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Міністерство освіти і науки України  
Вінницький державний технічний університет

Г.М. Багнюк, Л.Е. Габрійчук, В.В. Науменко, В.О. Плиненко

## **КОНТРОЛЬНІ РОБОТИ З АНГЛІЙСЬКОЇ МОВИ**

Для студентів заочної форми навчання

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Затверджено Ученою радою Вінницького державного технічного університету як навчальний посібник для студентів 1-4 курсів заочної форми навчання. Протокол № 6 від 25.01.2001 р.

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Рекомендовано до видання Ученою радою Вінницького державного технічного університету Міністерства освіти і науки України.

**Г.М. Багнюк, Л.Е. Габрійчук, В.В. Науменко, В.О. Плиненко**  
**Б 14 Контрольні роботи з англійської мови для студентів заочної форми навчання. Навчальний посібник.** – Вінниця: ВДТУ, 2002 – 60 с.

Даний навчальний посібник розрахований на студентів 1-4 курсів заочної форми навчання. В посібник включені чотири контрольні роботи, кожна з яких складається з 5 варіантів. Контрольні роботи вміщують тексти загальнотехнічного і технічного характеру. Граматичні вправи ілюструють основні граматичні явища і структури, характерні для наукових текстів на англійській мові.

# Методичні вказівки

## I. Мета навчання англійській мові на заочному відділенні

Основною метою навчання студентів англійською мовою в технічному вузі є досягнення ними практичного володіння цією мовою, що в умовах заочного навчання означає формування вміння самостійно читати іноземні літературні джерела за своїм фахом з метою здобуття інформації. Ця програма передбачає, головним чином, самостійну роботу студентів. Робота під керівництвом викладача розрахована тільки під час проведення установчих, контрольно-закріплювальних занять.

## II. Виконання контрольних завдань та оформлення контрольних робіт

1. Кількість контрольних завдань, що виконуються на кожному курсі, визначається навчальним планом університету.
2. Кожне контрольне завдання у цьому посібнику пропонується в п'яти варіантах. Ви повинні виконувати один з п'яти варіантів згідно з останнім цифрами студентського шифру: студенти, шифр яких закінчується на 1 чи 2, виконують варіант №1; на 3 чи 4 – №2; на 5 чи 6 – №3; на 7 чи 8 – №4; на 9 чи 0 – №5.
3. Виконувати письмові контрольні роботи потрібно в окремому зошиті. На обкладинці зошита напишіть своє прізвище, групу, номер контрольної роботи.
4. Контрольні роботи повинні виконуватися акуратно, чітким почерком. При виконанні контрольної роботи залишайте в зошиті поля для зауважень рецензента.
5. Виконані контрольні роботи направляйте для перевірки в установлені терміни.
6. Якщо контрольна робота виконана неповністю чи без дотримання вказівок, вона повертається без перевірки.

## III. Виправлення роботи на основі рецензій

1. Після отримання від рецензента перевіреної контрольної роботи, уважно прочитайте рецензію, ознайомтеся із зауваженнями рецензента і проаналізуйте помилки.
2. Керуючись вказівками рецензента, опрацюйте ще раз навчальний матеріал. Всі речення, де були допущені помилки чи неточності перекладу, перевипишіть у виправленому вигляді в кінці цієї контрольної роботи.
3. Контрольні роботи є навчальними документами, які потрібно зберігати. Нагадайте, що під час заліку проводиться перевірка засвоєного матеріалу, що ввійшов до контрольної роботи.

#### **IV. Підготовка до заліків та екзаменів**

Нід час підготовки до заліків та екзамену рекомендується:

- а) повторно прочитати та перекласти найбільш складні тексти з підручника;
- б) продивитись матеріал;
- в) виконати вибірково окремі вправи з підручника для самоперевірки.

Залік. До заліку допускаються студенти, які виконали програмні контрольні роботи і склали тексти в обсязі, передбаченому програмою.

Екзамен. До екзамену з англійської мови допускаються студенти, які мають залік за I – IV курси, виконали контрольні роботи та склали навчальний матеріал з читання за I – IV курси.

На екзамені з англійської мови перевіряються вміння:

- а) читати із словником тексти за фахом факультету. Форми розуміння – письмовий переклад. Норма перекладу – 1000 друкованих знаків за 45 хвилин;
- б) читати без словника текст, який містить вивчений граматичний матеріал на 600 – 800 друкованих знаків. Форми перевірки розуміння – переклад змісту прочитаного рідною мовою; час підготовки 8 – 10 хвилин.

## Контрольна робота №1

Для того, щоб правильно виконати роботу №1, необхідно засвоїти такі розділи курсу англійської мови з запропонованого підручника.

1. Іменник. Множина іменника. Артиклі і прийменники як показники іменника. Вираження відмінкових відношень в англійській мові за допомогою прийменників і закінчення -s. Іменник в функції означення і його переклад на рідну мову.
2. Прикметник. Ступені порівняння прикметників. Конструкції типу the more ... the less.
3. Числівник.
4. Займенники особові, присвійні, запитальні, вказівні, неозначені і заперечні.
5. Форма теперішнього (Present), минулого (Past) і майбутнього (Future) часу групи Indefinite дійсного стану дійсного способу. Відмінювання дієслів to be, to have в Present, Past і Future Indefinite. Наказовий спосіб і його заперечна форма.
6. Просте поширене речення, прямий порядок слів розповідного речення і спонукального в стверджувальній і заперечній формах, зворотний порядок слів запитального речення. Зворот There is( are) .
7. Основні випадки словотворення.

Використайте наступні зразки для виконання вправ.

### Зразок виконання 1 (до вправи 1)

Граматичні функції закінчення -s

- |   |   |
|---|---|
| 1. The students attend lectures and seminars at the University.           | Студенти відвідують лекції і семінари в університеті. |
| Lectures - множина від іменника, a lecture – лекція.                      |   |
| 2. He lectures on physics at the University.                              | Він читає лекції з фізики в університеті.             |
| Lectures – 3-я особа однини від дієслова to lecture в Present Indefinite. |   |
| 3. My brother's son is a student.   | Син мого брата студент.                               |
| В слові brother's 's - закінчення присвійного відмінка іменника в однині. |   |
| 4. My brothers' sons are the students.                                    | Сини мого брата студенти.                             |

Слово brothers'- форма присвійного відмінка іменника а brother в множині.

### Зразок виконання 2 (до вправи 2)

Особливості перекладу на рідну мову англійських іменників, що використовуються в функції означення, яке стоїть перед означуваним словом.

1. Market conditions are very difficult in our country.      Ринкові умови дуже важкі в нашій країні.

### Зразок виконання 3 (до вправи 5)

1. In the 14<sup>th</sup> century the Ukrainian language became the official state language.      В 14 столітті українська мова стала офіційною державною мовою.

Became - Past Indefinite Active від нестандартного дієслова to become.

### Варіант 1 \

I. Перепишіть наступні речення. Визначте за граматичними ознаками до якої частини мови належать слова з закінченням -s і яку функцію це закінчення виконує.

- а) показник 3-ї особи однини дієслова в Present Indefinite,
  - б) ознака множини іменника,
  - в) показник присвійного відмінка іменника.
- Перекладіть речення на рідну мову.

1. Ukraine pursues a policy of peace.
2. We hear the sounds of a child's voice.
3. We have high mountains, vast steppes, forests, beautiful rivers and lakes.
4. The Grihory Veryovka Ukrainian People's Choir is known all over the world.
5. Sometimes he gets up at half past seven.

II. Перепишіть наступні речення і перекладіть їх, звертаючи увагу на особливості перекладу на рідну мову означень, виражених іменником.

1. Ukraine has higher and local bodies of state power.
2. There are deposits of iron ores and coal in our country.
3. The correspondence education system has its advantages.
4. Winter winds are not very strong in our territory.
5. There are many study rooms at the university.

III. Перепишіть наступні речення, які містять різні форми порівняння, і перекладіть їх на рідну мову.

1. The largest lake of Ukraine is Swityas.
2. The Dnieper is longer than the river Bug.
3. Our university tries to organize student training at the level of the latest achievements of science.

4. His knowledge of the Ukrainian ancient history is the worst.
5. Your handwriting is now better than it was last year.

IV. Перепишіть і письмово перекладіть речення на рідну мову, звертаючи увагу на переклад неозначених і заперечних займенників.

1. Ukraine has some important ports.
2. Do any of you know the main industries of Ukraine?
3. Have you any books on Shevchenko?
4. The old plants had no modern facilities.
5. This assembly plant has some complex systems of conveyor **belts**.

V. Перепишіть наступні речення, визначте в них видо-часові форми дієслів і зазначте їх інфінітив, перекладіть речення на рідну мову.

1. Ukraine borders on the Russian Federation, Belarus, Moldova, Poland.
2. They were at the plant yesterday.
3. The long struggle of the Ukrainian people for independence ended victoriously.
4. Ukraine will establish new relations with countries through out the world.
5. In the 14 century the Ukrainian language became the official state language.

VI. Прочитайте і усно перекладіть на рідну мову весь текст. Перепишіть і письмово перекладіть 2, 5, 6-й абзаци:

### Ukraine

Ukraine is a self-contained sovereign state. The declaration of Ukrainian independence was proclaimed on august 24<sup>th</sup> 1991 by the Ukrainian parliament.

Ukraine has its own territory, higher and local bodies of state power (the supreme council and local councils), government, national emblem, state flag and anthem.

Ukraine is one of the largest European countries. Its total area is 603700 square kilometers. Our country is washed by the Black Sea and the Sea of Azov.

The population of Ukraine is about 52 million people. There are 24 administrative regions and the Crimean autonomous republic. Our country has many industrial raw materials, it has rich deposits of iron, metals, coal, oil, gas, different ores, marble and other natural resources.

The territory of our country has an astonishing variety of landscapes. We have high mountains, vast steppes, endless forests, beautiful rivers and lakes. Ukraine has 131 rivers, among them is the Dnieper with its tributaries such as the Desna, the Prypyat, the Dniester, the Bug, and the Donets. 95% of Ukraine is flat and the rest is mountainous. The Ukrainian Carpathians and the Crimean mountains make up the remaining 5% of its area.

The flora and fauna of our country are extremely rich. Almost all kinds of animals and birds can be found on the territory of our vast land. Ukraine



possesses enormous tracts of woodland, vast tracts of fertile arable lands and fine pastures. The country has metallurgical and heavy industries. It is an agricultural country.

The scientists of Ukraine make great contributions to science. Ukraine has its own original culture and art. Ukraine has many professional theatres and philharmonic societies.

Ukraine pursues a policy of peace. Now Ukraine is establishing new relations with countries throughout the world making direct contract with them and signing agreements and treaties. In 1995 Ukraine became a member of the council of Europe.

VII. Прочитайте I, 3, 4, 7- абзаци тексту і дайте відповіді на наступні питання:

1. When was the declaration of Ukrainian independence proclaimed?
2. What seas wash Ukraine?
3. What resources has our country?
4. What policy does Ukraine pursue?
5. When did Ukraine become a member of the council of Europe?

### Варіант 2

I. Перепишіть наступні речення. Визначте за граматичними ознаками до якої частини мови належать слова з закінченням -s і яку функцію це закінчення виконує:

- а) показник 3-ої особи однини в Present Indefinite,
- б) ознака множини іменника,
- в) показник присвійного відмінка іменника.

Перекладіть речення на рідну мову:

1. The British Isles consists of Great Britain, Ireland and some 5500 smaller islands.
2. British goods make up about an eighth of the world's total exports of manufactures.
3. Big cities and towns have enterprises of nearly all branches of industry.
4. England's fisheries are famous.
5. The system of higher education in England permits students to get whatever qualification they need.

II. Перепишіть наступні речення і перекладіть їх, звертаючи увагу на особливості перекладу на рідну мову означень виражених іменником.

1. Britain is a centre of the sterling area.
2. A college education is in most cases less academic and more practical in Great Britain.
3. The British government sets the arts budget for a three- year period.
4. Colleges in Britain offer a specialist qualification.
5. The London county council is responsible for housing education and town planning.

III Перепишіть наступні речення, які містять різні форми порівняння і перекладіть їх на рідну мову:

1. The highest mountain in the United Kingdom is Ben Nevis in Scotland.
2. The newer industries in Great Britain are electronics, electrical, engineering, chemicals.
3. Britain forms the greater part of the British Isles.
4. Great Britain is less rich in mineral resources than Ukraine.
5. Better late than never.

IV. Перепишіть і письмово перекладіть речення на рідну мову, звертаючи увагу на переклад неозначених і заперечних займенників.

1. There are no high mountains in Great Britain.
2. Unemployment means no income.
3. On the border between England and Scotland there are some hills called the Cheviot Hills.
4. Are there any new industries in Great Britain.
5. They sent some letters to foreign firms yesterday.

V. Перепишіть наступні речення. Визначте в них видо-часові форми дієслів і зазначте їх інфінітив. Перекладіть речення на рідну мову.

1. The rate of inflation fell sharply in the early 1980s in the United Kingdom.
2. Until the nineteenth century the universities in England offered no place to girls.
3. British firms and academic institutions will participate in European community and other international programmes.
4. The climate of Great Britain is typically maritime.
5. The faculty offers three-year courses leading to the degree of bachelor of engineering.

VI. Прочитайте і усно перекладіть на рідну мову весь текст. Перепишіть і письмово перекладіть 2, 4, 5 абзаци.

### **Great Britain**

Great Britain formally known as the United Kingdom of Great Britain and Northern Ireland is situated on the British Isles, beautifully decorated by nature. The total area of the United Kingdom is 244027 square kilometres. Great Britain is divided into 55 administrative counties. It is seventy-fifth in size among the countries of the world.

The surface of England and Ireland is rather flat. There are many rivers in Great Britain but they are not very long. The rivers are deep and do not freeze in winter. The chief rivers are the Severn and the Thames.

Great Britain is known for its typically maritime climate with frequent rains, strong winds and continuous fogs.

The population of Great Britain is nearly 56 million people. England has more people than the other parts of the British Isles. About four fifths of the population are urban and only one fifth is rural.

Great Britain is a parliamentary monarchy. Queen Elizabeth II is the head of the state. The country is governed in her name by the government.

Parliament is the supreme legislative body. It consists of two houses: the House of Commons and the House of Lords. The prime minister is usually the head of the party, which is in the power.

Great Britain is a highly developed industrial country. Coal is the main source for the development of British industry. The biggest centres of iron and steel industries are situated in the neighborhood of coal basins. They are Cardiff, Glasgow, and Sheffield. The products of Britain economy automobiles, textile, machinery, electronic equipment and many others are exported to many countries of the world.

VII. Прочитайте 1, 3, 6- абзаци тексту і дайте відповіді на такі питання:

1. By what are the British Isles beautifully decorated?
2. What is Great Britain in size?
3. How many counties are there in GB?
4. What is the climate of GB?
5. Where are the biggest centers of iron and steel industries situated?

### Варіант 3.

I. Перепишіть наступні речення. Визначте за граматичними ознаками до якої частини мови належать слова з закінченням -s і яку функцію це закінчення виконує:

- a) показник 3-ої особи однини дієслова в Present Indefinite,
- б) ознака множини іменника,
- в) показник присвійного відмінка іменника.

Перекладіть речення на рідну мову:

1. Kyiv lies on the both banks of the Dnieper.
2. Kyiv occupies an area of 790 square kilometres.
3. Kyiv's monuments of the past attract a lot of visitors.
4. Many scientific research institutes, colleges, universities are in Kyiv.
5. In 1917-1920 the Ukrainian language became the official language of the Ukrainian People's Republic.

II Перепишіть наступні речення і перекладіть їх, звертаючи увагу на особливості перекладу на рідну мову означень, виражених іменником.

1. The world disarmament conference was in Kyiv.
2. Market conditions are very difficult in our country
3. I shall spend summer holidays in the capital.
4. Barter deals are very popular in our days.
5. Kyiv is famous for its theatres and concert halls.

III. Перепишіть наступні речення, які містять різні форми порівняння і перекладіть їх на рідну мову.

1. Kyiv is one of the greenest and the most beautiful cities in the world.
2. His knowledge of the Kyiv's history is the worst.
3. The Kyiv State University is the country's largest university.
4. He made the shorter summary of the article about the natural resources of Ukraine than she did.

5. This University has more varied courses than any other higher educational institute.

IV. Перепишіть і письмово перекладіть речення на рідну мову, звертаючи увагу на переклад неозначених і заперечних займенників

1. There are some green parks and gardens in the capital of Ukraine.
2. Has Kyiv any places of interest?
3. No dictionary helped him in translation from English to Ukrainian.
4. Does our country buy any equipment from foreign firms?
5. He will find no one at the office tomorrow.

V. Перепишіть наступні речення. Визначте в них видо-часові форми дієслів і зазначте їх інфінітив. Перекладіть речення на рідну мову.

1. Kyiv lies on the both banks of the Dnieper.
2. After the Chornobyl catastrophe the Ukrainian Diaspora representatives stretched a helping hand.
3. The Golden Gate was the main entrance to the city.
4. Kyiv has many places of historic interest.
5. I shall leave for Kyiv in a week/

VI. Прочитайте і усно перекладіть на рідну мову весь текст. Перепишіть і письмово перекладіть 3, 4, 6 абзаци.

## Kyiv

Kyiv is the capital of Ukraine and the seat of the Supreme Council and the cabinet of Ministers.

Kyiv is one of the most ancient cities. It was called "The Mother of All Russian Cities". It has the population of about 3 million people.

Kyiv lies on die both banks of the Dnieper one of the longest river in Ukraine. Spreading over the picturesque hills of the Dnieper Kyiv is immersed in green parks and gardens.

Kyiv is an industrial scientific and cultural centre of Ukraine. Kyiv as one of the oldest cities has many places of interest. Among them the Golden Gate which was the main entrance to the city. On the Bogdan Khmeltsky Square there is the St Sophia's Cathedral. In the square in front of the cathedral there is the monument to Bogdan Khmeltsky.

In Kyiv you can see the monument to T Shevchenko, the well-known poet and fighter for freedom. It stands in the park in front of the University. There is the monastery ensemble Kyiv-Pechersk Lavra that was founded in the 11<sup>th</sup> century in Kyiv. In the park of Immortal Glory there is the Tomb of the Unknown Soldier over which an eternal fire burns.

Kyiv is the centre of Ukrainian culture. Many research institutes and higher educational establishments are to be found here. It is famous for its theatres and concert halls such as Taras Shevchenko Opera and Ballet Theatre, Musical Comedy Theatre, the Concert Hall "Ukraine". There are many fine museums m Kyiv the State Historical Museum, the Museum of Ukrainian art and so on.

The picturesque green banks and hills, plentiful flowerbeds with millions of

different flowers, wonderful beaches of the Dnieper, the Kreshchatik one the widest and most beautiful streets in our country - all this adds up to the beauty of the Ukrainian capital.

VII. Прочитайте 2, 5, 6- абзаци тексту і дайте відповіді на наступні питання:

1. How many people live in Kyiv?
2. What was founded in the 11<sup>th</sup> century?
3. Where does an eternal fire burn?
4. What stands in front of the Kyiv State University?
5. What street is the most beautiful in Kyiv?

#### Варіант 4

I. Перепишіть наступні речення. Визначте за граматичними ознаками до якої частини мови належать слова з закінченням -s і яку функцію це закінчення виконує:

- а) показник 3-ої особи однини дієслова в Present Indefinite,
- б) ознака множини іменника,
- в) показник присвійного відмінка іменника.

Перекладіть речення на рідну мову.

1. Historical and geographical circumstances made London one of the world's most important commercial and cultural centers.
2. The length and breadth of Greater London extends over an area of 700 square miles.
3. The London range of historical connections and its buildings attract millions of tourists from overseas each year.
4. Hundreds of French words slipped into English.
5. The Houses of Parliament stretch along the Thames's North Bank.

II. Перепишіть наступні речення і перекладіть їх, звертаючи увагу на особливості перекладу на рідну мову означень, виражених іменником.

1. All the London streets lead to the heart of the City the financial and business centre of Great Britain.
2. Downing Street is the street of government offices.
3. The chief grain crops are wheat and barley in Great Britain.
4. Westminster is the place for government offices.
5. There are student research societies at every university in Great Britain.

III. Перепишіть наступні речення, які містять різні форми порівняння і перекладіть їх на рідну мову.

1. One of the most beautiful of all English buildings is Westminster Abbey.
2. The National Gallery in Trafalgar Square has one of the best picture collections in the world.
3. You can buy the goods much cheaper in the East End than those in the West End.

4. London with a population of more than 8 million people is the largest city in the world after Tokyo and New York.
5. My sister speaks English worse than I do.

IV. Перепишіть і письмово перекладіть речення на рідну мову, звертаючи увагу на переклад неозначених і заперечних займенників.

1. There are some parts of London, which have distinctive features.
2. That country doesn't produce any heavy industrial machinery.
3. There are some outstanding pictures of the old Roman masters in the National Gallery.
4. This laboratory makes no researches in the field of biology.
5. Do any of you know the history of London?

V. Перепишіть наступні речення, визначте в них вищо-часові форми дієслів і зазначте їх інфінітив. Перекладіть речення на рідну мову.

1. London became a prosperous trading centre during the middle ages.
2. London always welcomes its visitors.
3. This city will attract crowds of visitors from home and abroad.
4. London grew up around the first settlement where Roman invaders found the Thames narrow enough to build a bridge.
5. London has the largest university and the greatest possibilities for entertainment.

VI. Прочитайте і усно перекладіть на рідну мову весь текст. Перепишіть і письмово перекладіть 2, 5, 6 абзаци.

### London

London is one of the world's three largest cities (the other two are New York and Tokyo). It is one of the world's most important ports and it is the capital of Great Britain.

The Romans founded a settlement on the River Thames 2000 years ago. They called it Londinium. London became a prosperous trading centre during the Middle Ages. Since that time it has continued to grow in size and prosperity. There are more than 10 thousand streets in London. About 7 million people live there.

There are four main parts in London the City, Westminster, the West End and the East End.

Sightseeing tours in London usually start in Trafalgar Square. Tourists are particularly impressed by the Nelson Column there in the centre of the square. In the north of Trafalgar Square there is the National Gallery. It exhibits all schools of European painting.

Not far from Trafalgar Square there is a little street with ordinary houses. This is Downing Street and for the last 200 years at house Number 10 the Prime Minister of England has resided. Downing Street is a street of government offices.

Not far from Trafalgar Square you can see the Houses of Parliament which stretch along the Thames's North Bank. Near the Parliament there is Westminster Abbey an old beautiful chapel. For nearly 1000 years all the lords and queens of England - 41 in all - have been crowned here.

Near St. James Park is Buckingham Palace - the Royal residence. Here we can see one of the most colourful and stirring of all London ceremonies the changing of the Guards. All the principal streets of London lead to the heart of the City the financial and business centre of Great Britain.

London is full of parks and green spaces. Hyde Park is the largest park in London. In London there is so much to see that even Londoners can always find new sights.

VIII. Прочитайте 1, 3, 4, 7 абзаци тексту і дайте відповіді на наступні питання:

1. What is London?
2. What parts does London consist of?
3. Where are all schools of European painting exhibited?
4. Where can we see the changing of the Guards?
5. What is the City?

### Варіант 5

I. Перепишіть наступні речення. Визначте за граматичними ознаками до якої частини мови належать слова з закінченням -s і яку функцію це закінчення виконує:

- a) показник 3-ої особи однини дієслова в Present Indefinite,
- b) ознака множини іменника,
- v) показник присвійного відмінка іменника.

Перекладіть речення на рідну мову:

1. Ukraine occupies a territory of 604 thousand square kilometers.
2. Ukrainian's population is 53 million more than 74 percent of whom are Ukrainians.
3. Ukraine produces almost 5 percent of the world's output.
4. Steppes and plains compose the most part of the territory of Ukraine (95 percent).
5. Ukraine completely satisfies its needs in iron.

II. Перепишіть наступні речення і перекладіть їх, звертаючи увагу на особливості перекладу на рідну мову означень, виражених іменником.

1. In the Donetsk coal basin a 50 billion tons supply of anthracite coal was discovered.
2. The Ukraine machine - building potential included tractors, diesel locomotives, automobiles, sea and river vessels, equipment for metallurgic, textile industries and mine.
3. Oil and gas pipelines of international significance go through the territory of Ukraine.

4. Ukraine is the first in Europe in iron ore extraction.
5. We grow sugar beets and a large variety of grain cultures.

III. Перепишіть наступні речення, які містять різні форми порівняння, і перекладіть їх на рідну мову.

1. A sugar beet production per person in Ukraine is greater than in other countries.
2. The Ukraine's topsoils are the best.
3. She came at the worst possible time.
4. He is less well known than his farther.
5. The Ukrainian Diaspora is the strongest in Canada and the USA.

IV. Перепишіть і письмово перекладіть речення на рідну мову, звертаючи увагу на переклад неозначених і заперечних займенників.

1. Some natural resources become a friendly and equal partner in the world market.
2. Are there any cities in Ukraine with the population of over 1 million?
3. No product can bring so much profit to Ukraine's state treasury as sugar does.
4. The name "Ukraine" has some different meanings: country in general, any remote area, borderland.
5. It's of no importance at all.

V. Перепишіть наступні речення. Визначте в них видо-часові форми дієслів і зазначте їх інфінітив.

1. Ukraine will quickly enter to the family of Europe's leading countries.
2. In the south Ukraine has access to the Black Sea and the Sea of Azov.
3. A land reform laid a foundation for Ukraine's transition to a market economy.
4. Ukraine produces about 300 billion kilowatt-hours of electrical energy.
5. In 1995 Ukraine became a member of the Council of Europe.

VI. Прочитайте і усно перекладіть на рідну мову весь текст. Перепишіть і письмово перекладіть 1, 2, 4 абзаци.

### **Ukraine's Economy In the Context of International Economic Relations**

On the map of the world appeared a new independent state with a thousand-year -old history – Ukraine. Ukraine is situated in the geographical centre of Europe. The country occupies a territory of 604 thousand square kilometers. Ukrainian's population is 53 million. There are 6 cities in Ukraine with a population of over 1 million. Ten million ethnic Ukrainians live outside the country on the territories of the former Soviet Union and close to 5 million live in other foreign countries. The Diaspora is the strongest in Canada and the USA.

Ukraine is the first in Europe in iron ore extraction, production of steel, cast iron, tractors, mineral fertilizers, sugar, and grain, second in coal mining, third



in producing concrete, electric energy and various equipment.

Ukraine produces about 300 billion kilowatt-hours of electrical energy. The biggest part is produced at nuclear power plants.

Steppes and plains compose the most part of the territory of Ukraine (95percent). The topsoil's are mainly black. They are the biggest treasure of the Ukrainian land In Ukraine we grow sugar beets, wheat, rye, barley, oats, corn, sunflowers, flax, potatoes, fruits, vegetables and so on. Sugar can be called white gold. This product can bring great profits to Ukraine's state treasury.

Because of its potential Ukraine is an industrial-agricultural country. Its machine-building potential included tractors and agricultural machines, production of diesel locomotives and railroad cars, automobiles, sea and river vessels, TV-sets, motorcycles, equipment for metallurgic, chemical, mine and textile industries and many other complicated products.

Natural and human resources are sufficient for creating a developed internal market and becoming a friendly and equal partner in the world market. There is every reason to believe that Ukraine will quickly enter the family of Europe's leading countries.

VII. Прочитайте 3,5,6 абзаци тексту і дайте відповіді на такі питання:

1. What is produced at nuclear power plants?
2. What country is Ukraine?
3. What does Ukraine produce?
4. What are natural and human resources sufficient for?
5. In what can we believe?

## Контрольна робота №2

Для того, щоб правильно виконати роботу №2, необхідно засвоїти подані розділи курсу англійської мови з рекомендованого підручника

1. Видо-часові форми дієслова: активний стан – форма Indefinite (Present, Past, Future); форми Continuous (Present, Past, Future); форми - Perfect (Present, Past, Future).

2. Функції дієслів to be, to have, to do.

3. Типи питань в англійській мові: а) загальні; б) альтернативні; в) спеціальні; г) розділові; д) питання до підмета.

4. Модальні дієслова: а) модальні дієслова, що виражають можливість: can (could), may (might) і їх еквіваленти to be able to і to be allowed to; б) модальні дієслова, що виражають повинність: must, його еквіваленти to have to; to be to; should.

5. Прийменники: а) прийменники місця; б) прийменники руху; в) прийменники часу.

6. Інтернаціональні слова.

### Зразок виконання 1 (до вправи 1)

1. When the engineer <u>gets</u> the necessary specification he <u>begins</u> his work.	Коли інженер отримує необхідну специфікацію, він починає свою роботу.
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gets, begins – Present Indefinite Active, від дієслів - to get, to begin

### Зразок виконання 2 (до вправи 3)

The engineers are to study the problem of using cosmic rays.	Інженери повинні вивчити проблему використання космічних променів.
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are – еквівалент модального дієслова must

Зразок виконання 3 (до вправи 4)

Maxwell studied the problems of electromagnetism, molecular physics, optics, mechanics and others.

1. Did Maxwell study the problems of electromagnetism, molecular physics ...?
2. Who studied the problems of electromagnetism, molecular physics, optics, mechanics and others?
3. What did Maxwell study?

Зразок виконання 4 (до вправи 5)

The students of our group may get textbooks at the library.

Студенти нашої групи можуть отримати підручники в бібліотеці.

Victor has to take his examination in mathematics.

Віктор повинен скласти екзамен з математики.

**Варіант 1**

I. Перепишіть подані речення; підкресліть в кожному з них дієслово-присудок, визначте його видо-часову форму і поставте в інфінітиві. Перекладіть речення українською мовою.

1. Nowadays the Academy of Sciences of Ukraine includes many outstanding scientists and research workers famous for their discoveries.
2. The workers will have repaired the automatic line by November.
3. The staff of the laboratory is finishing the work on the apparatus.
4. Maxwell wrote his first scientific work when he was fifteen.

II. Поставте дієслово в дужках у потрібному часі і перекладіть речення українською мовою.

1. The radio (to bring) great changes to our life.
2. K. Tsiolkovsky (to be) a natural mathematician, a practical inventor and a researcher.

3. Our scientists (to develop) various kinds of computers in future.

III. Перепишіть речення, перекладіть їх українською мовою, звертаючи увагу на різні значення дієслів to be, to have, to do, та вкажіть їх функцію.

1. Scientists had to create new materials for industry.

2. Some substances do not conduct heat.

3. The engineer is at the power plant.

IV. Поставте загальне запитання до речення та два запитання до підкреслених слів.

V.I. Vernadsky was Ukrainians great scholar of encyclopedic knowledge.

V. Перепишіть подані речення; підкресліть в кожному з них модальне дієслово чи його еквівалент. Перекладіть речення українською мовою.

1. John had to drive all the time at the speed of 90 km per hour.

2. A motorcycle that makes a lot of noise may have muffler problems.

3. Nuclear energy must be used to light and heat our homes.

4. Yesterday he was allowed to work at the laboratory.

VI. Прочитайте і усно перекладіть українською мовою 2-й абзац тексту. Перепишіть і письмово перекладіть 1-й і 3-й абзаци тексту.

### A Family of Scientists

George Boole was born in 1815 and he is famous for his works in the field of mathematical analysis. His wife Mary Everest was a niece of George Everest. He is known as a man who performed topographic survey in India on a large scale in 1841. It is after him that the highest peak in the world is named. Mary Everest was very much interested in her husband's work and after his death she published several books, which contributed greatly to the development of his theory.

The Booles had five daughters. The eldest daughter Mary married C. Hinton who was a well-known mathematician, inventor and author of science-fiction books.

Their three grandchildren became scientists. Howard was a talented entomologist, William and Joan were both physicists. The latter was almost the only woman-physicist who took part in the work at the atomic project of the USA. Their second daughter Margaret is known as the mother of the outstanding English mathematician Jeffrey Taylor who is a foreign member of the Academy of Sciences. Their third daughter Alicia was a specialist in the field of multidimensional space. The fourth daughter Lucy was the first woman-professor who was the head of a chemistry department. But the youngest daughter Ethel Lilian is the most famous. She married the Polish scientist and revolutionist Voynich. Her Wonderful book "The Gadfly" is translated into many languages and is popular in many countries of the world.

VII. Дайте відповіді на запитання:

1. What is George Boole famous for?
2. Who was the only woman-physicist who took part in the work at the atomic project of the USA?
3. What book of Lilian Voynich is popular in many countries of the world?

### Варіант 2

1. Перепишіть подані речення; підкресліть в кожному з них дієслово-присудок, визначте його вищо-часову форму і поставте в інфінітиві. Перекладіть речення українською мовою.

1. They had finished the translation of this scientific article by 5 o'clock.
2. - Let's meet at the station at 5 o'clock.  
- O.K. I shall be waiting for you there.
3. In future the development of power production will depend on the construction of thermal and hydraulic power station.

4. The Olympic Games give thousands of young people opportunity to meet, to make contacts and get better acquainted with each other.

II. Поставте дієслово в дужках у потрібному часі і перекладіть речення українською мовою.

1. Passanger transport (to became) quite a problem in all large cities of the world.
2. My friend (to go) away before he got your letter.
3. I don't understand what he (to speak) about.

III. Перепишіть речення, перекладіть їх українською мовою, звертаючи увагу на різні значення дієслів to be, to have, to do, та вкажіть їх функцію.

1. Any citizen of our country has the right to free education and training according to his choice.
2. For centuries Kiev, a heroic city, had defend its freedom and independence from foreign invaders.
3. The videogame sales are steadily rising.

IV. Поставте загальне запитання до речення та два запитання до підкреслених слів.

The Verhovna Rada of Ukraine adopted the Declaration of Independence of Ukraine on July 16, 1990.

V. Перепишіть такі речення; підкресліть в кожному з них модальне дієслово чи його еквівалент. Перекладіть речення українською мовою.

1. The smaller the computer the faster it can work.
2. Speaking about music we must mention a wellknown Russian composer Pyotr Ilyich Chaikovsky, because his name is linked with an entire epoch in the development of music.
3. You will be able to get a grant if you pass all examination well.

4. The role of new energy sources, such as nuclear power and new methods of conversion of thermal, chemical and nuclear energy into electrical power, are to grow in the future.

VI. Прочитайте і усно перекладіть українською мовою 2-й абзац тексту. Перепишіть і письмово перекладіть 1-й і 3-й абзаци. тексту.

### Outstanding People of Ukraine

There are a lot of outstanding people famous for their contribution to our science. They are scientists, musicians, experienced and skilled workers of medicine and education.

Volodymyr Vernadsky, for instance, was the first president of the Ukrainian Academy of sciences. He was born in 1863. Volodymyr Vernadsky was the first in our country to introduce the spectral method for the solution of geochemical problems. He developed special study to the composition of the Earth's crust, the ocean and the atmosphere. Volodymyr Vernadsky was the founder of the modern doctrine of the biosphere. His finding greatly contributed to the world science.

Yevhen Paton was another great scientist whom we take pride in. He was born in 1870 in the family of a Russian ambassador and received his education abroad. In 1904 Paton moved to Kyiv to work and teach at the Kyiv Politechnical Institute. He was a professor and the head of the chair for nearly thirty years at the Institute. Yevhen Paton was the first to apply electro-welding in bridge construction. Under his guidance a welded bridge was build across the Dnieper river in Kyiv. It is now known as the Paton bridge. It is 1,5 km long. In 1930 Paton organized the Research Institute of Electro-welding at the Academy of Sciences.

VII. Дайте відповіді на запитання:

1. What discoveries of Volodymyr Vernadsky do you know?
2. Who was the first to apply electro-welding in bridge construction?

3. When did Yevhen Paton organize the Research Institute of electro-welding at the academy of Sciences?

### Варіант 3

I. Перепишіть такі речення; підкресліть в кожному з них дієслово-присудок, визначте його видо-часову форму і поставте в інфінітиві. Перекладіть речення українською мовою.

1. Chemists and biologists have found that the way the brain works is far complicated that they had thought.
2. English mathematician Charles Babbage designed the first modern computer in the 1830's.
3. If you go to the machine-building plant you will see the process of producing equipment.
4. I don't speak any foreign languages, but I am learning English now.

II. Поставте дієслово в дужках у потрібному часі і перекладіть речення українською мовою.

1. A new state Ukraine (to appear) on the world of political map in 1991.
2. I (to finish) my scientific work by Monday.
3. The group of experts (to work) at the problems the whole year.

III. Перепишіть речення, перекладіть їх українською мовою, звертаючи увагу на різні значення дієслів to be, to have, to do, та вкажіть їх функцію.

1. You have to come to the language laboratory of the University to work at your pronunciation.
2. This material does not possess elastic properties.
3. The engineers are to study the problem of using cosmic rays.

IV. Поставте загальне запитання до речення та два запитання до підкреслених слів.

T. Shevchenko is the greatest poet of the Ukrainian nation.



V. Перепишіть такі речення; підкресліть в кожному з них модальне дієслово чи його еквівалент. Перекладіть речення українською мовою.

1. Energy can exist in many forms and each form can be transformed into the other.
2. Every engineer must know a foreign language.
3. Man still has a lot to learn about the most powerful and complex part of his body – the brain.
4. To measure the vast distances between different planets scientists have to use special instruments.

VI. Прочитайте і усно перекладіть українською мовою 1-й, 4-й абзаци тексту. Перепишіть і письмово перекладіть 2-й і 3-й абзаци тексту.

#### Inventors and Their Inventions

Samuel Colt was an American. He lived in the 19<sup>th</sup> century. In 1836 he designed and patented a pistol. It was a pistol with a revolving barrel that could fire 6 bullets one after the other. It was the first pistol of its kind. Later there came many other pistols with 6 bullets.

Rudolf Diesel was a German engineer. He was born in 1858 and died in 1913. In 1897 he invented a new internal combustion engine. This engine is known as a diesel and it began a transport revolution in cars, lorries, trains and ships. The main advantage of diesels is that they run on rather cheap fuel.

Samuel Finley Morse was born in 1791. He died in 1872. He was a portrait painter. Then he became the inventor. For 12 years he tried to perfect the telegraph and he was a success. Later he invented the telegraphic dot-and-dash alphabet. Now it is known as Morse code. Morse code was not only one in America of that time. There were some others. But now we use Morse code all over the world.

Charles Makintosh lived from 1766 to 1843. He lived in Scotland and was a chemist by profession. He worked in a textile industry. In 1823 he developed a rubber solution. This rubber solution was used for raincoat production. Raincoats with this rubber solution didn't allow water to penetrate. These raincoats were called makintoshes. Now people all over the world use them in spring and in autumn.

VII. Дайте відповіді на запитання:

1. Who and when designed a pistol?
2. What began a transport revolution in cars?
3. What is known as Morse code?

#### **Варіант 4**

I. Перепишіть такі речення; підкресліть в кожному з них дієслово-присудок, визначте його вищо-часову форму і поставте в інфінітиві. Перекладіть речення українською мовою.

1. The Constitution establishes the country's political system, assures rights, freedoms and duties of citizens and is the basis for its law.
2. One British mathematician called Lobachevsky "Copernicus of Geometry".
3. This time tomorrow they will be sitting in the train on their way to Chicago.
4. Treatment of materials was one of the first areas where lasers have not only replaced the old equipment, but have given rise to fundamentally new technological methods.

II. Поставте дієслово в дужках у потрібному часі і перекладіть речення українською мовою.

1. In 1930 Paton (to organize) the Research Institute of Electro-welding at the Academy of Sciences.
2. He (to be) at the laboratory since eleven o'clock.

3. I (to talk) over the telephone when my brother brought me the letter.

III. Перепишіть речення, перекладіть їх українською мовою, звертаючи увагу на різні значення дієслів to be, to have, to do, та вкажіть їх функцію.

1. His task is to rise his skill.

2. Man had to learn to obtain electric power directly from the Sun.

3. Specialists do not use solar cells in industry as they are too expensive.

IV. Поставте загальне запитання до речення та два запитання до підкреслених слів.

The engineering industry plays a key role in the modernization programme.

V. Перепишіть такі речення; підкресліть в кожному з них модальне дієслово чи його еквівалент. Перекладіть речення українською мовою.

1. We shall be able to hear Mr. Brown's lecture on British art next Tuesday.

2. Kurchatov always stressed that atomic energy should serve peace.

3. You can use a computer to write a letter, design a house, draw a picture or exchange messages with someone around the world.

4. These new materials had to withstand much higher temperatures than metals.

VI. Прочитайте і усно перекладіть українською мовою 2-й абзац тексту. Перепишіть і письмово перекладіть 1-й і 3-й абзаци тексту

### Inventors and Their Inventions

Charles Rolls was born in 1881 in Great Britain. He died in 1910. He was an aristocrat and businessman. He was especially interested in cars. Once he met another enthusiast of cars Henry Royce. Henry Royce was a famous car engineer. They decided to design the most comfortable and reliable car. At the

beginning of the 20<sup>th</sup> century it seemed to be a fantasy. But they worked hard and at last in 1907 they created the world-famous Rolls-Royce car. It was so comfortable and reliable that one of the models of Rolls-Royce cars "Silver Ghost" hadn't changed greatly for 20 years since 1907.

Gotlif Daimler and Charles Benz were two inventors. They lived in Germany. They were both interested in car production. At the end of the 19<sup>th</sup> century each of them designed a car. At the same time they organized two independent firms to produce them.

All the cars produced by the firm of Daimler were called "Mercedes". Mercedes was a daughter's name of one of the stockholders of the firm. This man saved the firm of Daimler from the financial crisis at the beginning of the 20<sup>th</sup> century. But after the World War I the firm Daimler met financial difficulties again. This time it had to join the firm of Benz. Since that time all the cars produced by the firm "Daimler-Benz" have been called "Mercedes-Benz".

VII. Дайте відповіді на запитання:

1. What did Charles Rolls and Henry Royce decide to design?
2. What were Gotlif Daimler and Charles Benz interested in?
3. When had the firm Daimler to join the firm of Benz?

### Варіант 5

I. Перепишіть такі речення; підкресліть в кожному з них дієслово-присудок, визначте його вищо-часову форму і поставте в інфінітиві. Перекладіть речення українською мовою.

1. When we speak of automatic control we can say that our country uses it in many in industrial enterprises.
2. Scientists of Ukraine enriched the world science with important discoveries and inventions.

3. Our science has solved a lot of important problems to make our life better.
4. Peter has finished the first of his thesis and now is writing the second one.

II. Поставте дієслово в дужках у потрібному часі і перекладіть речення українською мовою.

1. They (to make) their experiments before the professor comes.
2. I (to try) to do my best to put into practice all the knowledge and skills I (to obtain) during the years of my studying at the University.
3. Man (to differ) most from all the other animal in his ability to learn and use language but we still do not know exactly how this is done.

III. Перепишіть речення, перекладіть їх українською мовою, звертаючи увагу на різні значення дієслів to be, to have, to do, та вкажіть їх функцію.

1. New types of plastics had to be obtained for space technology.
2. Ukraine has rich deposits of iron, manganese and rare metals, coal, natural gas, oil, graphite and other mineral resources.
3. There are very good prospects of cooperation between Ukraine, the USA, Great Britain and other countries.

IV. Поставте загальне запитання до речення та два запитання до підкреслених слів.

All branches of industry are important for the development of the country.

V. Перепишіть такі речення; підкресліть в кожному з них модальне дієслово чи його еквівалент. Перекладіть речення українською мовою.

1. The application of digital computers should include all forms of automatic control in science and industry.
2. Chemical means had to be used for the separation of compounds into their elements.

3. Scientists and engineers can make a real contribution to engineering education or academic research.
4. We may say force and motion always go together, one as a cause, the other as a result.

VI. Прочитайте і усно перекладіть українською мовою 2-й, 3-й, 4-й абзаци тексту. Перепишіть і письмово перекладіть 1-й і 5-й абзаци тексту.

### Ukrainians in Space Engineering

Speaking about the development of rocket and space engineering the world usually connects this with the name of Academician Serhiy Korolyov, an outstanding creator of the practical space engineering. Many people regard him as a representative of the Russian people. However, Serhiy Korolyov is a Ukrainian.

Serhiy Korolyov, who was born in city of Zhytomyr, is one of the most outstanding Ukrainians whose name will go down in history of the world civilization. But his titanic deeds were possible owing to accurate and well coordinated work of numerous organizations. And some of them were headed by our compatriots.

Mykhailo Yangel, Volodymyr Chelomey, Valentyn Hlushko here should be mentioned. Mykhailo Yangel created a new direction and his own school in developing rocket and space equipment. He worked in Dnipropetrovsk at "Pivdenmash". To honour the name of Mykhailo Yangel a medal was created which is the award for achievements in space engineering. His name was given to a street in Kyiv too.

Valentyn Hlushko was a general designer of rockets. Volodymyr Chelomey headed the creation of the carrier rocket.

Speaking about Ukrainians, contribution into creation of rocket and space technology we should remember about scientists basis they used. This basis was created, in part, as early as in the 19<sup>th</sup> century by our compatriots. They were

Olexander Zasyadko (1779-1834), Konstyantyn Konstyantynov (born in 1817 or 1818), Mykola Kybalchych, who died at the age of 28, Kostyantyn Tsiolkovsky, who came from the glorious Cossack family of Nalyvaiko, Yuri Kondratyuk, who made calculations for the manned flight to the Moon. Americans used these calculations in 1969 when they sent their astronauts to this satellite.

VII. Дайте відповіді на запитання:

1. Who is an outstanding creator of the practical space engineering?
2. What did Michailo Yangel create?
3. Who was a general designer of rockets?

## Контрольна робота №3

Для правильного виконання роботи №3 необхідно засвоїти такі розділи курсу англійської мови:

1. Граматичні функції та значення слів it, that, one.
2. Пасивний стан (The Passive Voice) вищо-часових форм Indefinite, Continuous, Perfect.
3. Функції дієслів to be, to have, to do.
4. Функції дієприкметників Participle I, Participle II, Perfect Participle.
5. Особливості перекладу дієприкметникових зворотів (The Nominative Absolute Participle Construction).

### Зразок виконання 1 (до впр. I).

We were asked to come as early as possible.	were asked – Past Indefinite Passive від інфінітива to ask.
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### Зразок виконання 2 (до впр. II).

- |  |  |
|--|--|
| 1. One must know grammar rules                             | Треба знати граматичні правила.              |
| 2. This book is more interesting than that one.            | Ця книга цікавіша за ту (книгу).             |
| 3. It is hard to learn a foreign language in a short time. | Важко вивчити іноземну мову за короткий час. |

### Зразок виконання 3 (до впр. IV).

The student translating this article used a dictionary.	Студент, який перекладав цю статтю, користувався словником. translating – Participle I.
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## **Варіант I**

1. Перепишіть наступні речення та визначіть в кожному з них вищо-часову форму і стан дієслова-присудка ( див. зразок I ). Перекладіть речення українською мовою.

1. Great amount of water vapour are contained in snow.
2. His lecture could be illustrated with diagrams and models.
3. The solar devices which have been built in many countries convert the sun's energy into other forms of energy that man consumes with profit.



4. The question was being discussed when I entered the room.
5. According to the law of energy conservation, this energy may be transformed from one form to another, but may not be destroyed or created.

II. Перепишіть подані нижче речення і перекладіть їх українською мовою, звертаючи увагу на різні значення слів it, that, one ( див. зразок 2.)

1. One should be careful then crossing the street.
2. This wareless set is better than that one.
3. The studies of the Venus's atmosphere have shown that it does not contain water vapour and oxygen, but it has a high carbonic content.
4. It is known that this medical problem has already been solved.
5. Water is one of the few substances that man knows and use in all of its three forms.

III. Перепишіть подані нижче речення і перекладіть їх українською мовою, звертаючи увагу на різні значення дієслів to be, to have, to do.

1. I have to translate this text, but I have no a dictionary.
2. He was the only child in his family.
3. The examination paper had to contain not less than ten grammar exercises.
4. When a structure or a machine is to be built, suitable materials are to be chosen for the parts.
5. This article does not give any information about the subject you are interested in.

IV. Перепишіть подані нижче речення. Підкресліть Participle I, Participle II, Perfect Participle та визначіть їх форму. Перекладіть речення українською мовою, звертаючи увагу на різні функції дієприкметників ( див. зразок 3 ).

1. She is looking at the women sitting at the window.
2. This firm is interested in purchase of automobiles produced by our plant.
3. When placed in a strong magnatic field iron becomes magnetized.
4. The temperature used depended upon the substances entering the reaction.
5. Vast sums being spent on education in our country, our state is able to provide qualified specialists for all branches of industry.

V. Перепишіть і письмово перекладіть текст.

### What can computers do?

From the first electronic digital computers of the forties to to-day's versatile<sup>1</sup> computers and most up-to-date microcomputers, very little has changed as far as basic computer operations is concerned. In the last thirty years, vast improvements in the size, speed and capabilities of computers have taken place. But to-day digital computers still use same logical operations as their predecessors. There are many basic concepts that can be applied to all types of computers, including microcomputers.

For the most part, human beings can do whatever computers can do, but computers can do it with much greater speed and accuracy, though computers perform all their calculations and operations one step at a time. A computer is faster and more accurate than people, but unlike most people it must be given a complete set of instructions<sup>2</sup> that tell exactly what to do at each step of its operation. This set of instructions, called a programme is prepared by one or more person for each job a computer is to do. These programmes are placed in the computer's memory unit<sup>3</sup> in binary-coded form<sup>4</sup>, with each instructions having unique code.

Computers are often used in applications where the results of their calculations are required immediately to be used in controlling a process. These are called real-time applications, they are often found in industrial process control in industries such as paper mills, oil refineries, chemical plants, and many others. The measuring systems send their signals to the computer which processes them and responds with appropriate control signals to be sent back to the process<sup>5</sup>.

Computers in present use range considerably: from tiny things to big ones. The microcomputer is the smallest and the newest member of the computer family. It usually consists of several integrated circuit chips<sup>6</sup>, including a microprocessor chip, memory chips, and input/output interface chip<sup>7</sup> which are a result of tremendous advances in large-scale integration<sup>8</sup>.

#### Vocabulary Notes

1. versatile – універсальний;
2. set of instructions – набір інструкцій;
3. memory unit – блок пам'яті;
4. binary-coded form - форма двійкового кодування;
5. control signals to be sent back to the process – контрольні сигнали, які потрібно повернути на обробку;
6. integrated circuit chips – чіп інтегральної схеми;

7. input/output interface chip – чіп інтерфейсу вводу/виводу;
8. large-scale integration – велика інтегральна схема (BIC).

VI. Знайдіть і підкресліть в тексті речення з дієсловами “to be”, “to have”, “to do” та визначіть їх функції.

## Варіант 2

I. Перепишіть подані нижче речення та визначіть в кожному з них вищо-часову форму і стан дієслова-присудка ( див. зразок 1 ). Перекладіть речення українською мовою.

1. Our laboratory will soon be provided with the most up-to-date equipment.
2. These books are solved everywhere.
3. The letter has just been signed by the director.
4. The event had been reported by the newspaper, before they arrived home.
5. Automatic mines are being designed, where robots will work rich coal deposits at a depth of three to five kilometers where human beings are unable to operate.

II. Перепишіть подані нижче речення і перекладіть їх українською мовою, звертаючи увагу на різні значення слів it, that, one ( див. зразок 2. )

1. As my watch was broken, I had to buy a new one.
2. This machine will be more effective than that of an old design.
3. In London one must get used to the left-side traffic.
4. It is intended to raise the capacity of this machine through various technical improvements.
5. As one must expect the first metals that were used by primitive man were those that are found free in nature in large quantities.

III. Перепишіть подані нижче речення і перекладіть їх українською мовою, звертаючи увагу на різні значення дієслів to be, to have, to do.

1. I haven't heard from him since he left the country.
2. He has to improve his English.
3. He didn't pay much attention to his health.

4. The gas molecules do have attraction for one another although the attraction is very small.

5. All the data available are fed into the computer in order to be processed.

IV. Перепишіть подані нижче речення. Підкресліть Participle I, Participle II, Perfect Participle та визначіть їх форму. Перекладіть речення українською мовою, звертаючи увагу на різні функції дієприкметників ( див. зразок 3 ).

1. Being very tired, we refused to go for a walk.

2. Having lived a few years in England, he knew English properly.

3. We have received the contract, signed by the representative of the firm.

4. Being placed in a liquid, a body sink untill it has displaced its own weight of the liquid

5. Natural radioactivity having been discovered, many scientists became interested in it.

V. Перепишіть і письмово перекладіть текст.

### **Electronic brain.**

Computers represent a completely new branch of science, the first of them having appeared more than half a century ago. Although still now, these machines have already brought about<sup>1</sup> a real revolution in science, technology, statistics and automatic control.

The reason for this lies in the fact that a mathematical formula can be found for almost all scientific and technical problems. They can be solved without a computer but it would require millions of arithmetical operations. No wonder that many problems of exceptional importance remained unsolved for a long time, the volume of the calculations required being above human possibilities.

A high speed electronic computer can carry out several thousand arithmetical operations in one second. A calculation, which would have taken several years of intense human work in the past, is now done in a few minutes or hours.

The principal of this wonderful machine lies in counting electric impulses<sup>2</sup>. Numbers are represented as a sequence of such impulses<sup>3</sup>, and a radio-technical scheme counts them carrying out addition, subtraction, multiplication and division, all higher mathematical calculations being reduced to these for operations.

If we introduce into the scheme first one number and then another, the result will be yield<sup>4</sup> the sum of these two numbers. Subtraction is reduced of the addition of negative numbers. Multiplication is done by repeated additions the necessary number of times, a division – by repeated subtraction.

Electronic machines work according to a program prepared in advance which determines the sequence of operations. They have very efficient electronic “memory” which stores the initial data<sup>5</sup>, the intermediate<sup>6</sup> numbers and final results as well as the working commands given to the machine.

### Vocabulary Notes

1. to bring about – викликати;
2. electric impulse – електричний імпульс;
3. a sequence of (such) impulses – послідовність таких імпульсів;
4. yield [ji:ld] – давати, випускати;
5. initial data – вихідні дані;
6. intermediate – проміжний результат.

VI. Знайдіть і підкресліть в тексті речення з дієприкметниками.

### **Варіант 3**

I. Перепишіть подані нижче речення та визначіть в кожному з них видо-часову форму і стан дієслова – присудка (див. зразок 1). Перекладіть речення українською мовою.

1. The machine can be delivered by the manufactures at the end of the month.
2. They are offered the goods at a Low price.
3. The new fully automated plant was much spoken about.
4. The rapidly growing application of automatic control in industry is often refered to.
5. A new liquid zink anti-corrosive composition for use on iron and steel surfaces has been developed.

II. Перепишіть подані нижче речення і перекладіть їх українською мовою, звертаючи увагу на різні значення слів it, that, one (див. зразок 2).

1. This book is mine, and that one is yours.

2. My room is very light, that of my brother is not so light but it is large.
3. One can see an increased use of computers at present.
4. That water boils when sufficiently heated is well known to everybody.
5. It is impossible to live without water. It is water that is the most common thing in our life.

III. Перепишіть подані нижче речення і перекладіть їх українською мовою, звертаючи увагу на різні значення дієслів to be, to have, to do.

1. On June that firm was carrying on negotiations for the purchase of wheat.
2. I have no hope of seeing him soon.
3. Hi has to improve his English for his future work.
4. Solids do not flow as do liquids, and they do not expand and occupy place so do gases.
5. One of the great problems of mechanical engineer is to eliminate friction in the machine.

IV. Перепишіть подані нижче речення. Підкресліть Participle I, Participle II або Perfect Participle та визначити їх форму. Перекладіть речення українською мовою, звертаючи увагу на різні функції дієприкметників (див. зразок 3).

1. All objects surrounding us in nature are composed of different substances.
2. The price mentioned was five per cent lower than that which had been paid under the previous contract.
3. Temperature remaining the same, the volume of a gas varies with the pressure.
4. Having passed through parallel wires, the electron streams join each other.
5. Using a beam of electrons in place of the usual beam of light scientists built a microscope with great magnifying power.

V. Перепишіть і письмово перекладіть текст.

### **Mathematics – The language of science**

Human language is capable of precise statements<sup>1</sup> because it is a system of symbols. But common language is a product of social devel-

opment<sup>2</sup>, customs and traditions, and even by the most of careful choice of words the meaning concealed in them may influence our reasoning. Algebra, the language of mathematics, consist mostly of signs and symbols and carefully and purposefully designed. It is precise, concise and universal, i.e. one and the same throughout civilized world<sup>3</sup>, through the people in each country translate it into their own spoken language<sup>4</sup>.

Algebra in the broad sense of the term deals with operations upon symbolic forms. In this capacity<sup>5</sup> it not only permeates all mathematics, but pervades practically all sciences including formal logic, philosophy, and even linguistics, poetry and music. In our scientific age there is a general belief that all science as it grows to perfection become mathematical in its ideas.

It is generally true that algebra in its development has passed successfully through three stages: verbal, abbreviated and symbolic. Verbal algebra is characterized by the complete absense symbols, except, of course, that the words themselves are used in their symbolic sense. To this day verbal algebra is used in such a statement as "the sum is independent of the order of the terms", witch in symbols designated by  $a+b=b+a$ .

Abbreviated algebra, of witch the Egyptian is a typical example, is a further development of verbal one. Certain words of frequent use are gradually abbreviated. The history of the symbols "+" and "-" may illustrate the point. In medieval Europe the letter was denoted by the full word "minus", then by the first letter "m" duly superscribed. Eventually the letter itself was dropped, leaving the superscript only. The sign "plus" has passed through a similar metamorphosis. The abbreviation has become a symbol.

#### Vocabulary Notes

1. ...is capable of (precise) statement – здатний (точно) передавати висловлювання;
2. a product of social development – продукт суспільного розвитку;
3. throughout the (civilized) world – у всьому (цивілізованому) світі;
4. spoken language – розмовна мова;
5. in this capacity – в цій якості.

VI. Знайдіть і підкресліть в тексті речення, в яких дієслова-присудки використовуються в пасивному стані.

## Варіант 4

I. Перепишіть подані нижче речення та визначіть в кожному з них вищо-часову форму і стан дієслова – присудка (див. зразок 1). Перекладіть речення українською мовою.

1. The future of astronautics will be a logical continuation of what has already been achieved.

2. We are informed that many scientists are working at the problem of radioactivity.

3. The particles called molecules cannot be divided without changing of nature of substance.

4. Experience indicates that direct energy converters should be given special attention.

5. This new block of flats was being built at the time of our holidays.

II. Перепишіть подані нижче речення і перекладіть їх українською мовою, звертаючи увагу на різні значення слів it, that, one (див. зразок 2).

1. I liked this story very much, but I disliked that one you told us yesterday.

2. One sees other people's faults sooner than one's own.

3. This device is very necessary for our laboratory but it is too expensive.

4. The density of the liquid air is only a little less than that of water.

5. It is in industrial technology and scientific development that electronic tools made a great contribution.

III. Перепишіть подані нижче речення і перекладіть їх українською мовою, звертаючи увагу на різні значення дієслів to be, to have, to do.

1. This article does not give any information about the subject you are interested in.

2. The moving parts of the machine are made of steel.

3. He had a thirst of knowledge, and soon understood that he could not become a qualified worker without a specialized study.

4. She came from a poor family and had to choose the cheapest place when she went shopping.

5. Don't have anything to do with him.



IV. Перепишіть подані нижче речення. Підкресліть Participle I, Participle II або Perfect Participle та визначіть їх форму. Перекладіть речення українською мовою, звертаючи увагу на різні функції дієприкметників (див. зразок 3).

1. Having lost the key, he couldn't enter the room.
2. The goods passed through a customs examinations were placed in a warehouse.
3. Entering the room he saw several friends waiting for him.
4. Atmospheric air being put under increased pressure, its volume is reduced according to Boyle's Law.
5. The substance formed possessed important properties.

V. Перепишіть і письмово перекладіть текст.

### **Technical and social aspects of economic management.**

Management, or control, is the part of many processes and phenomena determining the outlook<sup>1</sup> of the contemporary world.

Men have learned to control highly complex machine tools, cars, planes and spaceships. Probing into<sup>2</sup> the secrets of living matter, they begin to control the development of plants and animals.

One should distinguish two aspects in management: technical and social.

In the technical sense, management has to do with machines, instruments, mechanical system, etc. This calls for<sup>3</sup> professional knowledge and special skills. Strictly speaking, this kind of management remains outside the sphere of economics. It is devoid of<sup>4</sup> social elements. The rules of driving a car or operating a milling machine, for instance, are mainly the same in our country, in the USA, in France and other countries.

Social life, economic life included, is the most complex area of management. It lends itself to regulation with great difficulty for the object of management in this case are not things but men and their social relations.

Economic as a totality<sup>6</sup> of relations between men in the realm<sup>7</sup> of production, distribution, exchange and consumption of goods includes, of course, the movement of material values, i.e., of things. But behind the relations to things stand real relationships between people, the motives and aim of their activity.

To manage the economy means foresee the to future and to influence the actions of people, and to orientate them in definite direction, towards working for a set goal. This constitutes the socio – economic aspect of management.

### Vocabulary Notes

1. outlook – кругозір, світогляд;
2. to probe (into) – проникати (в);
3. to call for – потребувати;
4. devoid of – позбавлений;
5. milling machine – фрезерний верстат;
6. totality – вся сума повністю;
7. realm – область.

VI. Знайдіть і підкресліть в тексті речення з дієсловами “to have”, “to be” та визначіть їх функції.

### **Варіант 5**

I. Перепишіть подані нижче речення та визначіть в кожному з них видо-часову форму і стан дієслова-присудка ( див. зразок 1 ). Перекладіть речення українською мовою.

1. We have just been demonstrated the results of this interesting experiment.
2. Don't enter the room! A student is being examined now.
3. They are payed twice a month.
4. The changing of one form of energy into another is called a transformation of energy.
5. Different kinds of automatic controllers were dealtwith in some detail in this article.

II. Перепишіть наступні речення і перекладіть їх українською мовою, звертаючи увагу на різні значення слів it, that, one ( див. зразок 2 ).

1. One should take into consideration that this question is very difficult.
2. Now one can speak by telephone over any distance.
3. It is necessary to give the equipment frequent inspections, keep it well-cleaned and repaired.
4. If one were to examine the stars on a clear moonless night, he would soon discover that not all the visibler stars are at the same degree of brightness.
5. The physical form of an element has no connection with that of the compound.

III. Перепишіть наступні речення і перекладіть їх українською мовою, звертаючи увагу на різні значення дієслів to be, to have, to do.

1. Learning the poems by heart is an excellent practice for the memory.
2. He had the letter typed.
3. According to the contract the goods are to arrive at the port at the end of the week.
4. Many scientists had to leave the country because they were given no help by the government.
5. I shall not do what you want unless you do what I asked you to.

IV. Перепишіть подані нижче речення. Підкресліть Participle I, Participle II, Perfect Participle та визначіть їх форму. Перекладіть речення українською мовою, звертаючи увагу на різні функції дієприкметників ( див. зразок 3 ).

1. One of the most noticeable features of air transport development is the big increase in the quantities of freight carried.
2. Knowing nothing of the dangers we continued our way.
3. Being very tired, I decided to stay at home.
4. Having collected all the material he needed, he started to write the article.
5. Everything being ready, we began our experiment.
6. The question being too difficult, no one could answer it.

V. Перепишіть і письмово перекладіть текст.

## Television

Television provides a means of viewing the images of objects that are out of sight<sup>1</sup>, i.e. far removed from the observer.

The images of moving or stationary objects are converted into electric signals and these signals are transmitted by a television transmitter. The television receiver (TV-set) picks up these signals and performs the reverse conversion<sup>2</sup> of electrical signals into the image displayed on the screen of a cathode ray tube ( CRT )<sup>3</sup>. Television signals can be transmitted by means of transmission lines as well as by radio.

The transmission of video signals is more complicated than the transmission of audio signals by means of radiowaves. There is a difference between the perception<sup>4</sup> of audio signals and video signals by the human being. No matter how complex the audio signal is, the human ear interprets it as the sum total<sup>5</sup> of all its components, i.e. as a signal sound.

The human eye, on the other hand, can perceive <sup>6</sup> many different objects at one and the same time. Modern television techniques have taken all the peculiarities of human sight into consideration.

The iconoscope camera tube <sup>7</sup> was developed as far back as the early thirties. Later, other types of camera tubes came into use, such as the supericonoscope which is commonly known as the image iconoscope <sup>8</sup>. The tube in the television receiver, that provides picture display, is called the picture tube of kinescope.

The image of an object is projected onto the camera tube. The electron beam of this tube scans the image point by point. The beam scanning is controlled by a scan unit <sup>9</sup>. At the tube output, pulses corresponding to the image are generated. These signals are usually termed the picture signals.

These pulses are amplified and used to drive the television transmitter <sup>10</sup>, where they modulate the transmitter carrier <sup>11</sup>. Transmission is usually achieved by amplitude-modulation techniques.

#### Vocabulary notes.

1. out of sight – поза межами видимості ;
2. reverse conversion – обернене перетворення;
3. cathode ray tube ( CRT ) – електронно-променева трубка ;
4. perception – сприйняття, відчуття ;
5. sum total - сукупність ;
6. to perceive – відчувати, сприймати ;
7. (iconoscope) camera tube – передавальна телевізійна трубка ;
8. image iconoscope - іконоскоп з переносом зображення, суперіконоскоп ;
9. scan unit – прилад сканування;
10. television transmitter – телевізійний передавач ;
11. transmitter carrier – несуча (частота).

VI. Знайдіть і підкресліть в тексті речення, в яких дієслова-присудки вживаються в пасивному стані.

## Контрольна робота №4

Щоб правильно виконати роботу №4, необхідно засвоїти такі розділи курсу англійської мови за рекомендованим підручником:

1. Прості та складні форми інфінітиву. Переклад інфінітиву у різних функціях.
2. Об'єктний та суб'єктний інфінітивні звороти.
3. Умовні речення ( should, would).

Зразок виконання 1 (до впр.1).

1. The device to be bought must be checked beforehand. Пристрій, який потрібно купити, слід перевірити заздалегідь.
2. To measure volumes we must know the dimensions of a body. Щоб виміряти об'єми, ми повинні знати розміри тіла.
3. He is glad to have been invited to take part in the conference. Він радий, що його запросили взяти участь у конференції.

Зразок виконання 2 (до впр.2).

1. We want the new car to be produced by February. Ми хочемо, щоб новий автомобіль був випущений до лютого.
2. The computer is known to perform complicated calculations. Відомо, що комп'ютер виконує складні обчислення.
3. The beta particles proved to be identical with the electrons. Бета-частинки виявилися ідентичними електронам.

Зразок виконання 3 (до впр.3).

1. If the installation is put into operation on time, the economic effect will be greater. Якщо установку ввести в експлуатацію своєчасно, зросте економічний ефект.
2. If the system had been perfected, we should have applied it for new calculations. Якщо б систему вдосконалили, ми б застосували її для нових розрахунків.

3. He would help you if he were here Він би допоміг вам, якби він був тут  
now. зараз.
4. It would be impossible to build spaceships without new materials and alloys. Було б неможливо побудувати космічні кораблі без нових матеріалів та сплавів.

### Варіант 1

- I. Перепишіть та письмово перекладіть українською мовою подані нижче речення; звертайте увагу на функцію інфінітива.
1. Our idea was to design a new device for automatic control.
  2. To increase the productivity of labour one must use the methods we have just described.
  3. To design new buildings is the work of an architect.
  4. He was happy to have worked with this famous scientist.
  5. The problem to be solved is of great importance for our research.
- II. Перепишіть та письмово перекладіть українською мовою подані нижче речення. Пам'ятайте, що суб'єктний та об'єктний інфінітивні звороти відповідають підрядним реченням.
1. The sun and stars are proved to be able to produce great quantities of energy by means of certain nuclear reactions.
  2. We know the wave theory of light to be first proposed by the English physicist Robert Hooke in 1665.
  3. The properties of the new material are known to be determined next month.
  4. The crew is reported to have carried out a great deal of scientific experiments.
  5. Rutherford suggested the positive charge of electricity to be concentrated in the nucleus of the atom.

III. Перепишіть та письмово перекладіть українською мовою подані нижче складні речення. Зверніть увагу на переклад умовних речень.

1. If the service life of the instrument had been prolonged, the economic effect would have been increased many times.
2. Automation will not be used by production if it does not bring profit.
3. It would be impossible to raise the output without installing the new equipment.
4. We should certainly inform you of the opening of the session if you gave us your address.

IV. Перепишіть та письмово перекладіть текст.

#### Cybernetics applied to space.

Cybernetics is the study of control and communication mechanisms in machines and animals. It covers all automatic control devices, selectors, relays, computers and robots, and also the corresponding physiological mechanisms such as those of automatic balance and reflex action. The application of cybernetics to electronic computers is known to be leading to a better understanding of the working of the brain, and conversely a deeper knowledge of the "human mechanism" is expected to lead to the development of machines of almost human capability. It is known that Russian scientists have been making a close study of the implications of this work in astronautics and the results may be applied to the problems of spacecraft control and the remote analysis of the planets.

Cybernetics has brought about a revolution in the design of machines. By revealing the profound analogy between the work of the computer and the work of the control system of the living organism, cybernetics has brought a new approach to investigations in biology and medicine.

Cybernetics has been of great assistance in the pre-flight training of cosmonauts. Besides making it possible to design various automatic simulators, the science has given experts in space medicine methods for the exact analysis

of all the physiological processes taking place in the human body under diverse conditions. The results of this analysis have made it possible to draw up a list of requirements which must be met by the spaceship, and it has also been possible to select the people best fitted to travel into space.

It is quite obvious that much greater accuracy is required in controlling the course of a rocket flight to other planets than that required for launching an artificial Earth satellite.

V. Знайдіть та підкресліть у тексті речення з суб'єктивним інфінітивним зворотом.

## Варіант 2

I. Перепишіть та письмово перекладіть українською мовою подані нижче речення; звертайте увагу на функцію інфінітива.

1. To operate this computer one must have special knowledge.
2. To land a high speed aircraft is a delicate operation even when visibility is good.
3. There are many things to be taken into consideration when designing a spaceship.
4. A thermometer is a device to show the temperature of the air.
5. The new method to be introduced at our plant will increase labour productivity.

II. Перепишіть та письмово перекладіть українською мовою подані нижче речення. Пам'ятайте, що суб'єктивний та об'єктивний інфінітивні звороти відповідають підрядним реченням.

1. Conduction is known to be a process by which heat is transmitted through a substance by molecular activity.
2. We expect the scientific and technological progress to increase the intensification of production.
3. Reconstruction of those plant was supposed to take 4 years.
4. We believe him to be carrying out an interesting experiment.



5. Stars appear to be made of the elements that have been found in our Sun.

III. Перепишіть та письмово перекладіть українською мовою подані нижче складні речення. Зверніть увагу на переклад умовних речень.

1. If the computer's electronic memory had recorded all the operator's commands, the picture of deviation from the required parameters would have been produced.
2. If biological experiments are continued, the problem of developing the technology for growing plants in space conditions will be solved.
3. It would be impossible to protect metal from corrosion without films.
4. He would willingly accept the post of lecturer, if he were offered it.

IV. Перепишіть та письмово перекладіть текст.

#### Automation and labour.

It is a matter of common knowledge nowadays that the principal direction of the present-day scientific and technological progress consists in the revolution of mechanized forms of work through the automation of production.

Quite recently, only some decades ago, even the words "automation", "automatic control" seldom appeared on the pages of the press or scientific publications. In the early forties the position radically changes. Soon automatic control was recognized throughout the world to be a new, progressive, independent branch of science and engineering. Today one cannot imagine technical progress without automation.

Automation may be defined as "the accomplishment of a job by an integrated mechanism with a minimum assistance of any kind". In fact, automation is the integration of four independent compounds which have been linked together into a single process. These integral parts of automation are: transfer machining, automatic assembly, communication engineering and control engineering.

Our country has many thousands of comprehensively mechanized and

automated enterprises and workshops. The mechanized and automated production lines replace or lighten the work of a tremendous number of workers. All the hydropower plants in the country have been completely automated. Annually hundreds of automated control systems go into operation at industrial, agricultural communication, trade and transport enterprises and organizations.

Modern means of automation make it possible to link up in a single complex the whole technological chain: machine designing, equipment, control of a technological process, control of the whole enterprise. This has been made possible due to the extensive development and mass production of new types of computer technology, from large computers to microprocessors.

Automated systems, called flexible manufacturing systems (FMS) are regarded by many experts as being the best way to meet the demands of industry. They consider the FMS to be the future of the automated factory, or at least the minimally manned factory.

The application of FMS requires advanced technical know-how.

V. Знайдіть та підкресліть у тексті речення з об'єктним та суб'єктивним інфінітивними зворотами.

### **Варіант 3**

- I. Перепишіть та письмово перекладіть українською мовою подані нижче речення; звертайте увагу на функцію інфінітива.
1. To answer this question, we must study the problem in detail.
  2. This metal is too brittle to be used in our case.
  3. To move from one astronomic body to another means to overcome gravitational forces.
  4. Molecules are too small to be seen with the most powerful microscope.
  5. All the changes of temperature and changes of state to be discussed are shown by a graph in Fig. 2.

II. Перепишіть та письмово перекладіть українською мовою подані нижче речення. Пам'ятайте, що суб'єктний та об'єктний інфінітивні звороти відповідають підрядним реченням.

1. The importance of chemistry for all sciences is known to be growing rapidly.
2. We expect this young scientist's work to lead to a new discovery in the field of optics.
3. Any metallurgist knows the properties of an alloy to depend upon the properties of the elements it consists of.
4. A beam of microwaves from a station of known position has been found to be able of detecting the waves reflected from the object to be located.
5. Billions of stars are assumed to exist in the universe.

III. Перепишіть та письмово перекладіть українською мовою подані нижче складні речення. Зверніть увагу на переклад умовних речень.

1. If the gathered data had been presented on time, the results of the experiments would have been different.
2. It would be impossible to determine the properties of these materials without intensive studies in our research laboratory.
3. If scientists use the new methods, they will get better results.
4. If your friend had sufficient experience, we should take him on as a lab assistant.

IV. Перепишіть та письмово перекладіть текст.

#### Energy and the environment.

Many of the most serious environment problems of the technological nations result from the use of energy. Every form of energy production is known to cause some damage to the surroundings. Other forms of urban air pollution result from the combustion of coal and low-grade oil in steam electric plants or central heating plants.

Hydroelectric plants are considered to cause serious problem of hydroelectric plants is the enormous weight of the water that fills the lake behind the dam rather quickly after the dam is constructed. The added weight places severe stresses on the geological formation, causing earthquakes in the area. Another form of environment degradation common to electric power generation is thermal pollution – the dumping of wasted heat into streams of water or the atmosphere. The warmed water is rather quickly mixed with the streams of water in a lake this having harmful effect upon ecological balance of the lake. In order to obtain enormous amounts of energy we are building powerful atomic electric stations, which open up fine prospects in atomic power industry. However nuclear plants are capable of polluting the environment with radioactive atoms of various elements. Moreover, nuclear reactors of the types now being built will not be widely used as a source of energy because of the scarcity the isotope “*u*” which is used as fuel.

The largest potential source of nuclear energy is thermo-nuclear fusion by which the nuclei of small atoms are combined to form larger nuclei. However these power plants also contaminate the environment with radioactive elements that are released when the fuel is burnt.

Human “achievements” in conquering nature became so great that man’s economic activity began to have an increasingly negative effect on nature. The devastation of nature gradually led to the loss of the most essential element of existence, a healthy biological habitat.

Today economic, social, technological and biological processes are so interconnected and interdependent that it is clearly necessary to consider modern production as a complicated ecological-economic system. Man and nature should interact and cooperate in order to build a sensible ecological-economic system. It is only international cooperation in environmental protection that will help us save our planet from ecological devastation. The achievements of the scientific and technological progress must be used for the solution of ecological problems.

Environmental protection is a task requiring the joint efforts of government, public organization and individual members of society.

Shortcomings in nature preservation are often due to the lack of ecological awareness (education) of people and specialists.

The conflict between man and nature can be avoided by fostering a scientific ecological education, encouraging all people to take an active part in nature protection.

V. Знайдіть та підкресліть у тексті речення з суб'єктивним інфінітивним зворотом.

#### **Варіант 4**

I. Перепишіть та письмово перекладіть українською мовою подані нижче речення; звертайте увагу на функцію інфінітива.

1. The experiment to be carried out is of great importance for our research.
2. To make interplanetary flights in the future it is necessary to know factors affecting the human organism.
3. Lovosier was the first to discover the importance of quantitative analysis of chemical elements.
4. Tshernov was proud to have found the best temperatures for the hot working of steel.
5. For the experiments we need several electrical devices to be connected in series.

II. Перепишіть та письмово перекладіть українською мовою подані нижче речення. Пам'ятайте, що суб'єктивний та об'єктивний інфінітивні звороти відповідають підрядним реченням.

1. Nowadays the principle of operation of a radio set appears to be quite simple.
2. Radio engineering is known to be of great importance for many branches of modern science.

3. We expect any processing engineer to be familiar with the basic fabricating processes.
4. Achievements in radio engineering are believed to have laid the foundation for further progress in the field of long-distance communication.
5. The rocket may be said to work on the reaction principle.

III. Перепишіть та письмово перекладіть українською мовою подані нижче складні речення. Зверніть увагу на переклад умовних речень.

1. If the metal had been heated slowly, the first changes in its appearance would have occurred at a temperature of 1000°K.
2. If mechanization is introduced, the plant will produce more goods of high quality.
3. It would be impossible to ensure the full energy supply without atomic power plants.
4. If I were free, I should help you with pleasure.

IV. Перепишіть та письмово перекладіть текст.

#### Lunar exploration.

Our solar family consists of the sun, nine known planets and their satellites, asteroids, comets and meteors.

The most important body in this great family is the sun. There are few kinds of energy on the earth that are not the gift of the sun.

The sun's mass is 750 times that of all the planets put together. Like all the other bodies in the universe, it is composed of the same sort of materials we find on the earth. Of all the elements or building blocks of nature which we have discovered, some 68 have been found on the sun, and none have been found in the sun which are not now known on earth.

Our sun has a surface temperature of about 6,000°C. A star as hot as the sun must radiate an enormous amount of heat. Every square metre of the sun's surface radiates energy equal to 84,000 horse power. Yet, the total amount the earth receives is only a very small fraction of it. Here is a possible source of energy for the future. The age of the earth is about two billions of years. The sun must have been in existence long before the earth was formed.

The Earth's nearest celestial neighbour the Moon – is only 384,400 km away from us. That is why, it appears sufficiently large and bright. Lunar exploration began in 1959 when the Soviet Union sent its Luna-3 spacecraft around the Moon. It radioed back the first photographs of the Moon's far side. In July 1969 two American astronauts landed on the Moon and carried out a variety of experiments on the surface of the Moon.

The kilometres of film exposed by the astronauts, the specimens of rock brought back to the Earth and other data studied by hundreds of scientists from countries all over the Earth have led to new views on several basic problems.

Before the landings the Moon was thought to be a simple body with the same composition throughout. But we now know it to be a body with a metallic core at its centre, a silica-rich mantle and a crust. Lunar soils proved to contain a type of structure that is not common on Earth.

The types of rocks that were encountered on the Moon are familiar to our geologists. However, almost all of these rocks have lower proportions of elements with lower melting points than does the Earth. Detailed examinations of the lunar rocks indicate to relatively high melting points such as calcium, aluminium and titanium. So the Moon and the Earth seem to be more similar than had been thought for the last few years. None of the lunar rocks contain any trace of water bound inside their minerals. This ends all hopes that water and life existed on the Moon at any time in the past.

V. Знайдіть та підкресліть у тексті речення з суб'єктивним та об'єктивним інфінітивними зворотами.

### Варіант 5

- I. Перепишіть та письмово перекладіть українською мовою подані нижче речення; звертайте увагу на функцію інфінітива.
1. The only way to produce a pure metal is to eliminate from it all chemical elements but one.
  2. Mendeleev left blank spaces in his Table for the elements to be discovered in future.
  3. To increase the range of his receiver Popov provided it with an antenna, which was made of a length of wire.
  4. To develop high-temperature alloys was of great importance.
  5. Scientific discoveries to be practically applied in industry and agriculture are paid special attention to.
- II. Перепишіть та письмово перекладіть українською мовою подані нижче речення. Пам'ятайте, що суб'єктивний та об'єктивний інфінітивні звороти відповідають підрядним реченням.
1. Casting is believed to have been used for centuries for producing a wide variety of articles.
  2. Electronic equipment is known to have already been applied at the beginning of the century.
  3. Electronics is sure to find an ever growing application.
  4. The early discoveries in nuclear science showed the atomic nucleus to be a vast source of energy.
  5. The ancients thought electricity to be invisible fluid.
- III. Перепишіть та письмово перекладіть українською мовою подані нижче складні речення. Зверніть увагу на переклад умовних речень.



1. If automation had not been applied, labour productivity of our shop would not have grown.
2. It would be impossible to solve many problems without using computers.
3. If this device is installed, the production process will be simplified.
4. If our Sun were far enough from us it would look like a star.

IV. Перепишіть та письмово перекладіть текст.

#### Robot technology.

Robots are machines of special type. They are considered to replace man wherever he is to do hard, monotonous or hazardous work. Robots are sophisticated machines. Many of them are fitted with artificial intellect systems, special programming devices and electronic controllers. Their development required the work of specialists in several technical fields, together with specialists in biophysics and physiology.

The idea of robot technology was born in the forties, when the foundations of atomic power engineering – the basis of technological progress – were laid. The materials scientists must deal with are radioactive. Besides, the equipment used in obtaining and studying them is dangerous for man. At the same time work with radioactive substances, assembly and disassembly of atomic reactors, the servicing of machines and devices in radioactive zones require human effort. Remote – controlled equipment helps to solve this problem.

Research into radioactive materials is becoming ever more complicated, new problems arising in atomic power engineering and space technology. This calls for newer manipulators and devices to be handled by an operator. An analysis of these ideas and their solutions show two entirely different approaches. The first one is to bring operator as close to the object as possible the other requires remote control. Both approaches have already found practical application not only in atomic power engineering but in underwater exploration as well.

Intended for detailed studies of the ocean bed at depths as low as 4,000 metres, robot was remote-controlled from the shore and could perform previous by programmed operations. It could be given "hands" adjusted delicately enough to thread a needle under water.

Space research in our country opens up vast perspectives for robots. Artificial satellites are already circulating the globe. The orbital stations are added to them nowadays. This equipment involves maintenance repair, part replacement and other jobs, which cannot be planned beforehand. Spacecraft fitted with robots are already in use.

The great advantage of the space robots are that they need no life support. They could be left in orbit for ever(назавжди), or sent off in a moon vehicle to explore some remote area without anyone worrying about whether it would come back or not. They are also very useful for repairing the outside of spacecraft or for assembling a space station in orbit.

- V. Знайдіть та підкресліть у тексті речення з суб'єктивним інфінітивним зворотом.

Навчальне видання

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## КОНТРОЛЬНІ РОБОТИ З АНГЛІЙСЬКОЇ МОВИ

Навчальний посібник

Оригінал-макет підготовлено авторами

Редактор В.О. Дружиніна

Підписано до друку *24.04.02.*

Формат 29.7 x 42<sup>1</sup>/<sub>4</sub> Гарнітура Times New Roman

Друк різнографічний Ум. друк. арк. *239*

Тираж 100 прим.

Зам. № *2002-123*

Віддруковано в комп'ютерному інформаційно-видавничому центрі  
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