выполнить действие (в отрицательных предложениях).

I said I would not do it.	Я сказал, что не буду этого делать.

Функции глагола to be

1. **to be** перед обстоятельством, обычно выраженным существительным с предшествующим предлогом, выступает в роли смыслового глагола *быть, находиться*.

His books were in the bag.	Его книги были в портфеле.

2. вспомогательный глагол **to be** в сочетании с Participle II смыслового глагола употребляется для образования всех времен страдательного залога (Passive Voice).

The work was finished.	Работу закончили.

3. вспомогательный глагол **to be** в сочетании с Participle I смыслового глагола употребляется для образования глагольных времен Continuous и Perfect Continuous.

They are waiting for him.	Они ждут его.

4. **to be** в сочетании с инфинитивом другого глагола с частицей **to** имеет модальное значение долженствования и указывает, что действие должно иметь место в соответствии с намеченным планом.

The teacher is to come at 5.	Преподаватель должен прийти в 5 часов.

Функции глагола to have

1. **to have** перед существительным выступает в роли смыслового глагола *иметь, обладать*.

They have a house in the country.	У них дом (они имеют дом) за городом.

2. вспомогательный глагол **to have** в сочетании с Participle II смыслового глагола употребляется для образования глагольных времен группы Perfect.

We have introduced a new system of work.	Мы ввели новую систему работы.

3. **to have** в сочетании с инфинитивом другого глагола с частицей **to** имеет модальное значение долженствования.

I have to buy another newspaper.	Я должен купить еще одну газету.

Lesson 12

§ 26. СОСТАВНЫЕ ПРЕДЛОГИ

Предлоги	Примеры	Перевод
1. **according to** *согласно чему-л.*	**According to** the information received by us the exhibition will open on May, 10.	*Согласно* полученным нами сведениям выставка откроется 10 мая.
2. **as far as** *до*	I went with him **as far as** Sverdlov Square and then we parted.	Я дошла с ним *до* площади Свердлова, а затем мы расстались.
3. **because of** *из-за, благодаря, вследствие*	The fishermen did not go into the open sea **because of** the storm.	Рыбаки не вышли в море *из-за* шторма.
4. **by means of** *посредством, с помощью*	All the calculations were made **by means of** electronic computer.	Все расчеты были сделаны *с помощью* электронно-вычислительной машины.
5. **due to** *из-за, благодаря, вследствие*	He achieved these results **due to** his hard work.	Он достиг этих результатов *благодаря* усердной работе.
6. **in addition to** *в дополнение к, кроме*	**In addition to** the oral examination they are given a written test.	*В дополнение* к устному экзамену они сдают письменный экзамен.
7. **in front of** *перед, впереди, напротив*	The bus stop is just **in front of** my house.	Автобусная остановка как раз *перед* моим домом.
8. **in order to** *чтобы, для того чтобы*	I went to the post office **in order to** send a telegram.	Я пошел на почту, *чтобы* послать телеграмму.
9. **in spite of** *несмотря на*	I went on an excursion **in spite of** the rain.	Я отправился на экскурсию, *несмотря на* дождь.
10. **instead of** *вместо*	May I go there tomorrow **instead of** today?	Можно мне пойти туда завтра *вместо* сегодня?
11. **on account of** *благодаря, вследствие, из-за*	He could not go to work in the North **on account of** his poor health.	Он не мог поехать работать на север *из-за* слабого здоровья.
12. **owing to** *благодаря, из-за, вследствие*	We could not get there in time **owing to** a severe storm.	Мы не могли прибыть туда вовремя *из-за* сильной бури.
13. **thanks to** *благодаря, из-за, вследствие*	The fire was quickly extinguished **thanks to** the energy of the fire brigade.	Пожар был быстро потушен *благодаря* энергии пожарной команды.

§ 27. СОСТАВНЫЕ СОЮЗЫ

Союзы	Примеры	Перевод
1. **as ... as** *так (же)... как (и); такой (же) ... как (и)*	The strength of this material is **as** great **as** that of steel.	Прочность этого материала *так же* велика, *как и* прочность стали.
2. **as long as** *(до тех пор) пока*	**As long as** you apply old methods, you will not be able to accomplish this research.	*До тех пор пока* вы будете применять старые методы, вы не сможете завершить это исследование.
3. **as soon as** *как только*	**As soon as** you finish your calculations, we shall begin the tests.	*Как только* вы закончите расчеты, мы начнем испытания.
4. **as well as** *так же как (и); и ... и*	We received your letter **as well as** your telegram.	Мы получили *и* ваше письмо, *и* вашу телеграмму.
5. **both ... and** *как...так и, и...и*	Franklin is known all over the world **both** as a scientist **and** as a progressive political leader.	Франклин известен всему миру *и как* ученый, *и как* прогрессивный политический деятель.
6. **either ... or** *или...или; либо...либо*	The chief engineer is **either** at the office **or** at the laboratory.	Главный инженер *либо* в конторе, *либо* в лаборатории.
7. **in order that** *(для того) чтобы*	The invitations were sent beforehand **in order that** the delegates might arrive in time for the conference.	Приглашения были разосланы заранее, *чтобы* делегаты прибыли на конференцию вовремя.
8. **neither ... nor** *ни...ни*	**Neither** he **nor** I know French.	*Ни* он, *ни* я не знаем французского языка.
9. **so that** *чтобы; для того чтобы*	I gave him the book **so that** he could prepare the task at home.	Я дал ему книгу, *чтобы* он мог подготовить задание дома.
10. **the ... the** *чем...тем*	**The** longer I look at this picture **the** more I like it.	*Чем* больше я смотрю на эту картину, *тем* больше она мне нравится.

Словообразовательные аффиксы, представленные в учебнике

1. основа глагола + **-tion/-sion/-ion** → существительное (preparation)
2. основа глагола + **-er/-or** → существительное (writer)
3. основа глагола + **-ing** → существительное (opening)
4. основа глагола + **-ment** → существительное (development)
5. основа прилагательного + **-ty** → существительное (activity)
6. основа глагола + **-ive** → прилагательное (active)
7. **un-/in-/ir-/il-/im-** + основа прилагательного → прилагательное с отрицательным значением (unusual)
8. основа глагола + **-able/-ible** → прилагательное со значением возможности совершения действия, обозначаемого глаголом (disputable)
9. **re-** + глагол → глагол со значением повторного действия (rewrite)
10. основа прилагательного + **-ize** → глагол (activize)
11. основа прилагательного + **-ly** → наречие (correctly)

Сводная таблица основных форм нестандартных глаголов, встречающихся в учебнике

Indefinite stem	Past Indefinite	Participle II	Перевод
be	was, were	been	быть
beat	beat	beaten	бить
begin	began	begun	начинать
bring	brought	brought	приносить
build	built	built	строить
burn	burnt	burnt	сжигать
buy	bought	bought	покупать
come	came	come	приходить
cost	cost	cost	стоить
cut	cut	cut	резать
do	did	done	делать
drink	drank	drunk	пить
drive	drove	driven	ехать
eat	ate	eaten	есть
fall	fell	fallen	падать
find	found	found	находить
fly	flew	flown	летать
give	gave	given	давать
go	went	gone	идти
grow	grew	grown	расти
have	had	had	иметь
hear	heard	heard	слышать
hold	held	held	держать
keep	kept	kept	хранить
know	knew	known	знать
lay	laid	laid	класть
lead	led	led	вести
leave	left	left	оставлять

Продолжение

Indefinite stem	Past Indefinite	Participle II	Перевод
lose	lost	lost	терять
make	made	made	делать
mean	meant	meant	иметь в виду
meet	met	met	встречать
pay	paid	paid	платить
put	put	put	класть
read	read	read	читать
rise	rose	risen	подниматься
say	said	said	сказать
see	saw	seen	видеть
send	sent	sent	посылать
shake	shook	shaken	трясти
show	showed	shown	показывать
sit	sat	sat	сидеть
sleep	slept	slept	спать
speak	spoke	spoken	говорить
speed	sped	sped	ускорять
spend	spent	spent	тратить
stand	stood	stood	стоять
swim	swam	swum	плавать
take	took	taken	брать
teach	taught	taught	учить, преподавать
tell	told	told	говорить
think	thought	thought	думать
understand	understood	understood	понимать
wear	wore	worn	носить
win	won	won	выигрывать
wind	wound	wound	заводить
write	wrote	written	писать

ОБЗОРНЫЕ ЛЕКСИКО-ГРАММАТИЧЕСКИЕ УПРАЖНЕНИЯ

А. Упражнения для работы в парах и самоконтроля

I. to be

1. In winter in Great Britain it is often very cold.
1а. В Великобритании зимой часто очень холодно.
2. All books and dictionaries were on the desk.
2а. Все книги и словари были на столе.
3. He was at home all day yesterday.
3а. Вчера весь день он был дома.

4. The students will be in the laboratory after 3 o'clock.
5. We shall be here again tomorrow.
6. All the summer she was in town.

4a. Студенты будут в лаборатории после 3 часов.
5a. Завтра мы опять будем здесь.
6a. Все лето она была в городе.

II. to have

1. When I was a boy we had a house on the collective farm.
2. These children have breakfast at 9 o'clock.
3. We shall have holidays in August.
4. This teacher has two lectures every day.
5. The students will have practical training at the plant in July.
6. They will have much work to do at the end of the month.

1a. Когда я был мальчиком, у нас был дом в колхозе.
2a. Эти дети завтракают в 9 часов.
3a. У нас будут каникулы в августе.
4a. У этого преподавателя каждый день две лекции.
5a. У студентов будет практика на заводе в июле.
6a. У них будет много работы в конце месяца.

III. there + to be

1. There are some mistakes in the work.
2. There will be many people at the concert.
3. There is little bread on the table.
4. There weren't any interesting football matches last week.
5. There was no lecture on mathematics yesterday.
6. There won't be a meeting tomorrow.

1a. В работе несколько ошибок.
2a. На концерте будет много народа.
3a. На столе мало хлеба.
4a. На прошлой неделе не было интересных футбольных матчей.
5a. Вчера не было лекции по математике.
6a. Завтра не будет собрания.

IV. Степени сравнения прилагательных и наречий

1. The sooner you start the sooner you finish.

1a. Чем скорее вы начнете, тем скорее вы закончите.

2. Which is more — one mile or one kilometre?
2a. Что больше — миля или километр?

3. New York is the largest city in the USA.
3a. Нью-Йорк — самый большой город в США.

4. The Nile is the longest river in Africa.
4a. Нил — самая длинная река в Африке.

5. Last summer was not so hot as this one.
5a. Прошлое лето было не таким жарким, как это.

6. The new house is more comfortable than the old one.
6a. Новый дом более удобен, чем старый.

V. Времена группы Indefinite

1. The dog is often called the friend of man.
1a. Собаку часто называют другом человека.

2. They repeated the words yesterday.
2a. Они повторили слова вчера.

3. The words were repeated two days ago.
3a. Слова повторили два дня назад.

4. Some mistakes were made in his last exercise.
4a. Несколько ошибок было сделано в (его) последнем упражнении.

5. He didn't make mistakes in his answer.
5a. Он не сделал ошибок в своем ответе.

6. This money will be spent on books.
6a. Эти деньги будут потрачены на книги.

7. He was given a difficult task.
7a. Ему задали трудное задание.

8. This book is written in English.
8a. Эта книга написана на английском языке.

VI. Модальные глаголы

1. The box is heavy. The boy cannot lift it.
1a. Ящик тяжелый. Мальчик не может его поднять.

2. The room is dark. We cannot work in it.
2a. Комната темная. Мы не можем в ней работать.

3. The apples are green. We cannot eat them.
3a. Яблоки зеленые. Мы не можем их есть.

4. Must you attend all the lectures?
4a. Должны ли вы посещать все лекции?

5. He must not be late for his classes.
5a. Он не должен опаздывать на занятия.

6. I must get up early on week days.
7. May I take your pencil for a minute?
8. May I try to read this text again?

6a. Я должен рано вставать в будние дни.
7a. Можно мне взять на минутку ваш карандаш?
8a. Можно мне попытаться прочесть этот текст еще раз?

VII. Времена группы Continuous

1. A.: Hallo, Mary. This is Ann speaking. How are you?
2. M.: Fine, thank you.
3. A.: It's a fine day today. It isn't raining. The sun is shining. What are you doing?
4. M.: I am reading a book.
5. A.: What is your husband doing?
6. M.: He is smoking a cigarette.
7. A.: What are your children doing?
8. M.: They are playing in their room.
9. A.: What were you doing yesterday evening?
10. M.: I was watching a TV programme. My husband was reading a newspaper. My daughter was playing the piano and my son was doing his homework.

1a. A.: Здравствуй, Мэри. Это говорит Аня. Как дела?
2a. M.: Хорошо. Спасибо.
3a. A.: Сегодня хороший день. Дождь не идет. Солнце светит. Что ты сейчас делаешь?
4a. M.: Я читаю книгу.
5a. A.: А что делает твой муж?
6a. M.: Он сейчас курит.
7a. A.: А что делают дети?
8a. M.: Они играют в своей комнате.
9a. A.: А что вы делали вчера вечером?
10a. M.: Я смотрела телевизор. Мой муж читал газету. Моя дочь играла на пианино, а мой сын делал домашнее задание.

VIII. Времена группы Perfect

1. Don't tell my mother that I have failed in the examination.

1a. Не говори моей маме, что я не сдал экзамена.

2. He has lived in Italy for ten years and now he teaches Italian.
3. They have just seen the accident in the street.
4. Has the train already left the station? No, it hasn't, it is still at the platform.
5. He had already seen the film before he watched it on TV.
6. He has known me since 1975.
7. They will have completed the experiment by the end of the year.
8. Have you ever driven a car?

2a. Он прожил в Италии 10 лет и сейчас преподает итальянский язык.
3a. Они только что видели катастрофу на улице.
4a. Поезд уже отошел от станции? Нет еще, он все еще находится у платформы.
5a. Он уже видел этот фильм до того, как он посмотрел его по телевизору.
6a. Он знает меня с 1975 г.
7a. Они закончат эксперимент к концу года.
8a. Вы когда-нибудь водили машину?

IX. Согласование времен

1. She said that she travelled a lot.
2. She said that she would travel a lot.
3. She said that she had travelled a lot.
4. He told me that our students were learning to drive a car.
5. He was interested if they had completed their research.
6. I could not understand what he was saying.
7. The teacher asked the student whether he had prepared his homework.

1a. Она сказала, что она много путешествует.
2a. Она сказала, что она будет много путешествовать.
3a. Она сказала, что она много путешествовала.
4a. Он сказал мне, что наши студенты учатся водить машину.
5a. Он поинтересовался, закончили ли они свое исследование.
6a. Я не мог понять, что он говорит.
7a. Преподаватель спросил студента, приготовил ли он свое домашнее задание.

X. Причастие

1. Calculating the programme they consulted

1a. Рассчитывая программу, они консуль-

their professor.

2. Having calculated the programme they paid attention to the possible changes.
3. Increasing the speed of the car the driver must remember the speed limits within the city.

4. Having increased the speed of the car the driver must remember the speed limits within the city.
5. Constructing a new railway they will link two towns.
6. Having constructed a new railway they linked two towns.
7. A person learning to drive a car must be attentive.

8. The problem solved by a young scientist was very important.
9. The information received was very valuable.
10. Being seriously ill he could not attend two last lectures.

тировались у своего профессора.

2а. Рассчитав программу, они обратили внимание на возможные изменения.

3а. Увеличивая скорость машины, водитель должен помнить об ограничении скорости в пределах города.

4а. Увеличив скорость машины, водитель должен помнить об ограничении скорости в пределах города.

5а. Строя новую железную дорогу, они соединят два города.

6а. Построив новую железную дорогу, они соединили два города.

7а. Человек, который учится водить машину, должен быть внимательным.

8а. Проблема, решенная молодым ученым, была очень важной.

9а. Полученная информация была очень нужной.

10а. Будучи серьезно больным, он не смог посетить последние две лекции.

XI. Инфинитив

1. Football is known to be a popular sport in many countries.

2. He is always the first to come and the last to go.

1а. Известно, что футбол — популярный вид спорта во многих странах.

2а. Он всегда приходит первым и уходит последним.

3. To go around the corner at a high speed is not safe.
4. I tried to make him understand that his behaviour was wrong.
5. To speak of radioengineering is to speak of electronics.
6. A submarine to be designed can cross the Arctic Ocean under water.
7. A new powerful lorry is reported to have been developed by the Kamaz engineers.
8. To carry out the plan in time the factory has to modify its old equipment.

3а. Небезопасно поворачивать за угол на высокой скорости.
4а. Я пытался заставить его понять, что его поведение неправильно.
5а. Говорить о радиотехнике значит говорить об электронике.
6а. Подводная лодка, которая будет сконструирована, может пересечь Северный Ледовитый океан под водой.
7а. Как сообщают, новый мощный грузовик был разработан инженерами Камаза.
8а. Чтобы выполнить план вовремя, завод должен модифицировать устаревшее оборудование.

Б. Упражнения для перевода [1]

I. *Оборот* **there + to be** *(к § 3 [2]).*

1. There were several empty seats in the bus when I got into it. 2. There is a great number of goods that can be transported by air. 3. There is no fear of damaging the machine if it is properly maintained. 4. There was no chance of getting tickets for this concert. 5. There are very powerful cranes for unloading ships in this port. 6. There was still some hope of reaching the destination in time. 7. There are some factories to be rebuilt in this region. 8. Is there any demand for the tubes of that size? 9. There are no reasons for his being late. 10. There are always some problems to be solved. 11. There have been several bad accidents at this corner recently. 12. There has been an increased demand for this kind of goods. 13. There were plenty of furnished flats and furnished houses in the vil-

[1] Упражнения предназначены для перевода с английского языка на русский.
[2] Номера параграфов соответствуют номерам параграфов грамматического справочника.

lage now. 14. There is a place where two streets cross. There are lights in the middle of the crossing. If there is a red light drivers of cars and buses must stop. Then they must wait until the red light changes to green. Sometimes there is a yellow light between the red and the green. It means that you must stop and wait until it changes to green.

II. *Степени сравнения прилагательных (к § 4).*

1. He thought he was the happiest man in the world. 2. Mayakovsky is one of the most talented Soviet poets. 3. The new car is more comfortable than the previous one. 4. His radio set is not so powerful as mine. 5. The Neva is wider and deeper than the Moskva River. 6. Last year he spent less time on English than this year. 7. The sooner they finish the construction of the plant the better. 8. The book is not so interesting as you think. 9. The more time you spend in the open air the sooner you will recover after your illness. 10. He has much more free time than I have. 11. Tom runs fast. Dick runs faster, but Harry runs fastest. 12. This road is the worst I've ever travelled over. 13. If you listen to the teacher more attentively you understand better. 14. Do you think people read more books twenty years ago than they do today? 15. Tennis and football are the games I like best. 16. This is the hottest day we have had for several weeks. 17. S miles is the longest word in the English language because there is a mile between two "s". 18. Yesterday was hotter than any other day we had this summer.

III. *Времена группы Indefinite Active и Passive (к § 5, 6).*

1. At last he returned to his native country to the little town where his childhood was spent. 2. The latest surgical instruments were used during this unique operation. 3. The trouble is that this student does not work properly at his English. 4. Before the experiment the substances are mixed in a large cup. 5. The commission will consider this offer carefully before accepting it. 6. In spite of the fact that the report was short, it covered the subject completely. 7. This instrument is preferred to all others because of its great reliability. 8. The doctor said that an urgent operation was needed. 9. They will do everything in their power to help us. 10. I hope we shall never deal with this matter again. 11. The last experimental results were constantly referred to by the professor. 12. This airplane crosses the Atlantic in about 10 hours. 13. The Houses of Parliament are situated in Westminster.

IV. *Модальные глаголы и их эквиваленты (к § 7).*

1. He is to go to the Far East on business. 2. When are we to visit the laboratories of the Institute? 3. He has to investigate a series of accidents that occurred in the locality for a period of three months. 4. We had to find a safe place for the pictures. 5. I shall have to take a local train. 6. You should follow all the important scientific researches in your field. 7. He was allowed to use the mobile equipment. 8. You needn't keep your activities in secret. 9. You can see this old film in one cinema only. 10. The laboratory was to make important scientific experiments in a very short time. 11. The talks were to be attended by the representatives of fifteen European countries. 12. We shall be able to see a number of Chaplin's films in September. 13. You are to write your name at the top of the paper. 14. If you want to know English you have to work hard. 15. We had to walk home because the last bus had gone. 16. I'll have to come to the Institute at 8 o'clock tomorrow. 17. The teacher will have to explain this difficulty.

V. *Времена группы Continuous Active и Passive (к § 8).*

1. When he met me I was going to the Institute and had little time to talk to him. 2. "What's your little brother doing?" "He is still sleeping." 3. She was sitting there doing nothing. 4. Next Monday we'll be working only five hours. 5. The construction of the road was being completed when the commission arrived. 6. The new engine is being tested in the laboratory. 7. Automation is being increasingly used in all the branches of our industry. 8. The child is being looked for everywhere. 9. A new research is being carried out successfully. 10. When I come home the family will be watching the TV programme. 11. A new hydroelectric station was being built when we came there to have practice. 12. Scientists are studying the currents of the Pacific Ocean. 13. I want to know what new books are being published. 14. He cut himself while he was repairing his car. 15. What subjects is he studying and which subject does he like best?

VI. *Времена группы Perfect Active и Passive (к § 11).*

1. He has never been there. 2. When you see him next, he will have passed the last exam. 3. By that time we had already changed our plans. 4. He decided to become a writer only when his first story had been published. 5. No one came in here since we have been here. 6. He has been shown her photo. 7. He told me that he had never been to doctors. 8. The boy

has never been told the truth. 9. The papers have not yet been sent. 10. It's a long time since I have visited that town. 11. By that time the story had been long forgotten even by the story-teller himself. 12. The better results have not been obtained yet. 13. The street has been widened. 14. The light has just changed from green to red. 15. I have not made my plans yet. 16. Several attempts have been made recently to produce artificial rain. 17. Have you ever seen a bull-fight? 18. Have you ever travelled by air? — Yes, I have often travelled by air. A month ago I flew to the Caucasus.

VII. *Согласование времен (к § 12).*

1. He said that by the year 2000 the number of skiers in the world would reach 75 million. 2. He asked me if I knew about the largest contracts concluded by the firm. 3. We didn't know whether our plan would bring us success. 4. They wanted to know what our present research was centred upon. 5. He asked if the car-manufacturing plant had expanded its international operations. 6. He reported that the firm was holding talks about possible construction of an automobile plant in that district. 7. I thought that the organization had already started its work. 8. He added that he could show us the collection of mail stamps his father had started to collect in his college days. 9. He said he was no longer interested in the discussion of that problem. 10. It was announced that the expedition had already left for the Kurils. 11. He asked me whether I had known about the planning and fulfilment of his mission. 12. I was told that you were good at mathematics. 13. Tom said he knew a man who was an automobile engineer. 14. The student said that the exercise had many sentences and added that he would do it in half an hour. 15. The engineer said that he didn't think that the office work would be interesting for him. 16. The mechanic asked me if the car had been damaged.

VIII. *Неопределенные местоимения* **some, any** *и отрицательное местоимение* **no** *(к § 13).*

1. There was no water left in the radiator, so we had to stop and refill it. 2. Any engineer who has worked long enough in this field can give this information. 3. I cannot consult just any person, I need someone who is an expert on the problem and who has had enough experience. 4. He said he had no wish to read detective stories. 5. I don't want to have any argument. The matter is clear enough for me. 6. He makes no attempts to establish any contacts with our group, so I under-

stand he got no such orders. 7. No explanation was given to him why the experiment had been stopped. 8. The scientists believe that there is practically no atmosphere on the Moon. 9. You've got absolutely no ground for saying so. 10. The station master said that no trains had arrived at the station during the night because of the heavy snow storms in the mountains. 11. It was clear that no person could do this work alone. 12. None of the young men seemed to enjoy the film. 13. No discovery can be made without wide experimentation. 14. Any moving object will continue to move in a straight line unless it is stopped by some other force.

IX. *Причастие. Независимый причастный оборот (к § 14, 15).*

1. The professor told the students about the experiments now being carried on in the laboratory of the Institute. 2. He went home, having looked through all the documents and letters received that day. 3. Squeezed by the ice the steamer could not continue her way. 4. She showed us a list of the published books. 5. Lake Baikal, known to be the deepest in the world, is fed by 336 rivers. 6. The sun having risen, they continued their way. 7. The talks between the two countries were conducted behind the closed doors, measures having been taken that no correspondent should receive any information. 8. The figures mentioned in his report were published in the latest scientific journal. 9. The goods having been loaded, the workers left the port. 10. Having been advised by the doctor to go to the south, she decided to spend her leave in Sochi. 11. One of the most noticeable features of air transport development is the big increase in the quantities of goods carried. 12. The moon being bright, everything was clearly visible. 13. Kerosene is the fuel used in jet engines. 14. The theatre built in the 18th century was the most beautiful building in the town. 15. Driving a car at night he met with an accident. 16. Travelling by train you will see much. 17. Having refused to unload American ships the French dockers lost their job. 18. Having been taught by a good teacher he knew German well.

X. *Герундий (к § 16).*

1. I remember your having objected to this schedule. 2. He entered the room without noticing her. 3. We were surprised at hearing his name among the sportsmen. 4. Nothing could prevent him from going in for sport. 5. Do you find any difficulty in solving this problem? 6. He improved his report by

changing the end. 7. She is against being sent to this region of the country. 8. Is there any possibility of their finding a suitable building material so soon? 9. They insisted on the question being reconsidered. 10. Flying is better for long journeys but travelling by car is more interesting. 11. Wood has many uses. We use it for making chairs and tables. It is used for building houses. It is used for making matches. 12. Seeing is believing. 13. Smoking is not allowed in this building. 14. He tried to find an excuse for being late. 15. You should avoid injuring the feelings of other people. 16. He was given an award for having saved the life of the little children during the fire. 17. The director was responsible for the work being finished in time.

XI. *Инфинитив (к § 18, 20, 21).*

1. The results to be expected are of great importance. 2. The child wanted to be taken seriously. 3. He didn't hear the boy enter the room. 4. The dog was the first to feel danger. 5. This question is too complicated to be answered at once. 6. The engine to be installed in this car is very powerful. 7. They considered him to have completed his research two days ago. 8. Where is the work to be done? 9. To get good results one must work hard. 10. To explain the problem the students were interested in, the engineer demonstrated some diagrams. 11. A delegation is expected to arrive in the capital of the country to discuss the creation of a shipping line to operate between the two countries. 12. The computer is said to be able to do computation in milliseconds. 13. He seemed to be completely exhausted after a whole day of hard work. 14. His knowledge of the subject proved to be both deep and many-sided. 15. Nothing could make him change his decision. 16. The new gaseous fuel is assumed to be both cheap and efficient. 17. Many various types of airplanes are reported to have been produced in our country during the last decades. 18. The idea of space flights appears to have been attracting attention of the people since the ancient times. 19. I tried to make him understand that his behaviour was no good. 20. To grow fruit one must have good soil. 21. We watched the train go out. 22. The mechanic heard the engine start. 23. Do you know the language well enough to read English newspapers and magazines?

XII. *Условные предложения (к § 24).*

1. Had they met with such difficulties before, they would have known what to do now. 2. If the scientists found the

ways to predict earthquakes, it would be possible to evacuate people from the regions and thus save many human lives. 3. Were I a newspaperman, I should write an article describing all the events that have taken place here. 4. If you approach the village from the north, you will see a tall deserted building that once was a landlord's place. 5. Had you planned your time better, you wouldn't have come to the station one minute before the train left. 6. If you had told me that you couldn't find enough material for your report, we might have postponed it until next Friday. 7. You would never get lost in a new city provided you have a map of it. 8. You will never get well unless you give up smoking. 9. The director won't see you unless you phone him at least two days in advance. 10. Were you an experienced driver, you would never have any road accidents no matter what road conditions were.

ГЛАГОЛЫ

1. **to act** действовать
2. **to answer** отвечать
3. **to ask** спрашивать
4. **to be (was/were, been)** быть
5. **to be born** родиться
6. **to become (became, become)** становиться
7. **to begin (began, begun)** начинать
8. **to buy (bought, bought)** покупать
9. **to close** закрывать
10. **to come (came, come)** приходить
11. **to continue** продолжать
12. **to declare** объявлять
13. **to do (did, done)** делать
14. **to dress** одеваться
15. **to drink (drank, drunk)** пить
16. **to eat (ate, eaten)** есть
17. **to excuse** извинять
18. **to get up (got, got)** вставать
19. **to give (gave, given)** давать
20. **to go (went, gone)** идти
21. **to have (had, had)** иметь
22. **to hear (heard, heard)** слышать
23. **to help** помогать
24. **to know (knew, known)** знать
25. **to learn** учить
26. **to like** любить
27. **to listen to** слушать
28. **to live** жить
29. **to look (at)** смотреть
30. **to love** любить
31. **to open** открывать
32. **to play** играть
33. **to prepare** готовить
34. **to put** класть
35. **to rain (it rains)** идет дождь
36. **to read (read, read)** читать
37. **to repeat** повторять
38. **to say (said, said)** сказать
39. **to see (saw, seen)** видеть
40. **to sit (sat, sat)** сидеть
41. **to skate** кататься на коньках
42. **to ski** кататься на лыжах
43. **to sleep (slept, slept)** спать
44. **to speak (spoke, spoken)** говорить
45. **to spend** проводить *(время)*
46. **to stand (stood, stood)** стоять
47. **to study** изучать
48. **to take (took, taken)** брать
49. **to tell (told, told)** говорить, рассказывать
50. **to thank** благодарить
51. **to translate** переводить
52. **to travel** ездить, путешествовать
53. **to understand** понимать
54. **to want** хотеть
55. **to walk** ходить
56. **to wash** мыть

СУЩЕСТВИТЕЛЬНЫЕ

57. **afternoon** полдень
58. **animal** животное
59. **answer** ответ
60. **apple** яблоко
61. **April** апрель
62. **arm** рука
63. **August** август
64. **autumn** осень
65. **bag** сумка
66. **ball** мяч
67. **bed** кровать
68. **bedroom** спальня
69. **blackboard** доска
70. **body** тело
71. **book** книга
72. **box** ящик

73. **bread** хлеб
74. **breakfast** завтрак
75. **brother** брат
76. **building** здание
77. **bus** автобус
78. **cap** шапка
79. **car** машина
80. **chair** стул
81. **child** ребенок
82. **children** дети
83. **cinema** кино
84. **city** город
85. **classroom** класс
86. **clock** часы *(настольные, стенные)*
87. **coat** пальто
88. **comrade** товарищ
89. **corner** угол
90. **country** страна
91. **date** число
92. **daughter** дочь
93. **day** день
94. **December** декабрь
95. **desk** стол *(письменный)*
96. **dictionary** словарь
97. **dining-room** столовая
98. **dinner** обед
99. **door** дверь
100. **dress** платье
101. **duty** долг
102. **east** восток
103. **evening** вечер
104. **example (for example)** пример (например)
105. **exercise** упражнение
106. **face** лицо
107. **factory** фабрика, завод
108. **family** семья
109. **farm** ферма
110. **farmer** фермер
111. **father** отец
112. **February** февраль
113. **flat** квартира
114. **floor** пол
115. **freedom** свобода
116. **Friday** пятница
117. **friend** друг
118. **garden** сад
119. **girl** девочка
120. **glass** стекло, стакан
121. **ground** земля
122. **hall** зал
123. **head** голова
124. **help** помощь
125. **holiday** праздник
126. **home** дом
127. **horse** лошадь
128. **house** дом, здание
129. **ice** лед
130. **ink** чернила
131. **January** январь
132. **July** июль
133. **June** июнь
134. **lesson** урок
135. **letter** письмо, буква
136. **library** библиотека
137. **life** жизнь
138. **light** свет
139. **man (men)** человек, мужчина
140. **map** карта
141. **March** март
142. **May** май
143. **milk** молоко
144. **minute** минута
145. **mistake** ошибка
146. **money** деньги
147. **month** месяц
148. **morning** утро
149. **mother** мать
150. **name** имя
151. **newspaper** газета
152. **night** ночь
153. **north** север
154. **nose** нос
155. **notebook** тетрадь
156. **November** ноябрь
157. **October** октябрь
158. **page** страница
159. **paper** бумага, газета
160. **peace** мир
161. **pen** ручка
162. **pencil** карандаш
163. **people** люди
164. **picture** картина
165. **play** игра
166. **pupil** ученик
167. **question** вопрос
168. **reader** читатель
169. **river** река
170. **room** комната
171. **Russia** Россия
172. **Saturday** суббота
173. **school** школа
174. **schoolchildren** школьники
175. **sea** море
176. **September** сентябрь
177. **sister** сестра
178. **skating-rink** каток
179. **snow** снег
180. **son** сын
181. **song** песня

182. **south** юг
183. **spring** весна
184. **square** площадь
185. **story** рассказ, история
186. **street** улица
187. **summer** лето
188. **sun** солнце
189. **Sunday** воскресенье
190. **table** стол
191. **teacher** учитель
192. **thing** вещь
193. **town** город
194. **tram** трамвай
195. **tree** дерево
196. **Tuesday** вторник
197. **walk** прогулка
198. **wall** стена
199. **watch** часы
200. **water** вода
201. **week** неделя
202. **west** запад
203. **window** окно
204. **winter** зима
205. **woman (women)** женщина
206. **word** слово
207. **work** работа
208. **worker** рабочий
209. **writer** писатель
210. **year** год

ПРИЛАГАТЕЛЬНЫЕ

211. **absent** отсутствующий
212. **bad** плохой
213. **beautiful** красивый
214. **big** большой
215. **black** черный
216. **blue** синий, голубой
217. **clean** чистый
218. **cold** холодный
219. **dark** темный
220. **different** различный
221. **difficult** трудный
222. **English** английский
223. **famous** знаменитый
224. **good** хороший
225. **great** великий
226. **green** зеленый
227. **high** высокий
228. **hot** жаркий
229. **ill (to be ill)** больной (болеть)
230. **interesting** интересный
231. **large** большой
232. **last** последний
233. **little** маленький
234. **long** длинный
235. **many, much** много
236. **new** новый
237. **next** следующий
238. **old** старый
239. **open** открытый
240. **poor** бедный
241. **ready (to be ready)** готовый
242. **red** красный
243. **rich** богатый
244. **right** правый, правильный
245. **short** короткий
246. **small** маленький
247. **warm** теплый
248. **white** белый
249. **young** молодой

МЕСТОИМЕНИЯ

250. **I** я
251. **you** ты, вы
252. **he** он
253. **she** она
254. **it** оно, он, она *(о неодушевленных)*
255. **we** мы
256. **they** они
257. **me** меня, мне
258. **you** вас, вам
259. **him** его, ему
260. **her** ее, ей
261. **it** в безличных оборотах; It is cold *(difficult)* — холодно *(трудно)*
262. **us** нас, нам
263. **them** их, им
264. **my** мой
265. **your** ваш
266. **his** его
267. **her** ее
268. **its** его, ее *(о неодушевленных)*
269. **our** наш
270. **their** их
271. **this** этот, это
272. **these** эти
273. **that** тот, то
274. **those** те
275. **all** все
276. **some** несколько, некоторые
277. **any** любой *(в утвердительной)*, несколько, сколько-нибудь *(в вопросительной, и отрицательной формах)*
278. **no** нет, никакой

НАРЕЧИЯ

279. **again** снова
280. **ago** назад
281. **far** далеко
282. **here** здесь
283. **inside** внутри
284. **near** рядом
285. **now** теперь
286. **never** никогда
287. **quickly** быстро
288. **there** там
289. **today** сегодня
290. **tomorrow** завтра
291. **yesterday** вчера
292. **very** очень
293. **well** хорошо

ЧИСЛИТЕЛЬНЫЕ

294. **one** один
295. **two** два
296. **three** три
297. **four** четыре
298. **five** пять
299. **six** шесть
300. **seven** семь
301. **eight** восемь
302. **nine** девять
303. **ten** десять
304. **eleven** одиннадцать
305. **twelve** двенадцать
306. **thirteen** тринадцать
307. **fourteen** четырнадцать
308. **fifteen** пятнадцать
309. **sixteen** шестнадцать
310. **seventeen** семнадцать
311. **eighteen** восемнадцать
312. **nineteen** девятнадцать
313. **twenty** двадцать
314. **thirty** тридцать
315. **forty** сорок
316. **fifty** пятьдесят
317. **sixty** шестьдесят
318. **seventy** семьдесят
319. **eighty** восемьдесят
320. **ninety** девяносто
321. **hundred** сто
322. **thousand** тысяча
323. **the first** первый
324. **the second** второй
325. **the third** третий
326. **the fourth** четвертый

ВОПРОСИТЕЛЬНЫЕ СЛОВА

327. **who** кто
328. **whom** кого, кому
329. **whose** чей
330. **what** что, какой
331. **when** когда
332. **where** где, куда
333. **which** который
334. **why** почему
335. **how** как, каким образом
336. **how many** сколько
337. **how much** сколько
338. **how long** как долго

ПРЕДЛОГИ

339. **against** против
340. **around** вокруг
341. **at** у, около
342. **before** перед
343. **behind** сзади
344. **from** из, от
345. **in** в
346. **into** в *(внутрь)*
347. **of** из *(соот. русск. род. падежу)*
348. **on** на
349. **out** из
350. **to** к *(по направлению)*
351. **under** под
352. **with** с

СОЮЗЫ

353. **and** и, а
354. **but** но
355. **or** или

ПРИНЯТЫЕ СОКРАЩЕНИЯ:

a — adjective — прилагательное
adv — adverb — наречие
cj — conjunction — союз
n — noun — существительное
pron — pronoun — местоимение
prp — preposition — предлог
v — verb — глагол

В скобках дается номер текста, в котором данное слово активизируется.

A

ability [ə'bɪlɪtɪ] *n* (5A) способность; умение
abolition [ˌæbə'lɪʃən] *n* (5A) отмена; упразднение
about [ə'baut] *prp* (5A) о, об; *adv* около, приблизительно; почти
above [ə'bʌv] *prp* (7A) над, выше; *adv* наверх; наверху
acceptable [ək'septəbl] *a* (14A) приемлемый
access ['ækses] *n* (12A) доступ; подход
accident ['æksɪdənt] *n* (3A) авария; катастрофа
accomplish [ə'kɔmplɪʃ] *v* (12A) выполнять; завершать
according to [ə'kɔ:dɪŋtə] *prp* (2A) согласно; соответственно
accustomed [ə'kʌstəmd] *a* (15A) привычный, обычный
achievement [ə'tʃi:vmənt] *n* (3A) достижение
acquire [ə'kwaɪə] *v* (11A) приобретать
across [ə'krɔs] *prp* (10A) через; сквозь
actually ['æktjuəlɪ] *adv* (11A) фактически; действительно
add [æd] *v* (4A) прибавлять; присоединять
adjacent [ə'dʒeɪsənt] *a* (15A) смежный, прилегающий
adopt [ə'dɔpt] *v* (10A) принимать
advanced [əd'vɑ:nst] *a* (7A) передовой
advantage [əd'vɑ:ntɪdʒ] *n* (7A) преимущество; польза
after ['ɑ:ftə] *prp* (1A) после, за; *cj* после того как
age [eɪdʒ] *n* (1A) возраст; век; эпоха
aggravate ['ægrəveɪt] *v* (18A) усугублять; ухудшать
agree [ə'gri:] *v* (11A) соглашаться
ahead [ə'hed] *adv* (17A) вперед; впереди
aid [eɪd] *n* (12A) помощь; *v* помогать
aim [eɪm] *n* (1A) цель
air [eə] *n* (3A) воздух; атмосфера
aircraft ['eəkrɑ:ft] *n* (10A) самолет; самолеты, авиация
alarm [ə'lɑ:m] *n* (18A) сигнал, тревога; *v* поднять тревогу; встревожить
alignment [ə'laɪnmənt] *n* (16A) регулировка; выравнивание; центровка
alike [ə'laɪk] *a* (19C) похожий,

подобный; *adv* одинаково, точно так же
alloy [ə'lɔɪ] *n* (15A) сплав
almost ['ɔ:lmoust] *adv* (1A) почти; едва не
alone [ə'loun] *a* (10A) один; *adv* только, исключительно
also ['ɔ:lsou] *adv* (8A) тоже, также
alter ['ɔ:ltə] *v* (12A) изменять(ся)
alternatively [ɔ:l'tə:nətɪvlɪ] *adv* (16A) в качестве альтернативы, альтернативно
although [ɔ:l'ðou] *cj* (6A) хотя
altogether [ˌɔ:ltə'geðə] *adv* (13A) в общем; всего
always ['ɔ:lwəz] *adv* (12A) всегда
among [ə'mʌŋ] *prp* (4A) среди, между
amount [ə'mount] *n* (12A) количество, сумма; *v* доходить до; равняться; составлять
angle ['æŋgl] *n* (12A) угол
annual ['ænjuəl] *a* (14A) годовой
another [ə'nʌðə] *pron* (13A) другой; еще один
anticipate [æn'tɪsɪpeɪt] *v* (16A) предвидеть, ожидать
apart [ə'pɑ:t] *adv* (14A) кроме
appear [ə'pɪə] *v* (7A) появляться; казаться
application [ˌæplɪ'keɪʃən] *n* (13A) применение
apply [ə'plaɪ] *v* (12A) применять(ся)
approach [ə'proutʃ] *n* (19A) подход; *v* приближаться; достигать
area ['ɛəɪə] *n* (12A) площадь; район
arouse [ə'rauz] *v* (7A) будить, пробуждать; вызывать
arrange [ə'reɪndʒ] *v* (16A) располагать; устраивать; организовывать
artificial [ˌɑ:tɪ'fɪʃəl] *a* (18A) искусственный
as [æz] *cj* (12A) в то время как; так как
as . . . as *cj* (12A) так (же) . . . как
as far as [əz'fɑ:rəz] (12A) до; насколько
as follows [əz'fɔlouz] (5A) как следует ниже; следующим образом
as long as [əz'lɔŋəz] (2A) пока
as soon as *cj* (12A) как только
as well [əz'wel] *adv* (18A) также
as well as [əz'weləz] *cj* (2A) так же как
assemble [ə'sembl] *v* (7A) собирать; монтировать
assurance [ə'ʃuərəns] *n* (7C) уверенность; гарантия; страховка
at once *adv* (8A) немедленно
attempt [ə'tempt] *n* (14C) попытка; *v* пытаться
attend [ə'tend] *v* (1A) посещать, присутствовать
attractive [ə'træktɪv] *a* (17A) привлекательный, притягательный
auxiliary [ɔ:g'zɪljərɪ] *a* (16A) дополнительный; вспомогательный
available [ə'veɪləbl] *a* (10A) наличный, имеющийся
avoid [ə'vɔɪd] *v* (5A) избегать

B

back [bæk] *adv* (5A) назад, обратно
backward ['bækwəd] *a* (8A) обратный; отсталый; *adv* назад
basis ['beɪsɪs] *n* (11A) основание; базис
beam [bi:m] *n* (11A) луч; брус, балка
beat [bi:t] *n* (8A) удар, бой; *v* бить, ударять, стучать
because [bɪ'kɔz] *cj* (10A) потому что, так как
because of [bɪ'kɔzəv] *prp* (8A) из-за, вследствие; благодаря
bed [bed] *n* (11A) постель; основание
behaviour [bɪ'heɪvjə] *n* (2A) поведение; режим работы
believe [bɪ'li:v] *v* (5A) верить; полагать
below [bɪ'lou] *prp* (14A) под
bend [bend] *n* (16A) изгиб *(дороги)*; *v* изгибать(ся), гнуть(ся)
beneath [bɪ'ni:θ] *prp* (16A) под, ниже; *adv* внизу
benefit ['benɪfɪt] *n* (13A) польза, благо; *v* приносить пользу, помогать

besides [bɪ'saɪdz] *prp* (10A) кроме
between [bɪ'twi:n] *prp* (1A) между
beyond [bɪ'jɔnd] *prp* (13A) за (пределами); вне
boat [bout] *n* (9A) лодка; *v* кататься на лодке
boil [bɔɪl] *n* (15A) кипение; *v* кипеть; кипятить
bore [bɔ:] *n* (17A) просверленное отверстие; *v* бурить; сверлить
borrow ['bɔrou] *v* (7A) заимствовать; занимать
both [bouθ] *pron* (4A) оба, обе
both . . . and [bouθ . . . ænd] *cj* (12A) как . . ., так и
branch [brɑ:ntʃ] *n* (6A) ветвь; отрасль
break down ['breɪk 'daun] *v* (10A) ломаться; разрушаться
brick [brɪk] *n* (7A) кирпич
brief [bri:f] *a* (14A) краткий
bring [brɪŋ] *v* (3A) приносить; приводить
broad [brɔ:d] *a* (1A) широкий
broaden ['brɔ:dn] *v* (14A) расширять(ся)
build [bɪld] *v* (2A) строить; сооружать
bulky ['bʌlkɪ] *a* (10A) большой; громоздкий
burn [bə:n] *v* (3A) жечь, сжигать
but [bʌt] *cj* (14C) но; *prp* кроме; только
by means of (11A) посредством
by-product ['baɪˌprɔdʌkt] *n* (13A) побочный продукт

C

calculate ['kælkjuleɪt] *v* (6A) вычислять
call for ['kɔ:l fɔ:] *v* (13A) требовать, предусматривать
capable ['keɪpəbl] *a* (10A) способный
capacity [kə'pæsɪtɪ] *n* (9A) мощность; емкость
capital ['kæpɪtl] *n* (6A) столица
care [kɛə] *n* (5A) забота
carefully ['kɛəfulɪ] *adv* (6A) аккуратно, тщательно
cargo ['kɑ:gou] *n* (10A) груз
carry ['kærɪ] *v* (3A) везти; перевозить
carry out *v* (4A) выполнять
case [keɪs] *n* (12A) случай
cause [kɔ:z] *n* (4A) дело; причина, основание; *v* заставлять; вызывать
century ['sentʃurɪ] *n* (9A) век, столетие
certain ['sə:tn] *a* (12A) некоторый; определенный; уверенный
chain [ʧeɪn] *n* (11A) цепь; цепочка; *v* сковывать
change [ʧeɪnʤ] *n* (3A) изменение; *v* изменять(ся)
channel ['ʧænl] *n* (6A) канал; пролив
charge [ʧɑ:ʤ] *v* (8A) поручать; заряжать
cheap [ʧi:p] *a* (14A) дешевый
check [ʧek] *v* (12A) проверять
chiefly ['ʧi:flɪ] *adv* (8A) особенно, главным образом
choice [ʧɔɪs] *n* (17A) выбор
choose [ʧu:z] *v* (5A) выбирать
circular ['sə:kjulə] *a* (11A) круглый
circumstance ['sə:kəmstəns] *n pl* (15A) обстоятельства, условия
civil ['sɪvl] *a* (11A) гражданский
clay [kleɪ] *n* (3A) глина
clear [klɪə] *a* (16A) ясный; свободный
close [klous] *a* (4A) близкий; тесный; *v* закрывать
cloud [klaud] *n* (10A) облако, туча
coach [kouʧ] *n* (8A) карета, экипаж
coal [koul] *n* (3A) уголь
collapse [kə'læps] *n* (8A) разрушение; крушение; *v* рушиться; разрушаться
combine [kəm'baɪn] *v* (10A) объединять
combustion [kəm'bʌsʧən] *n* (8A) горение, сгорание
common ['kɔmən] *a* (1A) общий
compete [kəm'pi:t] *v* (18A) соревноваться, состязаться; конкурировать
complete [kəm'plɪ:t] *a* (1A) полный; *v* заканчивать
complex ['kɔmpleks] *a* (19A) сложный

compress [kəm'pres] *v* (15A) сжимать
concept ['kɔnsept] *n* (15A) понятие, идея, представление
concern [kən'sə:n] *v* (11A) касаться, иметь отношение; *n* забота
concrete ['kɔnkri:t] *n* (7A) бетон; *v* бетонировать
confront [kən'frʌnt] *v* (19A) стоять против (лицом к лицу)
congestion [kən'dʒestʃən] *n* (14A) перегруженность; затор *(уличного движения)*
connect [kə'nekt] *v* (8A) соединять, связывать
consequence ['kɔnsɪkwəns] *n* (13A) последствие
consider [kən'sɪdə] *v* (3A) считать, полагать; рассматривать
considerable [kən'sɪdərəbl] *a* (6A) значительный; важный
consist (of) [kən'sɪst] *v* (2A) состоять
construction [kən'strʌkʃən] *n* (6A) строительство; строение
consume [kən'sju:m] *v* (13A) потреблять, расходовать
contain [kən'teɪn] *v* (4A) содержать; вмещать
continue [kən'tɪnju:] *v* (15A) продолжать(ся)
contribute (to) [kən'trɪbju:t] *v* (16A) способствовать, содействовать
convenient [kən'vi:njənt] *a* (6A) удобный
conventional [kən'venʃənl] *a* (15A) стандартный, традиционный
convert [kən'və:t] *v* (10A) превращать; преобразовывать
cool [ku:l] *v* (15A) охлаждать(ся); *a* прохладный
cope (with) [koup] *v* (18A) справляться
cost [kɔst] *n* (10A) цена; стоимость; *v* стоить
cotton ['kɔtn] *n* (9A) хлопок
course [kɔ:s] *n* (1A) курс; поток; слой
cover ['kʌvə] *v* (7A) покрывать; *n* крышка
crack [kræk] *n* (11A) трещина; *v* треснуть, растрескаться
create [kri'eɪt] *v* (14A) создавать, творить
cross [krɔs] *v* (9A) пересекать; *n* крест
cross-section ['krɔs,sekʃən] *n* (11A) поперечное сечение
crowd [kraud] *n* (7A) толпа; *v* толпиться
crude [kru:d] *a* (17C) сырой, необработанный; непродуманный, грубый
current ['kʌrənt] *a* (8A) текущий; *n* ток; течение
curve [kə:v] *n* (12A) кривая
cushion ['kuʃən] *n* (14A) подушка
cut [kʌt] *v* (7A) резать; сокращать

D

damage ['dæmɪdʒ] *n* (7A) ущерб; *v* наносить ущерб
danger ['deɪndʒə] *n* (16A) опасность
deal (with) [di:l] *v* (18A) иметь дело; заниматься чем-л.
decade ['dekeɪd] *n* (14A) десятилетие
decide [dɪ'saɪd] *v* (2A) решать
decrease [di:'kri:s] *v* (18A) уменьшать(ся); убывать
deep [di:p] *a* (3A) глубокий
deepen ['di:pən] *v* (9A) углублять
definition [,defɪ'nɪʃən] *n* (13A) определение
degree [dɪ'gri:] *n* (3A) степень; градус
delay [dɪ'leɪ] *v* (8A) задерживать; откладывать; *n* задержка
demand [dɪ'mɑ:nd] *n* (11A) спрос; требование; *v* требовать
density ['densɪtɪ] *n* (10A) густота; плотность
depend (on, upon) [dɪ'pend] *v* (7A) зависеть; полагаться, рассчитывать
deposit [dɪ'pɔzɪt] *v* (12A) отлагать; *n* отложение; залежь
depth [depθ] *n* (11A) глубина
deserve [dɪ'zə:v] *v* (5A) заслуживать

design [dɪ'zaɪn] *n* (9A) проект; конструкция; *v* конструировать, проектировать
desire [dɪ'zaɪə] *n* (15A) желание; *v* желать
destroy [dɪs'trɔɪ] *v* (7A) разрушать
destruction [dɪs'trʌkʃən] *n* (19A) разрушение
determine [dɪ'tə:mɪn] *v* (4A) устанавливать, определять
develop [dɪ'veləp] *v* (2A) развивать(ся); разрабатывать; совершенствовать
device [dɪ'vaɪs] *n* (8A) прибор, устройство
devise [dɪ'vaɪz] *v* (16A) придумывать, изобретать; разрабатывать
die [daɪ] *v* (5A) умирать
differentiate [ˌdɪfə'renʃɪeɪt] *v* (18A) различать, отличать
dig [dɪg] *v* (18A) копать
dimension [dɪ'menʃən] *n* (19C) размер; измерение; *v* проставлять размеры; соблюдать нужные размеры
direction [dɪ'rekʃən] *n* (7A) направление; указание
directly [dɪ'rektlɪ] *adv* (8A) прямо; непосредственно
disadvantage [ˌdɪsəd'vɑ:ntɪdʒ] *n* (14A) недостаток
discovery [dɪs'kʌvərɪ] *n* (4A) открытие
displace [dɪs'pleɪs] *v* (19C) перемещать, переставлять; вытеснять; иметь водоизмещение
distance ['dɪstəns] *n* (8A) расстояние
distribute [dɪs'trɪbju:t] *v* (11A) распределять
district ['dɪstrɪkt] *n* (6A) район
divert [daɪ'və:t] *v* (17A) отводить
doubt [daut] *n* (11A) сомнение; *v* сомневаться
drag [dræg] *v* (8A) тащить; волочить
draw [drɔ:] *v* (15A) втягивать, всасывать; тащить
drawback ['drɔ:bæk] *n* (10A) недостаток; помеха
drive [draɪv] *v* (3A) управлять; приводить в движение; вбивать
dry [draɪ] *a* (3A) сухой
due to [dju:tu:] *prp* (12A) благодаря; из-за
durability [ˌdjuərə'bɪlɪtɪ] *n* (13A) прочность; долговечность
duration [djuə'reɪʃən] *n* (7A) продолжительность
during ['djuərɪŋ] *prp* (1A) в течение, в продолжение

E

each [i:ʧ] *pron* (2A) каждый
early ['ə:lɪ] *adv* (2A) рано
earth [ə:θ] *n* (7A) земля
ease [i:z] *n* (17A) легкость; *v* облегчать; ослаблять
easy ['i:zɪ] *a* (3A) легкий
education [ˌedju:'keɪʃən] *n* (1A) образование; просвещение
efficiency [ɪ'fɪʃənsɪ] *n* (13A) эффективность; производительность; коэффициент полезного действия
efficient [ɪ'fɪʃənt] *a* (9A) продуктивный
effort ['efət] *n* (7A) усилие
either ... or ['aɪðə ... ɔ:] *cj* (1A) или ... или
elevation [ˌelɪ'veɪʃən] *n* (12A) подъем; возвышенность
eliminate [ɪ'lɪmɪneɪt] *v* (16A) устранять, исключать
else [els] *adv* (4A) еще; кроме
embankment [ɪm'bæŋkmənt] *n* (12A) насыпь, дамба; набережная
emergency [ɪ'mə:ʤənsɪ] *n* (10A) крайняя необходимость; непредвиденный случай
emit [ɪ'mɪt] *v* (18A) испускать; издавать *(звук)*; выделять; излучать
employ [ɪm'plɔɪ] *v* (13A) использовать
empty ['emptɪ] *a* (3A) пустой
enable [ɪ'neɪbl] *v* (19A) давать возможность
encounter [ɪn'kauntə] *n* (17C) встреча; *v* встречать(ся); сталкиваться
encouragement [ɪn'kʌrɪʤmənt] *n* (5A) поощрение
end [end] *n* (9A) конец; *v* кончаться
engage [ɪn'geɪʤ] *v* (19A) заниматься (чем-л.)

engine ['endʒɪn] *n* (8A) мотор, двигатель
enough [ɪ'nʌf] *adv* (4A) достаточно
ensure [ɪn'ʃuə] *v* (16A) обеспечивать; гарантировать
entirely [ɪn'taɪəlɪ] *adv* (3A) целиком, полностью
entrance ['entrəns] *n* (1A) вход; вступление
enumerate [ɪ'nju:məreɪt] *v* (18A) перечислять
environment [ɪn'vaɪrənmənt] *n* (17C) окружение, окружающая обстановка
equip [ɪ'kwɪp] *v* (1A) оборудовать
erect [ɪ'rekt] *v* (11A) сооружать, строить
error ['erə] *n* (19A) ошибка
especially [ɪs'peʃəlɪ] *adv* (2A) особенно, в особенности
essence ['esns] *n* (18A) сущность
essential [ɪ'senʃəl] *a* (2A) существенный; неотъемлемый
establishment [ɪs'tæblɪʃmənt] *n* (6A) основание; установление
estimate ['estɪmeɪt] *v* (11A) устанавливать; подсчитывать приблизительно; оценивать; ['estɪmɪt] *n* оценка
even ['i:vən] *adv* (2A) даже
eventually [ɪ'ventjuəlɪ] *adv* (13A) в конечном счете
ever ['evə] *adv* (10A) когда-либо
every ['evrɪ] *a* (5A) каждый, всякий
evolve [ɪ'vɔlv] *v* (11A) развивать(ся)
exact [ɪg'zækt] *a* (13A) точный
excellent ['eksələnt] *a* (5A) отличный, превосходный
exceed [ɪk'si:d] *v* (19A) превышать
exceptional [ɪk'sepʃənl] *a* (17C) исключительный, необычный
excessive [ɪk'sesɪv] *a* (17A) чрезмерный
exclude [ɪks'klu:d] *v* (18A) исключать
exhaust [ɪg'zɔ:st] *n* (15A) выпуск, выхлоп; *v* выпускать *(пар)*
exist [ɪg'zɪst] *v* (6A) существовать
expand [ɪks'pænd] *v* (6A) расширяться; увеличиваться *(в объеме)*
expect [ɪks'pekt] *v* (5A) ожидать
expensive [ɪks'pensɪv] *a* (7A) дорогой
experience [ɪks'pɪərɪəns] *n* (3A) опыт
explanation [ˌekspla'neɪʃən] *n* (4A) объяснение
explode [ɪks'ploud] *v* (17A) взрывать(ся)
explorer [ɪks'plɔ:rə] *n* (12A) исследователь
explosive [ɪks'plousɪv] *n* (5A) взрывчатое вещество; *a* взрывчатый
extend [ɪks'tend] *v* (7A) расширять; распространять; вытягивать
extent [ɪks'tent] *n* (19A) степень, мера
external [eks'tə:nl] *a* (15A) внешний, наружный
extra ['ekstrə] *a* (10A) дополнительный
extremely [ɪks'trɪ:mlɪ] *adv* (11A) крайне; чрезвычайно

F

face [feɪs] *v* (14A) стоять перед (лицом)
facilitate [fə'sɪlɪteɪt] *v* (6A) облегчать
facility [fə'sɪlɪtɪ] *n pl* (6A) оборудование; сооружение; возможности, благоприятные условия
fail [feɪl] *v* (1A) потерпеть неудачу; провалиться *(на экзамене)*
fairly ['feəlɪ] *adv* (17A) довольно; весьма
fall [fɔ:l] *v* (11A) падать; *n* падение
far [fɑ:] *a* (16A) далекий, дальний; *adv* далеко; намного
fast [fɑ:st] *a* (10A) крепкий, стойкий, твердый; скорый, быстрый
fatigue [fə'ti:g] *n* (19C) усталость
favour ['feɪvə] *n* (15A) расположение; *v* относиться благосклонно, одобрять

feasible ['fi:zəbl] *a* (19C) возможный; подходящий; осуществимый, выполнимый
feature ['fi:tʃə] *n* (6A) особенность, характерная черта
feel [fi:l] *v* (18A) чувствовать; осязать
a few [fju:] *pron* (9A) несколько
field [fi:ld] *n* (1A) поле; область, сфера деятельности
finally ['fainəli] *adv* (13A) в конце концов
find [faind] *v* (2A) находить, обнаруживать; ~ **out** разузнать, узнать
firm [fə:m] *n* (17C) фирма; *a* твердый; крепкий, устойчивый
fit [fit] *v* (10A) устанавливать; соответствовать; *a* годный, подходящий
fix [fiks] *v* (12A) укреплять; устанавливать
flat [flæt] *a* (7A) плоский, ровный; *n* квартира
flow [flou] *n* (10A) поток; *v* течь
fly [flai] *v* (9A) летать
follow ['fɔlou] *v* (3A) следовать, идти за
foot [fut] *n* (3A) нога, ступня; фут=30,48 см
for [fɔ:] *cj* (9A) так как; *prp* для; в течение
force [fɔ:s] *n* (8A) сила; мощность; *v* заставлять, принуждать
forecast ['fɔ:kɑ:st] *n* (13A) прогноз; *v* прогнозировать
foreign ['fɔrin] *a* (1A) иностранный
form [fɔ:m] *v* (5A) создавать; образовать
former ['fɔ:mə] *a* (1A) прежний; предшествующий
forward ['fɔ:wəd] *adv* (10A) вперед
found [faund] *v* (6A) основывать
fraction ['frækʃən] *n* (12A) доля; дробь
free [fri:] *a* (2A) свободный
frequently ['fri:kwəntli] *adv* (12A) часто
friction ['frikʃən] *n* (19C) трение; сцепление
fuel [fjuəl] *n* (9A) топливо; *v* снабжать топливом; заправлять(ся)
fulfil [ful'fil] *v* (16A) выполнять; осуществлять
full [ful] *a* (3A) полный; целый
furnish ['fə:niʃ] *v* (4A) снабжать
further ['fə:ðə] *adv* (11A) дальше; *a* дальнейший
furthermore ['fə:ðə'mɔ:] *adv* (7A) кроме того, к тому же

G

gain [gein] *v* (10A) приобретать; выигрывать
general ['dʒenərəl] *a* (8A) общий, всеобщий; обычный; главный
generation [ˌdʒenə'reiʃən] *n* (1A) поколение
get [get] *v* (4A) добираться; становиться; получать
glass [glɑ:s] *n* (13A) стекло
goods [gudz] *n* (8A) товары
government ['gʌvnmənt] *n* (5A) правительство
grade [greid] *n* (19C) степень; класс; *v* отбирать; сортировать
gradually ['grædjuəli] *adv* (8A) постепенно
graduate (from) ['grædjueit] *v* (1A) окончить высшее учебное заведение
a great deal of [ə 'greit 'di:l əv] (9A) множество, большое количество
grow [grou] *v* (2A) расти; выращивать; становиться
growth [grouθ] *n* (14A) рост

H

hand [hænd] *n* (8A) рука; *v* вручать
happen ['hæpən] *v* (3A) случаться
hard [hɑ:d] *a* (2A) твердый; суровый; *adv* упорно; много
harden ['hɑ:dn] *v* (16A) затвердевать; придавать твердость; закалять
hardly ['hɑ:dli] *adv* (18A) едва; вряд ли
hazard ['hæzəd] *n* (16A) опасность, риск

heat [hi:t] *v* (7A) нагревать; отапливать
heavy ['hevɪ] *a* (15A) тяжелый *(о весе)*
height [haɪt] *n* (12A) высота
hide [haɪd] *v* (19A) прятаться
higher ['haɪə] *a* (1A) высший; ~ **education** высшее образование
highway ['haɪweɪ] *n* (12A) автомобильная дорога; шоссе
hinder ['hɪndə] *v* (6A) препятствовать, мешать
hitherto ['hɪðə'tu:] *adv* (19A) прежде; до сих пор
hole [houl] *n* (7A) отверстие
hold [hould] *v* (15A) держать
hollow ['hɔlou] *n* (17C) углубление, впадина; *a* пустой; полый; *v* выдалбливать
horse-power ['hɔ:s ˌpauə] *n* (9A) лошадиная сила; мощность в лошадиных силах
however [hau'evə] *cj* (15A) однако, тем не менее
huge [hju:dʒ] *a* (7A) огромный
human ['hju:mən] *a* (14A) человеческий

I

ignite [ɪg'naɪt] *v* (15A) зажигать, воспламенять(ся); загораться
imagine [ɪ'mædʒɪn] *v* (18A) воображать, представлять себе
immediate [ɪ'mi:djət] *a* (19A) непосредственный; немедленный
immense [ɪ'mens] *a* (17A) огромный
immerse [ɪ'mə:s] *v* (17A) погружать, окунать
important [ɪm'pɔ:tənt] *a* (1A) важный
improvement [ɪm'pru:vmənt] *n* (6A) улучшение
in addition to [ə'dɪʃən] *prp* (12A) кроме
include [ɪn'klu:d] *v* (2A) включать
increase [ɪn'kri:s] *v* (6A) увеличивать; ['ɪnkri:s] *n* увеличение
indeed [ɪn'di:d] *adv* (17A) в самом деле
indicate ['ɪndɪkeɪt] *v* (12A) указывать
influence ['ɪnfluəns] *n* (2A) влияние, воздействие
in front of [frʌnt] *prp* (12A) перед
initial [ɪ'nɪʃəl] *a* (17A) первоначальный
injure ['ɪndʒə] *v* (15A) вредить; повреждать
in order to ['ɔ:də] *prp* (9A) для того чтобы
in order that *prp* (12A) для того чтобы
insist [ɪn'sɪst] *v* (17A) настаивать
in spite of [spaɪt] (3A) несмотря на
install [ɪn'stɔ:l] *v* (3A) устанавливать
instance ['ɪnstəns] *n* (18A) случай; пример
instead of [ɪn'sted] *prp* (6A) вместо
integral ['ɪntɪgrəl] *a* (16A) неотъемлемый, существенный
intend [ɪn'tend] *v* (18A) намереваться; **(for)** предназначать
internal [ɪn'tə:nl] *a* (8A) внутренний
introduce [ˌɪntrə'dju:s] *v* (1A) вводить; вставлять; вводить в употребление
introduction [ˌɪntrə'dʌkʃən] *n* (8A) введение
in turn [tə:n] (7A) в свою очередь; по очереди
invention [ɪn'venʃən] *n* (12A) изобретение
investigate [ɪn'vestɪgeɪt] *v* (12A) исследовать
involve [ɪn'vɔlv] *v* (13A) включать в себя; вовлекать
iron ['aɪən] *n* (9A) железо
island ['aɪlənd] *n* (9A) остров
issue ['ɪsju:] *n* (18A) выпуск, издание; *v* выпускать, издавать

J

join [dʒɔɪn] *v* (17A) соединять; присоединять(ся)
journey ['dʒə:nɪ] *n* (14A) путешествие
just [dʒʌst] *adv* (16A) точно, как раз, именно; только что

justify ['dʒʌstɪfaɪ] *v* (5A) подтверждать; оправдывать

K

keep [kiːp] *v* (2A) держать; сохранять
key [kiː] *n* (15A) ключ
kill [kɪl] *v* (5A) убивать
kind [kaɪnd] *n* (1A) род; вид, сорт
knowledge ['nɔlɪdʒ] *n* (2A) знание

L

labour ['leɪbə] *n* (14A) труд; работа
lack [læk] *n* (14A) недостаток, нехватка; отсутствие чего-л.; *v* нуждаться в чем-л.; испытывать недостаток в чем-л.
land [lænd] *n* (4A) земля; суша
lane [leɪn] *n* (17A) полоса движения
language ['læŋgwɪdʒ] *n* (1A) язык
largely ['lɑːdʒlɪ] *adv* (13A) в значительной степени; широко
last [lɑːst] *v* (1A) длиться, продолжаться
late [leɪt] *a* (1A) последний
latter ['lætə] *a* (19A) последний *(из двух названных)*; второй
law [lɔː] *n* (18A) закон
lay [leɪ] *v* (11A) класть, положить
layer ['leɪə] *n* (11A) слой
layout ['leɪaut] *n* (14A) план; схема расположения
lead [liːd] *v* (8A) вести; руководить
leave [liːv] *v* (1A) оставлять; покидать
length [leŋθ] *n* (6A) длина; продолжительность; протяженность
level ['levl] *n* (3A) уровень
lie [laɪ] *v* (15A) лежать; находиться
like [laɪk] *a* (9A) подобный, похожий; одинаковый; *cj* как, словно
likely ['laɪklɪ] *a* (16A) вероятный; *adv* вероятно
limit ['lɪmɪt] *n* (14C) предел, граница; *v* ограничивать
line [laɪn] *n* (12A) линия; ряд
link [lɪŋk] *n* (6A) звено; связь; *v* связывать; оцеплять
liquid ['lɪkwɪd] *n* (15A) жидкость; *a* жидкий
load [loud] *n* (9A) груз; нагрузка; *v* грузить
local ['loukəl] *a* (11A) местный
locality [lou'kælɪtɪ] *n* (19A) местность
lorry ['lɔrɪ] *n* (8A) грузовик
lose [luːz] *v* (10A) терять; проигрывать
lot (of) [lɔt] *n* (18A) много; масса
low [lou] *a* (10A) низкий; тихий

M

main [meɪn] *a* (3A) главный, основной
maintain [men'teɪn] *v* (3A) поддерживать; содержать
maintenance ['meɪntɪnəns] *n* (13A) техническое обслуживание; эксплуатация
major ['meɪdʒə] *a* (6A) основной
make [meɪk] *v* (5A) делать; заставлять
make use of (12A) употреблять что-л.; пользоваться
management ['mænɪdʒmənt] *n* (18A) управление; руководство
manner ['mænə] *n* (16A) способ; образ действий
manual ['mænjuəl] *n* (18A) справочник; руководство; *a* ручной
manufacture [ˌmænju'fækʧə] *n* (7A) производство; *v* производить
mark [mɑːk] *n* (4A) отметка; оценка
marked [mɑːkt] *a* (19A) заметный; отмеченный
master ['mɑːstə] *v* (5A) изучать; овладевать
mean [miːn] *v* (8A) значить; иметь в виду
meaning ['miːnɪŋ] *n* (5A) значение; смысл
means [miːnz] *n* (6A) средство, способ
measure ['meʒə] *n* (8A) мера; *v* измерять

medium ['mi:djəm] *n* (16A) средство; способ; *a* средний
meet [mi:t] *v* (16A) встречать; удовлетворять, отвечать *(требованиям)*
memory ['meməri] *n* (18A) память
mention ['menʃən] *v* (11A) упоминать; *n* упоминание
merely ['miəli] *adv* (10A) только, просто
middle ['midl] *n* (7A) середина
mile [mail] *n* (9A) миля
mind [maind] *n* (17A) ум, разум; мнение
mine [main] *n* (5A) шахта
mode [moud] *n* (14A) метод, способ; форма, вид
moisture ['mɔisʧə] *n* (16A) влажность, сырость; влага
mount [maunt] *v* (12A) устанавливать; монтировать
move [mu:v] *v* (3A) двигать(ся)

N

narrow ['nærou] *a* (9A) узкий
nearly ['niəli] *adv* (10A) почти
necessary ['nesisəri] *a* (2A) необходимый, нужный
need [ni:d] *v* (2A) нуждаться
negligible ['neglidʒəbl] *a* (9A) незначительный
neither . . . nor ['naiðə . . . nɔ:] *cj* (12A) ни . . . ни
network ['netwə:k] *n* (17A) сеть *(железнодорожная и т. п.)*
nevertheless [ˌnevəðə'les] *adv* (1A) все же; тем не менее
noise [nɔiz] *n* (14A) шум
no longer [nou'lɔŋgə] (10A) больше не
nowadays ['nauədeiz] *adv* (16A) в наше время; теперь
nuclear ['nju:kliə] *a* (5A) ядерный
number ['nʌmbə] *n* (6A) число, количество; номер
numerous ['nju:mərəs] *a* (3A) многочисленный

O

object ['ɔbdʒikt] *n* (11A) вещь; предмет; объект; цель; [əb'dʒekt] *v* возражать
observe [əb'zə:v] *v* (10A) наблюдать; замечать
obstacle ['ɔbstəkl] *n* (17A) препятствие
obstruct [əb'strʌkt] *v* (17A) препятствовать
obtain [əb'tein] *v* (4A) получать; достигать
obviate ['ɔbvieit] *v* (18A) устранять; избегать
obvious ['ɔbviəs] *a* (18A) очевидный
occur [ə'kə:] *v* (5A) случаться, происходить
offer ['ɔfə] *v* (4A) предлагать
often ['ɔ:fn] *adv* (3A) часто
oil [ɔil] *n* (9A) масло; нефть; *v* смазывать
on account of [ə'kaunt] *prp* (12A) вследствие; из-за
once [wʌns] *adv* (4A) раз; однажды
only ['ounli] *adv* (2A) только; *a* единственный
operate ['ɔpəreit] *v* (9A) работать, действовать; эксплуатировать
opinion [ə'pinjən] *n* (15A) мнение
opportunity [ˌɔpə'tju:niti] *n* (5A) благоприятная возможность
ordinary ['ɔ:dnri] *a* (4A) обычный
other ['ʌðə] *a* (2A) другой
otherwise ['ʌðəwaiz] *adv* (12A) иначе; в противном случае
output ['autput] *n* (13A) выпуск; производство; мощность
outside [aut'said] *adv* (3A) снаружи
outstanding [aut'stændiŋ] *a* (11A) выдающийся
over ['ouvə] *prp* (17A) над; через; сверх, свыше
overall ['ouvərɔ:l] *a* (13A) общий; весь (в целом)
overcome [ˌouvə'kʌm] *v* (19C) преодолевать
owing to ['ouiŋtu:] *prp* (9A) благодаря
own [oun] *a* (5A) собственный
ownership ['ounəʃip] *n* (14A) собственность; владение

P

part [pa:t] *n* (7A) часть, доля; *v* расставаться

partial ['pɑːʃəl] *a* (18A) частичный
particularly [pə'tɪkjuləlɪ] *adv* (10A) особенно
pass an examination [pɑːs] (1A) сдать экзамен
passage ['pæsɪdʒ] *n* (11A) проход; переход
path [pɑːθ] *n* (17A) путь, дорога; тропа
pave [peɪv] *v* (8A) мостить
pay [peɪ] *v* (8A) платить; *n* плата; ~ **attention** (2A) уделять внимание
peculiarity [pɪˌkjuːlɪ'ærɪtɪ] *n* (18A) специфичность, особенность
pedestrian [pɪ'destrɪən] *n* (14A) пешеход
penetrate ['penɪtreɪt] *v* (11A) проникать
perfect ['pəːfɪkt] *a* (15A) совершенный; [pə'fekt] *v* совершенствовать
perform [pə'fɔːm] *v* (6A) исполнять, выполнять
performance [pə'fɔːməns] *n* (15A) работа *(машины)*; действие
perhaps [pə'hæps] *adv* (15A) возможно
permanent ['pəːmənənt] *a* (6A) постоянный
pile [paɪl] *n* (11A) куча, груда; свая
pipe [paɪp] *n* (12A) труба, трубопровод; *v* подавать по трубам
place [pleɪs] *n* (7A) место; *v* помещать; укладывать; располагать
plant [plɑːnt] *n* (16A) растение; завод; *v* сажать *(растения)*
pleasant ['pleznt] *a* (14A) приятный
plenty (of) ['plentɪ] *n* (6A) много
point [pɔɪnt] *n* (9A) точка; пункт
point out *v* (4A) указывать
pollution [pə'luːʃən] *n* (13A) загрязнение
population [ˌpɔpju'leɪʃən] *n* (6A) население
possess [pə'zes] *v* (16A) владеть, обладать
possible ['pɔsəbl] *a* (2A) возможный
power ['paʊə] *n* (15A) сила; мощность; энергия; *v* приводить в действие
powerful ['paʊəful] *a* (4A) мощный
precaution [prɪ'kɔːʃən] *n* (10A) предосторожность; предостережение
predict [prɪ'dɪkt] *v* (17A) предсказывать
prefer [prɪ'fəː] *v* (12A) предпочитать
preliminary [prɪ'lɪmɪnərɪ] *a* (12A) предварительный
pressure ['preʃə] *n* (15A) давление
prevent [prɪ'vent] *v* (11A) предотвращать; мешать
previous ['prɪːvjəs] *a* (6A) предыдущий
primary ['praɪmərɪ] *a* (1A) начальный; основной; первостепенный
principal ['prɪnsəpəl] *a* (16A) главный
private ['praɪvɪt] *a* (13A) частный; личный
probably ['prɔbəblɪ] *adv* (3A) вероятно
produce [prə'djuːs] *v* (2A) производить
profound [prə'faund] *a* (16A) глубокий
project ['prɔdʒekt] *n* (11A) проект
promise ['prɔmɪs] *n* (15A) обещание; *v* обещать
promote [prə'mout] *v* (9A) способствовать, содействовать
propel [prə'pel] *v* (14A) приводить в движение
proper ['prɔpə] *a* (11A) свойственный; надлежащий
property ['prɔpətɪ] *n* (4A) свойство; собственность
propose [prə'pouz] *v* (14A) предлагать
protection [prə'tekʃən] *n* (9A) защита
prove [pruːv] *v* (9A) доказывать; оказываться
provide [prə'vaɪd] *v* (2A) обеспечивать; снабжать
provision [prə'vɪʒən] *n* (16C) обеспечение
pure [pjuə] *a* (19C) чистый; беспримесный

purpose ['pə:pəs] *n* (10A) цель, намерение
push [puʃ] *n* (14C) толчок; *v* толкать; проталкивать(ся)
put out ['put 'aut] *v* (18A) выпускать
put up *v* (7A) поднимать; воздвигать

Q

quality ['kwɔlɪtɪ] *n* (6A) качество
quantity ['kwɔntɪtɪ] *n* (9A) количество
quarter ['kwɔ:tə] *n* (13A) четверть
quiet ['kwaɪət] *a* (15A) тихий; спокойный
quite [kwaɪt] *adv* (3A) вполне; довольно

R

railway ['reɪlweɪ] *n* (3A) железная дорога
raise [reɪz] *v* (18A) поднимать(ся)
range [reɪndʒ] *n* (1A) горная система; пределы колебания
rapid ['ræpɪd] *a* (6A) быстрый
rate [reɪt] *n* (17C) скорость, темп; сорт; класс; разряд
rather ['rɑ:ðə] *adv* (8A) скорее, лучше; предпочтительнее
ratio ['reɪʃɪou] *n* (19C) отношение; соотношение; пропорция; коэффициент
raw [rɔ:] *a* (9A) сырой, необработанный
ray [reɪ] *n* (4A) луч
reach [rɪ:ʧ] *v* (11A) простираться; достигать
readily ['redɪlɪ] *adv* (11A) охотно; быстро; легко
readings ['rɪ:dɪŋz] *n pl* (10A) показатели, данные
realize ['rɪəlaɪz] *v* (1A) понимать, осознавать; осуществлять
really ['rɪəlɪ] *adv* (5A) действительно
rear [rɪə] *n* (15A) задняя сторона; *a* задний
reason ['rɪ:zn] *n* (6A) причина; повод; рассудок
receive [rɪ'sɪ:v] *v* (1A) получать; принимать *(гостей)*
recent ['rɪ:snt] *a* (6A) недавний
recognize ['rekəgnaɪz] *v* (10A) узнавать; признавать
reduce [rɪ'dju:s] *v* (14A) уменьшать; понижать
reflect [rɪ'flekt] *v* (13A) отражать, изображать
refuse [rɪ'fju:z] *v* (4A) отказывать(ся)
regard [rɪ'gɑ:d] *n* (14C) уважение; отношение; *v* рассматривать, считать(ся)
region ['rɪ:dʒən] *n* (7A) край; область
relative ['relətɪv] *a* (13A) относительный; сравнительный
release [rɪ'lɪ:s] *v* (10A) освобождать; отпускать; *n* выпуск
reliable [rɪ'laɪəbl] *a* (9A) надежный
remain [rɪ'meɪn] *v* (6A) оставаться
remark [rɪ'mɑ:k] *v* (8A) замечать; отмечать; *n* замечание
remember [rɪ'membə] *v* (13A) помнить
remove [rɪ'mu:v] *v* (18A) убирать; передвигать
repair [rɪ'pɛə] *n* (8A) ремонт; *v* чинить; ремонтировать
replace [rɪ'pleɪs] *v* (9A) заменять
require [rɪ'kwaɪə] *v* (1A) требовать
research [rɪ'sə:ʧ] *n* (4A) исследование
reserved [rɪ'zə:vd] *a* (14A) запасный; резервный; зарезервированный
resistance [rɪ'zɪstəns] *n* (19C) сопротивление
respect [rɪs'pekt] *v* (5A) уважать
responsible [rɪs'pɔnsəbl] *a* (13A) ответственный *(за что-л.)*
restore [rɪs'tɔ:] *v* (7A) восстанавливать
restrict [rɪ'strɪkt] *v* (13A) ограничивать
result (in, from) [rɪ'zʌlt] *v* (13A) приводить к; проистекать, вытекать из
retain [rɪ'teɪn] *v* (16A) удерживать; сохранять
return [rɪ'tə:n] *v* (1A) возвращаться

ride [raɪd] *n* (13A) поездка; *v* ездить
road [roud] *n* (16A) дорога
rock [rɔk] *n* (1A) скала; горная порода
roof [ru:f] *n* (7A) крыша
root [ru:t] *n* (13A) корень
rope [roup] *n* (11A) канат; веревка; трос
rotate [rou'teɪt] *v* (19A) вращать(ся)
rough [rʌf] *a* (12A) грубый; шероховатый
round [raund] *prp* (9A) вокруг
route [ru:t] *n* (6A) маршрут; путь
rubber ['rʌbə] *n* (13A) резина; каучук
rule [ru:l] *n* (14A) правило
run [rʌn] *v* (9A) бегать; проходить; работать *(о машине)*
rush [rʌʃ] *n* (14C) стремительное движение, натиск; *v* мчаться

S

safety ['seɪftɪ] *n* (3A) безопасность
sail [seɪl] *v* (9A) плавать; *n* парус
same (the) [seɪm] *pron* (8A) тот же самый; одинаковый
sand [sænd] *n* (3A) песок
satisfactory [ˌsætɪs'fæktərɪ] *a* (19C) удовлетворительный
save [seɪv] *v* (15A) экономить; беречь
scale [skeɪl] *n* (6A) масштаб; шкала
scarcely ['skeəslɪ] *adv* (4A) едва
scheme [ski:m] *n* (11A) схема; план, программа
science ['saɪəns] *n* (4A) наука
scientist ['saɪəntɪst] *n* (5A) ученый
seal [si:l] *n* (17C) пломба; изоляция; *v* запечатывать; герметизировать
search [sə:tʃ] *n* (19A) поиск; *v* искать
seat [si:t] *n* (6A) место; *v* вмещать, помещать
secondary school ['sekəndərɪ] (1A) средняя школа
secure [sɪ'kjuə] *v* (11A) закреплять; гарантировать; обеспечивать; *a* надежный
seem [si:m] *v* (9A) казаться
seldom ['seldəm] *adv* (5A) редко
send [send] *v* (2A) посылать, отправлять
sense [sens] *n* (18A) чувство; значение; смысл
sequence ['si:kwəns] *n* (18A) последовательность
serious ['sɪərɪəs] *a* (16A) серьезный
serve [sə:v] *v* (1A) служить
set [set] *v* (14A) устанавливать
settle ['setl] *v* (8A) разрешать *(вопрос)*
several ['sevrəl] *a* (6A) несколько
shallow ['ʃælou] *a* (7A) мелкий; неглубокий
shape [ʃeɪp] *n* (7A) форма; вид; *v* придавать форму
share [ʃeə] *v* (11A) делить, распределять
ship [ʃɪp] *n* (9A) корабль; судно; *v* перевозить грузы по воде
shock [ʃɔk] *n* (19C) удар; толчок; *v* потрясать
shop [ʃɔp] *n* (1A) цех, мастерская; магазин
shortage ['ʃɔ:tɪdʒ] *n* (7A) недостаток
show [ʃou] *v* (2A) показывать; демонстрировать
side [saɪd] *n* (2A) сторона
sign [saɪn] *n* (15A) знак; признак; *v* подписывать
significance [sɪg'nɪfɪkəns] *n* (6A) значение; важность
similar ['sɪmɪlə] *a* (4A) подобный; сходный
simple ['sɪmpl] *a* (4A) простой; элементарный
simultaneously [ˌsɪməl'teɪnjəslɪ] *adv* (12A) одновременно
since [sɪns] *prp* (15A) с; *cj* так как; с тех пор как; *adv* с тех пор
sink [sɪŋk] *v* (17A) опускаться; топить; погружать; тонуть
size [saɪz] *n* (9A) размер, величина
skilled [skɪld] *a* (10A) опытный, умелый
slight [slaɪt] *a* (16A) незначительный; легкий; слабый
slowly ['slouli] *adv* (9A) медленно; тихо

smooth [smuːð] *a* (9A) гладкий, ровный
so far [sou'fɑː] (11A) до сих пор
so far as [sou'fɑːrəz] (4A) насколько
so that ['souðæt] (2A) чтобы
soil [sɔɪl] *n* (9A) почва
solve [sɔlv] *v* (6A) решать
soon [suːn] *adv* (4A) скоро, вскоре
sound [saund] *n* (13A) звук; *a* разумный, здравый; надежный, прочный
source [sɔːs] *n* (8A) источник; начало
space [speɪs] *n* (4A) пространство; место
spare [speə] *n* (13A) запасная часть; *a* запасной, резервный; лишний; *v* давать; уделять
spark [spɑːk] *n* (15A) искра; *v* искрить, давать искру
speed [spiːd] *n* (3A) скорость
split [splɪt] *v* (4A) расщеплять(ся); разделять(ся)
square [skweə] *n* (19A) квадрат; площадь; *a* квадратный
stage [steɪdʒ] *n* (8A) стадия; этап
state [steɪt] *n* (1A) состояние; государство; штат
stay [steɪ] *v* (10A) оставаться; пребывать; *n* пребывание
steadily ['stedɪlɪ] *adv* (1A) равномерно
steam [stiːm] *n* (3A) пар
steel [stiːl] *n* (9A) сталь
steep [stiːp] *a* (13A) крутой
step [step] *n* (8A) шаг; ступень
still [stɪl] *adv* (7A) еще; *cj* однако
stone [stoun] *n* (7A) камень
store [stɔː] *v* (4A) запасать; хранить; вмещать
store-room ['stɔːrum] *n* (4A) кладовая
straight [streɪt] *a* (12A) прямой
strain [streɪn] *n* (19A) напряжение; натяжение; нагрузка; *v* напрягать; натягивать
stream [striːm] *n* (12A) поток; течение; *v* течь
strength [streŋθ] *n* (7A) сила
stress [stres] *n* (19A) давление; напряжение; *v* подчеркивать; подвергать напряжению
stretch [streʧ] *n* (8A) протяжение; участок; *v* вытягивать
strict [strɪkt] *a* (17C) точный; определенный; строгий
stroke [strouk] *n* (15A) удар; ход (такт) поршня
strong [strɔŋ] *a* (4A) крепкий; сильный
subject ['sʌbgɜɪkt] *n* (1A) тема; предмет
substance ['sʌbstəns] *n* (4A) вещество; сущность
substantial [səb'stænʃəl] *a* (19A) существенный
substitute ['sʌbstɪtjuːt] *n* (19C) замена; *v* заменять
suburb ['sʌbəːb] *n* (14A) пригород
successful [sək'sesful] *a* (6A) удачный, успешный
such [sʌʧ] *a* (9A) такой; ~ **as** как например; такой как
suddenly ['sʌdnlɪ] *adv* (5A) вдруг, внезапно
sufficient [sə'fɪʃənt] *a* (15A) достаточный
suggest [sə'dʒest] *v* (11A) предлагать
suitable ['sjuːtəbl] *a* (11A) подходящий
supply [sə'plaɪ] *n* (9A) снабжение; запас; *v* поставлять; снабжать
support [sə'pɔːt] *n* (11A) поддержка; опора, оплот; *v* поддерживать
suppose [sə'pouz] *v* (9A) предполагать
sure [ʃuə] *a* (15A) уверенный
surface ['səːfɪs] *n* (8A) поверхность
survey ['səːveɪ] *n* (12A) съемка; изыскание; [sə'veɪ] *v* осматривать
suspend [səs'pend] *v* (11A) подвешивать; приостанавливать

T

take an examination (1A) сдавать экзамен
take into consideration (11A) принимать во внимание
take off ['teɪk'ɔf] *v* (10A) снимать; взлетать *(о самолете)*
take place (1A) происходить

task [tɑːsk] *n* (6A) задача, задание
teach [tiːʧ] *v* (2A) учить
temporary ['tempərərɪ] *a* (11A) временный
tend [tend] *v* (10A) стремиться; направлять(ся)
tension ['tenʃən] *n* (17C) напряжение; напряженность; растяжение; натяжение
term [tɜːm] *n* (1A) срок, семестр; термин
test [test] *v* (3A) испытывать; *n* испытание; проба
thanks to ['θæŋkstuː] *prp* (12A) благодаря
then [ðen] *adv* (5A) тогда; потом
therefore ['ðɛəfɔː] *adv* (2A) поэтому
thick [θɪk] *a* (7A) толстый; густой; плотный
think [θɪŋk] *v* (2A) думать
thorough ['θʌrə] *a* (19A) тщательный; совершенный, полный
though [ðou] *cj* (4A) хотя
threat [θret] *n* (5A) угроза
through [θruː] *prp* (3A) через, сквозь; вследствие; из-за
throughout [θruː'aut] *adv* (4A) повсюду, везде
throw [θrou] *v* (2A) бросать, кидать
thus [ðʌs] *adv* (7A) таким образом
tie [taɪ] *v* (7A) связывать; *n* связь
tight [taɪt] *a* (17A) непроницаемый; плотный
till [tɪl] *prp* (9A) до
timber ['tɪmbə] *n* (9A) строевой лес
time [taɪm] *n* (5A) время; раз
together [tə'geðə] *adv* (16A) вместе
too [tuː] *adv* (5A) также; слишком
top [tɔp] *n* (7A) верх; верхушка
total ['toutl] *a* (3A) целый; полный; весь
touch [tʌʧ] *n* (18A) прикосновение; *v* трогать; затрагивать *(тему, вопрос)*
towards [tə'wɔːdz] *prp* (1A) к, по направлению
track [træk] *n* (14A) путь; колея; след; *v* выслеживать; прослеживать
trade [treɪd] *n* (18A) профессия; торговля; *v* торговать
traffic ['træfɪk] *n* (3A) движение
transfer ['trænsfəː] *n* (18A) перенос; перемещение; перевод; [træns'fəː] *v* переносить, перемещать; переводить
travel ['trævl] *n* (14A) путешествие; *v* путешествовать; двигаться
tremendous [trɪ'mendəs] *a* (19A) огромный
trend [trend] *n* (13A) тенденция, общее направление
trial ['traɪəl] *n* (19A) испытание
trouble ['trʌbl] *n* (10A) затруднение; неполадки; *v* беспокоиться
truck [trʌk] *n* (10A) грузовик; *v* перевозить на грузовиках
true [truː] *a* (18A) истинный; правильный, верный
try [traɪ] *v* (2A) испытывать; пробовать
tube [tjuːb] *n* труба
tunnel ['tʌnl] *v* (3A) прокладывать тоннель
turn [tɜːn] *v* (4A) повернуть(ся)
twice [twaɪs] *adv* (4A) дважды, два раза; вдвое
twin [twɪn] *n* (17C) двойник; *a* двойной, спаренный
tyre ['taɪə] *n* (14A) шина

U

ultimate ['ʌltɪmɪt] *a* (19A) окончательный; конечный; максимальный
underline [ˌʌndə'laɪn] *v* (18A) подчеркивать
undertake [ˌʌndə'teɪk] *v* (17A) предпринимать
unfortunately [ʌn'fɔːʧnɪtlɪ] *adv* (7A) к сожалению
uniformity [ˌjuːnɪ'fɔːmɪtɪ] *n* (13A) единообразие
unit ['juːnɪt] *n* (7A) единица; агрегат
unite [juː'naɪt] *v* (6A) соединять; объединять
unless [ən'les] *cj* (8A) если не
unlikely ['ʌn'laɪklɪ] *a* (10A) неправдоподобный, невероятный

until [ən'tɪl] *prp* (2A) до; *cj* (до тех пор) пока (не)
upper ['ʌpə] *a* (10A) верхний; высший
urgently ['ə:dʒəntlɪ] *adv* (10A) срочно; безотлагательно
use [ju:z] *v* (2A) применять, пользоваться
used to ['ju:st tə] (5A) иметь обыкновение
useless ['ju:slɪs] *a* (5A) бесполезный
usually ['ju:ʒuəlɪ] *adv* (1A) обычно
utilize ['ju:tɪlaɪz] *v* (2A) использовать

V

valuable ['væljuəbl] *a* (6A) ценный
value ['vælju:] *n* (10A) значение; величина; ценность; *v* ценить
vary ['veərɪ] *v* (8A) менять, изменять
vast [va:st] *a* (13A) обширный, громадный
vehicle ['vɪ:kl] *n* (8A) экипаж, повозка; автомобиль
virtually ['və:tjuəlɪ] *adv* (15A) фактически; в сущности
visibility [ˌvɪzɪ'bɪlɪtɪ] *n* (16A) видимость
vision ['vɪʒən] *n* (18A) зрение; видение
vital ['vaɪtl] *a* (12A) жизненный; насущный
volume ['vɔljum] *n* (16A) том, книга; объем

W

war [wɔ:] *n* (5A) война
way [weɪ] *n* (2A) путь; способ; образ действия
weakness ['wɪ:knɪs] *n* (3A) слабость
weather ['weðə] *n* (10A) погода
weigh [weɪ] *v* (9A) взвешивать; весить
weight [weɪt] *n* (8A) вес; груз
wheel [wɪ:l] *n* (8A) колесо; *v* катить
whenever [wen'evə] *cj* (16A) всякий раз когда; когда бы ни
whereas [wɛə'æz] *cj* (10A) в то время как
while [waɪl] *cj* (5A) пока; в то время как
wholly ['houlɪ] *adv* (10A) целиком
wide [waɪd] *a* (8A) широкий
widen ['waɪdn] *v* (9A) расширять(ся)
width [wɪdθ] *n* (1A) ширина
win [wɪn] *v* (5A) выигрывать
wind [wɪnd] *n* (8A) ветер
wish [wɪʃ] *n* (1A) желание
within [wɪ'ðɪn] *prp* (6A) в; в пределах; внутри
without [wɪ'ðaut] *prp* (7A) без
with reference to ['refrəns] (12A) относительно
withstand [wɪð'stænd] *v* (9A) выдерживать, противостоять
wood [wud] *n* (7A) дерево (*материал*); лес; роща
world [wə:ld] *n* (3A) мир
worth [wə:θ] *a* (17A) стоящий; заслуживающий

Y

yet [jet] *cj* (13A) однако; все же; *adv* еще

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