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Міністерство освіти і науки України Вінницький державний технічний університет

О.М. Михайлова-Пехан, Г.Я. Наконечна

НЕОСОБОВІ ФОРМИ ДІЄСЛОВА

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НЕОСОБОВІ ФОРМИ ДІЄСЛОВА

Затверджено Ученою радою Вінницького державного технічного університету як навчальний посібник з дисципліни "Іноземна мова". Протокол № 13 від 4 липня 2002 р.

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Даний навчальний посібник призначений для студентів II-IV курсів всіх спеціальностей факультету медико-біологічного та електронного приладобудування (ФМБЕП), а також факультету радіотехніки та телекомунікацій (ФРТТК) з метою закріплення граматичного матеріалу розширеною системою вправ. Посібник буде корисний для широкого загалу студентів.

3MICT Property of the control of the	
Методична записка	4
Вступ	
1 Інфінітив	5
Вправи	
2 Об'єктний інфінітивний комплекс	20
Вправи	
3 Суб'єктний інфінітивний комплекс	30
3.1. Переклад суб'єктного інфінітивного	
комплексу на українську мову	34
Вправи	
4 Дієприкметник	43
4.1. Вживання дієприкметників	44
Вправи	47
5 Незалежний дієприкметниковий комплекс	
Вправи	
6 Герундій	
6.1 Дієслівні властивості герундія	
6.2 Іменникові властивості герундія	
6.3 Вживання герундія	
6.4 Комплекси з герундієм	
6.5 Герундій і віддієслівний іменник	86
6.6 Герундій і дієприкметник в функції обставини	
Вправи	
Література	

Методична записка

Даний навчальний посібник призначений для надання допомоги студентам II-IV курсів всіх спеціальностей факультетів радіотехніки та телекомунікацій (ФРТТК) і медико-біологічного та електронного приладобудування (ФМБЕП) при вивченні таких розділів англійської граматики як неособові форми дієслова.

В посібнику висвітлюються основні питання щодо утворення, вживання та значення неособових форм дієслова, їх функції в реченні та особливості перекладу на українську мову. Всі граматичні пояснення подано у вигляді моделей, значення яких розкриваються на прикладах. Граматичні правила ілюструються за допомогою відповідних таблиць та схем і супроводжуються системою тренувальних вправ, спрямованих на вироблення та закріплення навичок розуміння структур та їх перекладу.

Мета практичного аспекту посібника полягає в систематизації знань студентів з граматики, в розвитку вмінь та навичок перекладу на рідну мову граматичних явищ, які розрізняються при читанні та перекладі спеціальної технічної та наукової літератури.

Вправи згруповані в порядку зростання складності і розміщені безпосередньо після відповідного граматичного розділу, до якого вони відносяться, що сприятиме безпосередньому переходу від засвоєння теоретичного матеріалу до його практичного використання. Досконале знання граматики необхідно для розвитку вмінь і навичок усного мовлення в монологічній й діалогічній мовній формі на базі активного володіння англійською лексикою і допомагає студентові подолати мовний бар'єр.

Вправи, приведені на початку розділу, побудовані на лексичному матеріалі розмовної мови, тому їх можна використовувати в діалогах та розмовних темах на побутову тематику. Одночасно відбувається закріплення граматичного матеріалу на основі наведених структур. Вправи, які наведені в кінці розділу, укладені на базі лексичного матеріалу і термінології, що відповідають тематиці всіх спеціальностей Інституту радіотехніки, зв'язку та приладобудування.

Виклад матеріалу дозволяє вивчати одні теми незалежно від інших, тому послідовність їх вивчення можна змінювати, виходячи з потреб і рівня знань кожної академічної групи.

Посібник може бути використаний як на практичних заняттях в аудиторії, так і для самостійної роботи студентів.

Посібник складений у відповідності з діючою програмою вивчення англійської мови в вищих технічних навчальних закладах.

Вступ

Форми дієслова, які вживаються в ролі присудка речення, називаються особовими формами дієслова (Finite Forms of the Verb). В англійській мові, як і в українській, є також неособові форми дієслова (Non-Finite Forms of the Verb), тобто такі, що не вживаються в ролі присудка, але вони можуть входити до його складу. До неособових форм дієслова в англійській мові відносяться неозначена форма дієслова або інфінітив (The Infinitive), дієприкметник (The Participle) і герундій (The Gerund). Інфінітив, дієприкметник і герундій мають загальні дієслівні властивості, але вони мають і різні риси, які є властивими іншим частинам мови, наприклад прикметнику, іменнику, що і визначає їх різні синтаксичні функції в реченні. Неособові форми дієслова не мають граматичних ознак особи, числа і способу, не виражають часу дії (теперішнього, минулого та майбутнього), а лише вказують на співвіднесеність у часі, тобто чи є виражена ними дія одночасною з дією присудка, чи передує їй.

Загальні властивості інфінітива, дієприкметника та герундія мають спільні риси:

- 1. Прості форми інфінітива, дієприкметника і герундія виражають дію, одночасну або майбутню по відношенню до дієслова-присудка. Перфектні форми виражають дію, яка передує дії, що виражена дієсловом- присудком.
- 2. Інфінітив, дієприкметник та герундій мають форми дійсного і пасивного станів.
- 3. Інфінітив, дієприкметник та герундій можуть приймати прямий додаток.
- 4. Всі вони можуть означатись прислівником.

1 IHΦIHITUB (THE INFINITIVE)

Інфінітив є неособовою формою дієслова, яка має властивості дієслова і іменника, категорію стану і часу, може мати прямий додаток і означатись прислівником. Інфінітив — це форма дієслова, яка тільки називає дію і відповідає на запитання що робити?, що зробити?, to write писати, to help допомагати. Ознакою інфінітива в англійській мові є частка to. Частка not перед інфінітивом вказує на заперечну форму.

В англійській мові інфінітив має одну просту і п'ять складних форм (див. таблицю 1.1).

Таблиця 1.1 - Форми інфінітива

	Active	Passive	
Indefinite	V ₀ to help I am always glad to help you. Я завжди радий допомогти тобі.	to be + Ved / V ₃ to be helped I am always glad to be helped by you. Я завжди радий, що ти допома- гасш мені.	Форми Indefinite та Continuous виражають одночасність або дію, яка є майбутньою по відношенню до дії, вираженої
	To be + Ving to be helping He seems to be		дієсловом- присудком.
Continuous	helping his mother now. Здається, він зараз допомагає своїй матері.		
Perfect	to have + Ved / V ₃ to have helped I am glad to have helped you. Я радий, що допоміг тобі.	to have been + Ved / V ₃ to have been helped I was glad to have been helped by you. Я був радий, що ти допоміг мені.	Перфектні форми виражають дію, що передує дії, вираженій дієсловом-присудком.
Perfect Continious	to have been + Ving I am glad to have been helping you for a week. Я радий, що допомагаю тобі про- тягом тижня.	- - - -	Форми Perfect Continuous виражають дію, яка почалась в минулому і тривала протягом певного часу до моменту мовлен- ня.

Маючи властивості іменника, інфінітив може виконувати в реченні функції підмета, додатка, означення, обставини і входити до складу будьякого складного присудка (див. таблицю 1.2).

Таблиця 1.2 - Функції інфінітива в реченні та його переклад

	інфінітивом.	тидмет	To develop this circuit is our aim.
	іменником		Розробити це коло – наша мета.
	інфінітивом	частина складеного	Our aim is to develop this circuit.
		іменного присудка	Hama мета – розробити це коло. They are to develop this circuit.
:		частина складеного	
	інфінітивом	дієслівного	Вони повинні розробити це
i		присудка	коло.
1		5 1 4 4	Our students want to develop this
**			circuit at the university laboratory.
нфінітив перекладається	інфінітивом	додаток	Наші студенти хочуть
аС		обставина	розробити це коло в
ып	-		університетський лабораторії.
3			1. Our students came to the
G	:		laboratory to develop this circuit.
1 1	:		Наші студенти прийшли в
Ë	інфінітивом		лабораторію для того, щоб
. =			розробити це коло.
Ħ			2. To develop this circuit our
-			students came to the laboratory.
			Для того. щоб розробити це
			коло, наші студенти прийшли в
	:		лабораторію.
:			This circuit to be developed
1			attracts much attention.
	інфінітивом	означення	Коло, яке потрібно розробити
ī	i i i i i i i i i i i i i i i i i i i		(яке буде розроблено).
i i			привертає багато уваги.

Примітка. Як означення інфінітив прилягає до означеного іменника справа і визначає дію, яка ще не реалізована, можлива, або необхідна чи яка повинна бути виконана в майбутньому.

ВПРАВИ

Exercise 1. Make up five sentences from each table.

I	am	glad	to meet you.
He	is	happy	to hear it.
She	are	pleased	to be late
We	was	sorry	to have missed the train.

want like hate	to tell you everything about it. to be troubled when I am working. to play basket-ball.
	to be visited when I am ill.
	to be sent there.

delighted not to have been informed about it.

I	can	find that magazine.
He/She	may	be found there.
We	must	show you the way to the station.
You		be shown the way to the station.
They		bring the children home.

Exercise 2. Combine the two sentences as in the models.

You

were

Models: I teach English here. I am glad of it.—I am glad to teach English here. We helped him. We are happy about it. — We are happy to have helped him. I was examined yesterday. I am glad of it. — I am glad to have been examined yesterday.

- A. 1. I work at the factory. I am happy about it. 2. I see you. I am glad of it. 3. I study French. I am glad of it. 4. I live in this town. I am happy about it. 5. I know this man. I am happy about it.
- B. 1. I am going to Paris. I am happy about it. 2. I am spending my holidays in the Crimea. I am happy about it. 3. I am listening to the symphony. I am glad of it. 4. I am reading his letter. I am glad of it. 5. I am playing chess with you. I am glad of it.
- C. 1. I spent my holidays in the country. I am happy about it. 2. He played chess with the world champion. He is happy about it. 3. I bathed in the river. I am glad of it. 4. I learned English at school. I am glad of it. 5. I passed my examination yesterday. I am glad of it.
- D.1. I don't understand this rule. I am sorry about it. 2. I am not working there now. I am sorry about it. 3. I have not seen this film. I am sorry about it. 4. She has not been working all these years. She is sorry about it. 5. Peter didn't see her. He is sorry about it.
- E. 1. She was not invited to the evening party. She is sorry about it. 2. We are taught English. We are glad of it. 3. I was waked early this morning. I am glad of it. 4. I was not informed of it. I am sorry about it. 5. I am not allowed to go there. I am sorry about it.

Exercise 3. State the function of the Infinitive in the sentences. Translate them into Ukrainian.

1. Everyone had a wish to say something. (Gaskell) 2. He decided to go alone. (Gordon) 3. We must work hard to live. (Abrahams) 4. The question must be answered. (Heym) 5. It was difficult to believe. (Dickens) 6. She was going to my rooms to see my aunt. (Dickens) 7. She had no desire to open her heart to her aunt. (Gaskell) 8. The great thing is to make a good breakfast. (Jerome) 9. I am ready to go with Annie. (Dickens) 10. Nothing could be done before morning. (Gaskell) 11. It wasn't safe to cross the bridge at night. (Greene) 12. To earn a living he became a salesman. (Carter) 13. The man was the first to speak. (Gaskell) 14. I am too old to be given a hiding. (Shaw) 15. This is my bench. and you have no right to take it away from me. (Albee)

Exercise 4. Translate into English using different forms of the Infinitive.

- А. 1. Я радий, що працюю разом з ним. 2. Я радий, що працював разом з ним. 3. Вона шаслива, що вчиться в цьому інституті. 4. Вона щаслива, що вчилась у цьому інституті. 5. Мені незручно, що я турбую Вас. 6. Мені незручно, що я потурбував Вас. 7. Він буде радий поїхати туди. 8. Він буде радий, що поїхав туди.
- В. 1. Я радий запросити вас на вечір. 2. Я радий. що мене запрошують на вечір. 3. Я радий. що запросив їх на вечір. 4. Я радий, що мене запросили на вечір. 5. Я радий послати вам що книжку. 6. Я радий, що послав їй цю книжку. 7. Я радий, що мене посилають на цю конференцію. 8. Я радий, що мене посилають на цю конференцію.
- С. 1. Я хочу послати їй телеграму. 2. Я хочу, щоб мене послали на конференцію. 3. Моя сестра хоче побачити їх там. 4. Вона не хоче, щоб її там побачили. 5. Дівчинка любить, щоб їй розповідали казки. 6. Дівчинка любить розповідати казки.
- D. 1. Забути цей день було неможливо. 2. Переправлятися через річку вночі було небезпечно. 3. Вчитися наполегливо завдання кожного учня. 4. Допомогти йому тепер—значить врятувати його. 5. Її мета стати лікарем. 6. Ваше завдання—написати твір про свої літні канікули. 7. Наше завдання полягає в тому, щоб закінчити роботу до 5 грудня.
- Е. 1. Він першим допоміг нам. 2. Вона написала твір першою. 3. Вона першою розповіла мені про це. 4. Директор говорив на зборах останнім. 5. Він першим поздоровив нас. 6. Я пішов додому останнім.
- F. 1. Ми взяли таксі, щоб прибути на станцію вчасно. 2. Вона пішла на пошту, щоб одержати посилку. 3. Я ввімкнув телевізор, щоб подивитися футбольний матч. 4. Вони приїхали в Київ для участі в спортивних

змаганнях.	5. 3aı	втра ми	підемо	в ліс	збирати	гриби.	6.	Щоб	вивчити	мову,
ви повинні	яком	ога білы	пе чита	ŤИ.						

G. 1. Погода була надто хороша, щоб залишатись вдома. 2. Завдання було надто складним, щоб зробити його за годину. 3. Він досить досвідчений, щоб виконати це завдання. 4. Сьогодні надто холодно, щоб іти на річку. 5. В цьому тексті надто багато нових слів, щоб зрозуміти його без словника.

Exercise 5. In this exercise you have to complete each sentence with a suitable verb in the form of the Infinitive: to talk, to get, to lend, to buy, to be, to play, to call, to fly, to look, to close, to hear.

Example: Don't forgetto post the letter I gave you.
1. Tom refused me any money. 2. Jill has decided not a car. 3. The thief got into the house because I forgot the window. 4. There was a lot of traffic but we managed to the airport in time. 5. I've arranged tennis tomorrow afternoon. 6. One day I'd like to learn an airplane. 7. I shouted to him. He pretended not me but I'm sure he did. 8. Why hasn't Sue arrived yet? She promised not late. 9. Our neighbour threatened the police if we didn't stop the noise. 10. Ann offered after our children while we were out. 11. The teacher was very strict. Nobody dared during his lessons.
Exercise 6. Open the brackets using the necessary forms of the Infinitive.
1. He seems (to read) a lot. 2. He seems (to read) now. 3. He seems (to read) since morning. 4. He seems (to read) all the books in the library. 5. I want (to take) you to the concert. 6. I want (to take) to the concert by my father. 7. She hoped (to help) her friends. 8. She hoped (to help) by her friends. 9. I hope (to see) you soon. 10. We expect (to be) back in two days. 11. He expected (to help) by the teacher. 12. The children seem (to play) since morning. 13. I am glad (to do) all the homework yesterday. 14. She seems (to work) at this problem ever since she came here. 15. I am happy (to invite) you to the movie theatre.
Exercise 7. Complete each sentence using what or how with one of the following verbs: do say use ride cook
Example: Do you knowhow to get to John's house?
1. Have you decided what for dinner this evening? 2. Can you show me the washing machine? 3. Do you know if there's a fire in the building? 4. You'll never forget a bicycle once you have learned. 5. I was really astonished. I didn't know

Exercise 8. Now make your own sentences. Complete each sentence with to + infinitive.
Example: This evening I have arrangedto go to the theatre 1.Not many people can afford 2. I would like to learn 3. One day I hope 4. I wouldn't dare 5. Sometimes I tend
Exercise 9. In this exercise you have to make sentences with afraid. Read each situation and then use the words in brackets to write your sentence.
Examples: The streets are unsafe at night.(I / afraid / go out / alone) I am afraid to go out alone.
1. I don't usually carry my passport with me. (I / afraid / lose / it). 2. The sea was very rough. (we / afraid / go / swimming). 3. We rushed to the police station. (we / afraid / look / behind. 4. I didn't tell Tom that I thought he had behaved foolishly. (I / afraid / discuss / it / with him). 5. In the middle of the film there was a particularly horrifying scene. (we / afraid / look). 6. She seemed very upset that day. (she / afraid / tell / her parents / about the incident). 7. I didn't like the look of the food on my plate. (I / afraid / eat / it).
Exercise 10. Now you have to make sentences with need + passive infinitive (to be+Ved/V ₃). Use the verb in brackets.
Example: This coat is rather dirty, (clean) It needs to be cleaned.
1. This room hasn't been painted for years (paint). It 2. Your hair is too long (cut). It 3. Those shoes are rather dirty (polish). They 4. This plant hasn't been watered for some time (water). It 5. Those screws are loose (tighten). They 6. Your jeans are too long (take up). They 7. The street is rather narrow (widen). It
Exercise 11. Put the verb into the correct form of the Infinitive.
Example: If you want to pass your exams, you needto study (study) more. I'm sorry I broke the chair. It needs to be repaired(repair).
1. Does this job need (do) now or can I leave it until later? 2. I've got an extra bed, so when you come to stay, you won't need (bring) your sleeping bag. 3. Tom helped his mother (get) the dinner ready. 4. The batteries of this radio are low. They need (charge). 5. Those shirts need (iron) but you don't need (do) it now. 6. He looks so unhappy. He needs

(encourage). 7. The fine weather helped ____ (make) it a very enjoyable holiday.

Exercise 12. Translate the following sentences into Ukrainian paying attention to active and passive forms of the Infinitive:

1.Nature has many secrets to be discovered yet. 2.To improve your phonetics you should record yourself and analyze your speech. 3. This is the book to be read during the summer holidays. 4.To be instructed by such a good specialist was a great advantage. 5. To play chess was his greatest pleasure. 6. The child did not like to be washed. 7. Isn't it natural that we like to be praised and don't like to be scolded? 8. Which is more pleasant: to give or to be given presents? 9. He is very forgetful, but he doesn't like to be reminded of his duties. 10. Are you a good friend to have?

Exercise 13. Translate the following sentences into Ukrainian paying attention to the Perfect Infinitive:

1. I am awfully glad to have met you. 2. Sorry to have placed you in this disagreeable situation. 3. I am very happy to have had the pleasure of making your acquaintance. 4. I am sorry to have kept you waiting. 5. Clyde was awfully glad to have renewed his acquaintance with Sondra. 6. Sorry not to have noticed you. 7. I am sorry to have added some more trouble by what I have told you. 8. When Clyde looked at the girl closely, he remembered to have seen her in Sondra's company. 9. I remembered to have been moved by the scene I witnessed. 10. The child was happy to have been brought home. 11. Jane remembered to have been told a lot about Mr. Rochester. 12. The children were delighted to have been taken to the circus. 13. I am sorry to have spoilt your mood. 14. Maggie was very sorry to have forgotten to feed the rabbits.

Exercise 14. Translate the following sentences into Ukrainian paying attention to different forms of the Infinitive:

1. I am glad to invite you to the conference. 2. I am glad to be inviting you to the conference. 3. I am glad to have invited you to the conference. 4. I am glad to be invited to the conference. 5. I am glad to have been invited to the conference. 6. He asked to be shown the new pictures. 7. We are happy to have been included in the research group. 8. He wants to be supported by you. 9. He was glad to be helped by you at the examination. 10. I want to support you in solving this problem. 11. To know everything is to know nothing. 12. To achi-eve better results we must repeat the experiment. 13. To live is to work and to study. 14. I was sorry to have changed my mind so unexpectedly. 15. Who doesn't like to be given presents? 16. A little girl was pleased to be taken to the zoo. 17. He

expected to be told more about the case. 18. A vain person always hopes to be praised by everybody. 19. When a child she liked to be told fairy tales.

Exercise 15. Translate the following sentences into Ukrainian paying attention to the Infinitive in the function of an attribute:

1. The article to be translated was very difficult. 2. The railway to connect these two towns will be the longest in the region. 3. This report will be discussed at the conference to open in Moscow in some days. 4. Show me the text to be translated today. 5. There are many rules to be remembered when you translate from the foreign languages. 6. I think that the film to be shown at our club to-night will be interesting. 7. The task to be fulfilled by our students seems to be rather difficult. 8. The power station to be put into operation in some months will have an output of 1.000 000 kW. 9. The periodic law of elements to be described here was discovered by D. I. Mendeleyev in 1869. 10. The lecture to be followed by a large concert will take place in our club. 11. The work to be finished in a week is of great importance for our laboratory.

Exercise 16. Translate the following sentences into Ukrainian paying attention to different functions of the Infinitive:

1. Here are some tables to be referred to later. 2. There are a lot of problems to be solved in order to understand the phenomenon under study. 3. Those scientists were the first to make the satellite. 4. To be precise is the character of an experimenter. 5. There are some other phenomena to be considered. 6. This paper will be read at the conference to open shortly in Dubna, 7. To consider all these effects took a lot of time. 8. The method to be followed will be discussed later. 9. To define the object of the experiment you must consult your professor. 10. The data to be obtained from the experiment are very important. 11. I am glad to have joined this research team. 12. We are lucky to be working at a very interesting problem. 13. computational physics is the subject of your studies. 14. To introduce it successfully we are to see what computational physics is. 15. To involve computational problems is difficult without some practice in solving ordinary differential equations. 16. To solve this second order differential equation is the first thing to be done. 17. To understand the problem we must involve one new phenomenon. 18. To demonstrate this phenomenon we involve a challenging problem. 19. To see things in a simple way is the job of a physicist. 20. To understand many complicated phenomena in terms of a few simple principles physicists develop theories. 21. To provide experimental evidence for the theoretical ideas experimentalists make more and more complicated experiments. 22. This is last but one argument to be included in the forthcoming presentation.

Exercise 17. Translate the following sentences with the Infinitive differentiating between the functions of a subject and an adverbial modifier of purpose. The latter is translated into Ukrainian with a conjunction "для того щоб".

1. To build a new railway line of this length is a very complicated task. 2. To build a line in such short period of time a lot of preliminary work must be done. 3. To complete it on time it is important to work out all the details. 4. To deal with such accurate measurements is extremely difficult. 5. To obtain the data on such shifts is the purpose of the paper. 6. Do derive the data we must make several experiments. 7. To exploit new sources of energy is the most urgent problem of today. 8. To solve this problem the researchers have been working hard for years. 9. To exploit the whole of the Sun's energy is one of the researcher's long term aims. 10. To do it as quickly as possible we are to increase scientific efficiency. 11. To increase scientific efficiency is to raise the productivity of our industry. 12. To improve our citizens' working and living conditions our government pays much attention to all of these questions, 13. For these problems to be carried out successfully we are to work hard. 14. Much is to be done in these fields for this key problem to be solved successfully, 15. To learn the principles of the "black hole" the scientist had to carry out a number of experiments. 16. To explain the phenomenon of the Bermuda triangle was not an easy task. 17. To move from one astronomical body to another means to overcome gravitational forces. 18. To do work our object must have energy, 19. To produce a large thrust in a rocket requires high mass flow, high energy and high pressure. 20. To coordinate the efforts of many groups of engineers constitutes a very difficult task. 21. To start a chain reaction it is necessary for at least one neutron to hit a Uranium-235 nucleus. 22. Four years are required for light to travel from the nearest star to the Earth.

Exercise 18. Translate the sentences paying attention to the Infinitive in the function of an attribute which is translated into Ukrainian by an attribute subordinate clause beginning with a conjunction "який".

1. This is the key problem to be solved immediately. 2. For this key problem to be solved immediately much is to be done. 3. We are to solve this key problem immediately. 4. These are the main sources of energy to be exploited. 5. The main sources of energy to be exploited in the future are the energy of the sun and nuclear energy. 6. For energy of the sun to be exploited to the full the researchers are developing new techniques. 7. There is nothing to worry about. 8. Packing is the first thing to be done for this algorithm. 9. There are some important instructions to be followed. 10. You always find something to be done urgently. 11. Have you got any book to read? 12. This is the book to pay attention to. 13. There are many things to be taken into consideration when designing a new device. 14. Now we will discuss the system of units to be employed later in our discussion. 15. The experimental data to be discussed

must be included in the paper. 16. The instruments to be displayed at the well-known exhibition might be provided with modernized units.

Exercise 19. Translate the following sentences paying attention to the functions of the Infinitive:

1. We have got one more problem to solve today. 2. There is one more phenomenon to be involved into this solution. 3. To introduce numerical methods and their use in physics is the purpose of the paper. 4. To answer the question we studied a great deal of publications on the problem. 5. The methods to be introduced are extremely useful for solving many practical problems. 6. We need a week more to study the problem in detail. 7. The person to solve the problem must be familiar with different calculus. 8. We have strong evidence to predict this result. 9. This is the set of equations to be solved to understand the problem as a whole. 10. The set of laws to be involved in these calculations must be studied in detail. 11. To interpret these results in terms of your concept is rather difficult. 12. The specialists to make these computations must write a program in BASIC. 13. The amount of computations to be done is great. 14. There are some laws to follow in this solution. 15. This is the novelty to pay attention to. 16. To avoid any trouble the operator should always check up whether the devices are in order.

Exercise 20. State the forms and functions of the Infinitive in the following sentences and translate them into Ukrainian:

1. To magnetize a magnetic body or to create a magnetic flux in a circuit always requires an expenditure of energy. 2. The force that causes electrons to move is called the difference of potentials or e.m.f. 3. At the same time some electrons become energetic enough to escape from solid and thermionic emission takes place. 4. This quality in a diode is used to convert or rectify alternating current to direct current. 5. One can see the anodes to be connected together through two equal resistors R₁. 6. To understand the operation of the class A push-pull amplifier first imagine that the signal amplitude is V/2 and the common standing bias is - V_{HM}/2. 7. In metallic conductors many of the electrons are free to travel about among the atoms like molecules of a gas. 8. To double the rate of electron flow the e.m.f. was doubled. 9. To double the rate of electron flow means to increase the current strength. 10. It is necessary to measure the current strength in this circuit. 11. Strength of the magnetic field to be determined depends on the current strength in the circuit. 12. There are four variable parameters to be taken into consideration. 13. An initial experiment was made to reduce the interelectrode capacitance of the triode. 14. A capacitor is usually connected externally from the screen grid to the cathode to provide a low impedance path for the current. 15. To reduce the interelectrode capacitance of a triode an experiment was made. 16. To reduce the interelectrode

capacitance was possible due to introduction of the second grid. 17. To get high-frequency steady-state oscillations including the microwave band vacuum tubes are necessary to be used. 18. The prime function of electromagnetic waves is to carry information from a source (called the transmitter) to some other point (called the receiver). 19. The model of the atom to be discussed belongs to Niels Bohr. 20. The function of the detecting screen is to give a visible indication of the instantaneous position of the electron beam.

Exercise 21. Translate the following sentences into Ukrainian paying attention to the Infinitive.

1. The method to be used in measuring the e.m.f. is very simple. 2. The device to be used performs different functions. 3. This is the device to be used in our experiment. 4. The first man to get the electric current was Volta. 5. The only way to stop or control the anode current is to decrease or remove the anode voltage. 6. For this effect to be understood researchers had to carry out a lot of experiments. 7. We will discuss the operation of a junction transistor to show how amplification may be achieved. 8. The examples chosen to illustrate donors and acceptors are particularly simple. 9. In many semiconductors it is of great importance to recognize two kinds of carriers of electric current, i.e. electrons and holes. 10. Unlike the generator a transformer can not be used to convert mechanical energy into electrical one. 11. Rectifiers are devices designed to convert alternating current into direct current. 12. In any amplifier or oscillator the function of the electron stream is to convert d.c. energy from h.f. supply to a.c. energy at the required frequency. 13. The plate must have enough surface area to dissipate this heat by radiation. 14. This quality in a triode is used to convert or rectify alternating current to direct current. 15. If there happens to be the source of secondary emission, having a higher positive potential than this source, the secondary emission electrons will tend to flow to this second electrode.

Exercise 22. Find the Infinitive in the following sentences and state its functions. Translate the sentences into Ukrainian.

1. To develop a new device we had to study structures of many similar devices. 2. To obtain the desired properties of the device the scientist had to continue this experiment. 3. To determine the direction of the lines of force set up around a conductor we must know the rule of gimlet. 4. The above mentioned method is used to determine the polarity of an electromagnetic solenoid. 5. To make an electric current flow continuously along a wire, a continuous supply of electrons must be available at one end and a continuous supply of positive charges at the other. 6. To avoid possible breakdown of the insulation, the practice is to put extra insulation on the end turns. 7. To make permanent steel magnets we must prepare steel of high quality. 8. In a battery the determining

factors are kinds of electrolytes and the kind of the metals to be used for all plates. 9. The grounded-emitter and grounded-base switching circuits can be made to operate from saturation to cutoff. 10. A Zener diode is incorporated in the gate input to raise the maximum permissible logic 0 input levels to 5 V. 11. What is used to describe different types of logic circuits? 12. The voltage level at point P becomes sufficiently positive for a portion of the base current of T_1 to flow through the base-collector junction.

Exercise 23. Translate the following sentences into Ukrainian using different kinds of translation of the Infinitive.

1. In practice, most of the problems that you'll encounter will be easy to fix: bad batteries, broken microphone cables, etc. 2. A triode requires three operating voltages, one on each electrode, to operate correctly. 3. Since the radio volume control is rendered ineffective R16 is added to control the static or noise-free volume. 4. Use double-sided transparent or masking tape to keep the pickup from sliding about. 5. One of the newer devices to find its way into the modern car is the IC voltage regulator. 6. This regulator consists of three principal parts: a voltage-control device, a temperature-compensation network, and an output device to control alternator field current. 7. No wires are needed or used to connect the regulator to the alternator and only one cable is required to connect the IC regulator to the car battery and electrical system. 8. When the system voltage drops slightly below the tolerance level, the Zener diode stops conducting, turning off O1, which turns on O2, allowing field current to flow again. 9. This current is sufficient to produce slight heating of the thermistor assembly 10. If the fuel level falls below the level of the thermistor, it begins to warm up and its resistance decreases, 11. To facilitate installation and servicing, flexible leads should be used. 12. The automatic noise eliminator is an automatic feedback control system that compares a wired - in signal to an acoustically coupled signal containing both program and noise, then adjusts radio loudness to maintain a fixed signal - to - noise ratio for the listener.13. T1 steps up the audio voltage so it can be rectified and filtered to obtain a d.c. level proportional only to S. 14. R12 is adjustable to make the radio volume "track" the noise to maintain the selected signal -to- noise ratio over the ambient noise range. 15. R8, R9, R10, R11, C6 and C7 establish time constants long enough to prevent volume fluctuations due to silences and pauses. 16. R1 and D3 compensate the base-emitter forward voltage drop to provide true class - B operation over the temperature range. 17. The special shunt remains in use and the shunt connected to the contacts of the selector is increased, so as to permit the measuring of maximum currents of 10, 50, 100 and 500 milliamperes. 18. The 650 - ohm rheostat is connected at the same time in parallel with the instrument, so as to form an adjustable shunt which will permit the needle to be carried to zero on the ohm scale. 19. Most instruments are more accurate and easier to read when the needle is near the middle of the scale. 20. Additional circuit components have been added to ensure high-frequency stability of the complete amplifier.

Exercise 24. Translate the following sentences paying attention to different functions of the Infinitive.

1. So the conventional flip-flop of Fig.1 was modified to form the frequency divider shown in Fig.2 by increasing all resistances. 2. A 4-volt (peak-to-peak) trigger input is required and the MFC4040 device seems to trigger well from sine waves to over 5 Mhz. 3. The input signal required in order to obtain the maximum undistorted output is represented by the minimum voltage necessary to apply to the input circuit of an amplifier to obtain the maximum undistorted power output. 4. When an amplifier is said to have a total gain of 130 dB, and a power output of +30 dB, the total output will be obtained by applying an ititial power of - 100 dB. 5. He was told not to waste any more time: it was acknowledged that the equipment was worthwhile and that airline security people believed such devices to be necessary, but no orders were forthcoming. 6. The real challenge is to use the telephone pair, to listen not to telephone conversations but to conversation in the room. 7. Though Thevenin produced a rush of publications in 1883, he seems to have published nothing thereafter. 8. To use the tunnel diode as an amplifier or an oscillator, we must prevent it from switching. 9. The company's research laboratories merged in 1925 with those of AT & T to become the Bell Telephone Laboratories. 10. In addition to a high resolution capability, provisions for specimen protection are now required of an electron microscope, to assure the acquisition of more accurate information. 11. Thus, it is possible to obtain a diffraction pattern from approximate 0.3 μ m area. 12. This goniometer allows the specimen to be tilted with no image deviation and to be tilted or shifted with no changes of focus, magnification and camera length. 13. The electron microscope, however, presents various restrictions that have to be solved to obtain a clean high vacuum. 14. To start operation, you have only to turn the POWER-key. 15. We have incorporated special design considerations to facilitate high voltage application and filament exchange. 16. The check panel enables you to constantly monitor the operation state of each section, making the instrument maintenance extremely easy. 17. The operation panel has enough space to accommodate up to five spans of attachments, such as amplifiers and signal processors.18. Provision of a side entry type EDS detector permits a high P-B ratio to be obtained even at high accelerating voltage. 19. Attempts to increase output voltages and hence the range of applications, have met with two major obstacles until recently. 20. Where the load is constant it is relatively simple to control the voltage across the load, but if the load is variable it is necessary to use feedback which is proportional to the r.m.s. value of the output. 21. The main purpose of industry is to convert ideas into wealth.

Exercise 25. State the forms and functions of the Infinitive and translate them into Ukrainian.

1. Each motor has nominantly the same power and is loaded to take the rated input. 2. The control system can be expanded to include computer or tape control. 3. With a round wire this causes the current density to be maximum at the surface and the least at the centre. 4. Lines used for this purpose are commonly said to be resonant or nonresonant according to the method of operation. 5. When the load impedance does not equal the characteristic impedance, a reflected wave exists and the line is said to be resonant because of the resulting oscillatory character of the current and voltage distributions. 6. A simple arrangement is shown in Fig.7, in which the tuning of the circuits and the mutual inductance are chosen to make the load resistance of the proper magnitude. 7. As it is, only electrons having enough energy to overcome the surface forces manage to get away. 8. The higher the cathode temperature, the higher the emission and the higher the voltage at which the current curve begins to flatten or "saturate". 9. The pentode resulted from efforts to improve the characteristics of the triode and screen-grid tube. 10. The triode was designed to have a low electrostatic capacity between control grid and plate. 11. The amount of the reduction of plate current in this region may be sufficient to cause the plate current to be negative. 12. The chief use of such a resistance is to eliminate the high-frequency peak that results when a transformer is associated with a plate resistance that is too low. 13. A transformer used to couple a transmission line, a microphone, or other low impedance source of energy to the grid of a tube is termed an input transformer. 14. When the possible frequencies of oscillation differ greatly, both tend to occur simultaneously with the lowfrequency oscillation modulating the high-frequency one. 15. Vacuum- tube oscillators tend to synchronize with an injected voltage of approximately the same frequency. 16. In this way it is possible to control the relative frequency of oscillator and injected voltage at ratios up to 10:1. 17. That makes it easier to spot when something's wrong, and to analyze what the trouble is. 18. For servicing you need a way to find out if a set can hold color on weak signals. 19. This gives you a constant signal level to work with in color-sync or automatic color control circuits. 20. All we need to know about this tunnel current is that its transit time is so short that it does not affect the maximum operating frequency of the diode. 21. At the opposite end, in the n-region near the negative terminal, more electrons arrive from the negative battery-terminal and enter the n-region to replace the electrons lost by combination with holes near the junction. 22. This region is very thin and only slightly "doped" with impurity atoms, so that the majority of the holes are able to drift across the base without meeting electrons to combine with. 23. The main point to note is that a very small emitter voltage suffices to produce a large flow of emitter current. 24. N rays were but one of the unusual kinds of radiation to have been used for radiography.

2 ОБ'ЄКТНИЙ ІНФІНІТИВНИЙ КОМПЛЕКС (THE OBJECTIVE INFINITIVE COMPLEX) АБО СКЛАДНИЙ ДОДАТОК (THE COMPLEX OBJECT)

Свою думку, судження, припущення про якусь особу, факт чи предмет можна висловити на англійській мові двома засобами:

- Складнопідрядним реченням з підрядним додатковим:

I suppose that the velocity of movement changes.

- Простим реченням з складним додатком (The Complex Object), яке складається з іменника (у загальному відмінку) або особового займенника в об'єктному відмінку) і інфінітиву:

I suppose the velocity of movement to change.

Обидва речення перекладаються однаково:

Я вважаю, що швидкість руху змінюється.

У реченні *I like* **him to come** *in time for dinner* (*Meні подобається, що він приходить вчасно на обід*) інфінітив **'to come'** виражає дію, яку виконує особа, позначена займенником в об'єктному відмінку — **him**, що стоїть перед інфінітивом **to come**, тобто інфінітив відноситься до цього займенника, як присудок до підмета. Отже **'him to come'** являє собою єдине ціле або об'єктний інфінітивний комплекс. У реченні цей комплекс виконує роль **складного додатка**, оскільки речення, що зазначене вище, означає, що мені подобається не **він**, а те що **він приходить** вчасно на обіл.

Саме тому, що такий комплекс має у своєму складі інфінітив і вживається у функції додатка (object), він називається об'єктним інфінітивним комплексом (The Objective Infinitive Complex).

Об'єктний інфінітивний комплекс складається з двох частин. Перша частина — іменник у загальному відмінку або особовий займенник в об'єктному відмінку (me, him, her, it, us, you, them). Друга частина комплексу — інфінітив, що виражає дію, яку виконує іменник або займенник в першій частині.

На українську мову об'єктний інфінітивний комплекс перекладається здебільшого підрядним додатковим реченням з сполучниками що або щоб.

	я він вона		me him her	to study better.
Я хочу, щоб	воно	I want	it	вчився
	ми		us	(вчилась,вчились)
	ти, ви		you	краще.
	вони		them	

Об'єктний інфінітивний комплекс вживається лише після певних груп дієслів.

1. Об'єктний інфінітивний комплекс вживається після дієслів, що виражають бажання, намір, почуття: to want -xomimu, to wish, to desire бажати: to dislike - не подобатися, не любити; to hate - ненавидіти; to intend – мати намір; to love – любити; to like –подобатися, should/would like - vomie би та інші

What do you want him to do for you?

Шо ви хочете, що б він для вас зробив?

She dislikes him to shout at his sister.

Їй не подобається, що він кричить на свою сестру.

He intended me to go with him to the theatre.

Він хотів, щоб я пішов з ним до театру.

I'd like you to read this book.

Я хотів би, щоб ви прочитали цю книгу.

2. Об'єктний інфінітивний комплекс вживається після дієслів, що виражають думку, припущення, сподівання, надію: to think=to guess=to suppose – думати, вважати; to find – знаходити; to consider=to believe – вважати; to know - знати; to expect - сподіватися та ін. Для дієслів цієї групи (крім to expect) найчастіше вживається інфінітив to be:

його найкращим We consider **him to be** the best Mu вважаємо студентом нашої групи. student of our group.

He thought her to be about Він думав, що їй близько 25 років. twenty five.

They knew him to be lazy.

Вони знали, що він ледачий.

Він сподівався, що вона повернеться. He expected her to return.

3. Об'єктний інфінітивний комплекс вживається після дієслів, що виражають наказ, прохання, дозвіл, пораду, примус: to order – наказувати, to ask=to request - npocumu; to advise = to recommend - padumu, рекомендувати; to persuade - впевнювати; to press - вговорювати, наполягати, to warn – попереджати; to permit = to allow - дозволяти; to cause=to force= to make - примушувати; to let - веліти, дозволяти. Після дієслів to make і to let інфінітив вживається без частки to (to make somebody do something – примушувати когось робити щось).

We made him work.

Ми примусили його працювати.

Nick's father ordered some water to be put on the stove.

Батько Ніка наказав поставити воду на плитку.

dictionaries.

The teacher allowed us to use Учитель дозволив нам користуватися сповниками.

4. Об'єктний інфінітивний комплекс вживається після дієслів, що виражають сприйняття за допомогою органів чуття: to see — бачими, to hear — чути, to feel — відчувати, to watch = to observe — спостерігати, to notice — помічати та ін. Після цих дієслів інфінітив у об'єктному інфінітивному комплексі вживається без частки to, або замість інфінітива в деяких випадках вживається дієприкметник теперішнього часу (Participle I).

I've seen **them go** into the room. She saw him **writing** something.

They **noticed** him **fall** while getting off the bus.

I felt someone watching me.

Я бачив, що вони зайшли в кімнату. Вона бачила, як (що) він щось писав (що робив?).

Вони помітили, як він упав, коли виходив з автобусу (**що зробив**?). Я відчув, що (як) хтось спостерігає за

мною.

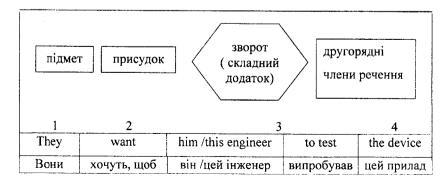
Таким чином, об'єктний інфінітивний комплекс з дієприкметником теперішнього часу (Participle I) перекладається дієсловом недоконаного виду (що робив?), а з інфінітивом – дієсловом доконаного виду (що зробив?).

Об'єктний інфінітивний комплекс з дієприкметником минулого часу (Participle II) після дієслова to have в значенні "мати" вживається для вираження дії, яка виконується не особою, яка є підметом, а якимось іншим суб'єктом, наприклад:

My daughter had her hair cut yesterday. Моя дочка вчора постриглася.

Виконуючи вправи, ще раз зверніть увагу на особливості перекладу речень зі складним додатком (див. таблицю 2.1).

Таблиця 2.1-Об'єктний інфінітивний комплекс (складний додаток)



ВПРАВИ

Exercise 1. Make up five sentences from each table paying attention to the Objective Infinitive Complex.

I	saw	him	enter the house.
He/She	heard	her	leave the room.
You	watched	them	play the piano.
We They	noticed	you the girl	

I	made	him		learn the poem by heart.
He/She	let	them		do the exercise again.
We	caused	you	(to)	go home.
You	forced	me		buy it.
They				read it aloud.
	1	1		

1	want(s)	her	to become an agronomist.
He/She	wanted	them	to work here.
We	like(s)	you	to speak English.
You	should like	me	to sing this song.
They	would like	the boys	to stay here.

I	expect (s)	him	to come back at five.
He/She	expected	them	to help them.

We You	expect	me you	to arrive on Monday. to win the match.
They	expected	us	to answer the letter at once.

I	considered	him	to be brave.
He/She	believed	you	to be an honest man.
We	thought	us	to be lazy.
You	knew	them	to be about twenty-five.
They	supposed	me	to be a good pupil.
1	find(s)	it	difficult.
He/She	found	the film	to be easy.
We		the subject	to be funny.
You	To the second se	the story	to be dull.
They		the flat	to be comfortable.

Exercise 2. Combine the given two sentences into one using the Objective Infinitive Complex.

Model: Mary opened the window. I saw it.—I saw Mary open the window.

9. Kate helped the old woman to carry a heavy bag. I saw it. 10. Somebody tried to get into the house. They noticed it. 11. The people spoke their native language very quickly. She heard it. 12. Nick hid something in the drawer. Mother noticed

^{1.} Peter took my pen. I saw it. 2. He ran to the river. I saw it. 3. The girl smiled. I noticed it. 4. The children shouted in the next room. I heard it. 5. She played the violin. My brother heard it. 6. The man tried to open the door. We saw it. 7. They got into a taxi. He saw it. 8. Somebody knocked at the door. We heard it. 9. Kate helped the old woman to carry a heavy bag. I saw it. 10. Somebody tried

it. 13. The stranger crossed the street slowly. She saw it. 14. The boy played with the gun in the yard. The neighbors watched it.

Exercise 3. Change the following complex sentences into simple ones using the Objective Infinitive Complex.

- A. 1. We watched the dockers as they unloaded the ship. 2. They watched me as I made my bed. 3. Mother saw him as he climbed over the fence. 4.I watched them as they played ice hockey. 5. Nobody noticed her as she went away.
- B. 1. We expect that he will come back at 7. 2. They expect that their football team will win the game. 3. She expected that her friend would write her a letter. 4. I expect that you will come in time. 5. He expects that his friends will help him.
- C.1. I think that he is a good engineer. 2. I suppose that he is about forty. 3.I believe that they are at home now. 4. I know that she is very modest. 5. They believe that he is honest.
- D. 1. My wish is that you should tell me about it. 2. Her parents' wish is that she should enter a music school. 3. Our wish is that you should go to the forest with us. 4. His father's wish is that he should become an engineer. 5. My wish is that you should stay here.
- E. 1. I desire that he should see me off. 2. I desire that she should go shopping. 3. We desire that he should repair our radio set. 4. I desire that he should stop smoking. 5. I desire that they should return tomorrow.

Exercise 4. Read each sentence and write a second sentence from the words given.

Example: Jill didn't have any money.

(she / want / Ann / lend her some). - She wanted Ann to lend her some.

1. Tom's parents were disappointed when he decided to leave home. (they / want / Tom / stay with them). 2. Please don't tell anyone that I'm leaving my job. (I / not / want / anyone / know). 3. There's a football match next Saturday between England and Scotland. (you / want / Scotland / win?). 4. Unfortunately someone had told Sue that I was going to visit her. (I / want / it / be a surprise).

Exercise 5. Now you have to read a sentence and then write a second sentence with the same meaning. Each time begin in the way shown.

Examples: 'Don't touch anything', the man said to me. - The man told me not to touch anything. My father said I could use his car. - My father allowed me to use his car.

1. 'Don't forget to post the letter', Jack said to me Jack reminded told me that it would be best if I told the police about the accident She advised 3. I told you that you shouldn't tell him anything I warned 4. I was surprised that it rained I didn't expect 5. 'Would you like to have dinner with me?' Tom said to Ann Tom invited 6. At first I didn't want to play tennis but John persuaded me John persuaded 7. The sudden noise caused me to jump The sudden noise made 8. If you've got a car, you are able to travel around more easily Having a car enables 9. She wouldn't allow me to read the letter She wouldn't let
Exercise 6. Now put the verb in the right form: -ing, to + infinitive, or infinitive without to paying attention to the Complex Object.
Example: Mr Thomas doesn't allow smoking (smoke) in his office.
1. Mr Thomas doesn't let anyone (smoke) in his office. 2. I don't know Jack but I'd like (meet) him. 3. Where would you recommend me (go) for my holidays? 4. I don't recommend (eat) in that restaurant. The food's awful. 5. The film was very sad. It made me (cry). 6. Jack's parents have always encouraged him (study) hard. 7. We were kept at the police station for an hour and then allowed (go).
Exercise 7. Answer these questions beginning in the way shown.
Examples: 'Does Tom ever dance?' 'I' ve never seen him dance (or dancing) 'How do you know I came in late?' I heard you come in late. 1. 'Does Ann ever smoke?' 'I' ve never seen 2. 'How do you know the man took the money?' 'I saw 3. 'Did Jack lock the door?' 'Yes, I heard 4. 'Did the bell ring?' 'I am not sure. I didn't hear 5. 'Does Tom ever swear (use bad language)? 'I' ve never heard 6. 'How do you know Ann can play the piano?' 'I have heard 7. 'Did Bill kick the dog?' 'Yes, I saw 8. 'Did the boy fall into the water?' 'I didn't see
Exercise 8. In each of these situations you and a friend saw, heard or smelt something. This is what you said at the time:

Later you tell someone what you saw, heard or smelt.

1. We saw Ann waiting for a bus. 2. We saw _____, etc.

Exercise 9. Complete these sentences. Use one of the following verbs in the correct form:

run explode slam cry sit happen go out collide open tell slip crawl climb fall burn

1. Can you smell something	burning? 2. I s	saw the accident	happen.
3. We listened to the old man	his story froi	n beginning to e	nd. 4. Listen!
Can you hear a child ? 5.	Did anybody se	e the two cars	? 6. We
watched the two men across	the garden,	_ a window and	through
it into the house. 7. Everybody he	ard the bomb _	It was a trem	endous noise.
8. Oh! I can feel something	up my leg! It	must be an inse	ct. 9. I heard
someone the door in the r	niddle of the n	ight. It woke me	e up. 10. We
couldn't find Tom at first. In the	end we found hi	m in the ga	rden. 11. The
boy was catching his cat on the s	loping roof. The	ey saw him	and to
the ground. 12. Oh! There is nobo	dy here! Did yo	u notice anyone	?

Exercise 10. Translate the following sentences into Ukrainian paying attention to the Complex Object:

1. They think us to know this student. 2. We know metallurgists to have produced many new alloys. 3. We know copper to contain carbon. 4. We suppose this problem to be solved by our scientists. 5. We suppose this problem to have been solved by our scientists successfully. 6. We expect metallurgists to produce many new kinds of alloys. 7. I don't want the work to be done in a hurry. 8. Do you want it to be forgotten? 9. They wanted a new house to be built in this place. 10. Do you want them to be introduced to you? 11. Would you like them to change their minds? 12. We didn't expect him to agree with them. 13. I would like you to see the sights tomorrow. 14. The father wanted his son to become a doctor. 15. The driver expected the passenger to get off at the next stop and opened the door. 16. She would like her son to receive a good education. 17. He doesn't want you to leave without him. 18. I think you didn't expect the suit to be so cheap. 19. I would like you to spend the summer with us. 20. We didn't expect the weather to change. 21. The boy wanted the train to begin moving, 22. They didn't want the delegation to stop its visit, 23. I didn't expect you to leave so soon. 24. The father didn't want it to happen to his son again. 25. We didn't expect them to come to Moscow soon. 26. I would like you to be ready in an hour. 27. We expected the group of scientists to come at the weekend. 28. Everybody expected the performance to be interesting. 29. Sports make young people train muscles and will. 30. We expect the Shengen countries to direct all their activities to further cooperation. 31. Technologists planned some samples of semiconductors with improved properties to be obtained on a new installation. 32. Manufacturers consider lasers to have found wide application in medicine.

Exercise 11. Translate the following sentences into Ukrainian paying attention to different verbs used with the Complex Object:

1. He wants you to come to our party meeting next week. 2. I believe him to know this subject well. 3. They expect you to be here at half past five. 4. I knew them to have fulfilled this difficult task in time. 5. I heard her tell about this discovery. 6. He heard the woman say something to her son. 7. My friend saw the taxi stop at the door. 8. We want this device to function quite well. 9. All progressive mankind wants atomic energy to be used in peaceful purposes. 10. In old times people believed the Sun to move round the Earth, 11. We have learned the air to compose of many gases. 12. I know this instrument to be very accurate. 13. Everyone knows the strength of current to depend upon the resistance of the circuit. 14. Bohr considered the atom to consist of a nucleus with electrons revolving around it. 15. The tests have shown the device to be very sensitive. 16. A number of scientists believe the Tunguska explosion to be caused by a meteorite. 17. For the experiment we need several electrical devices to be connected in series. 18. They suppose their scientific discoveries to be practically applied in industry nowadays, 19. We know the wave theory of light to be first proposed by the English physicist Robert Hooke in 1665.

Exercise 12. Translate the following sentences into Ukrainian paying attention to the Objective Infinitive Complexes.

1. We assume these operations to be performed by a computer. 2. I believe it to be the only way to do it. 3. We consider all the bodies to consist of atoms. 4. We expect our football team to win at the next match, too. 5. We know the practical unit of resistance to be the ohm. 6. I thought our delegation to leave Moscow yesterday. 7. Tests have shown the receiver to be very sensitive. 8. We know the frequency to be expressed in kilocycles. 9. I want you to prepare the information on this subject. 10. I do not desire you to tell them about it just now. 11. Our chief engineer wanted us to see the new invention. 12. I wish you to complete your tests as quickly as possible. 13. I saw him give his friend this book. 14. He watched them carry on this experiment. 15. I felt my cheeks redden at his rude words. 16. We heard him report the commander about it. 17. We observed the laboratory assistant to check data thoroughly day by day. 18. We expected him to carry on a careful study of the process without a new device. 19. The government planned the reconstruction of those plants to take four years. 20. We expect this scientist's work to lead to a new discovery.

Exercise 13. Translate the following sentences paying attention to the Complex Object.

1. I felt her touch my hand. 2. He took him to be a foreigner. 3. She made me stand up and give her medicine. 4. He helped me to pack my things. 5. We know him to be a good actor. 6. He was looking for someone to help him. 7. I saw him cross the street. 8. I saw him crossing the street. 9. They watched the doctor working. 10. I like my porridge to have a salty taste. 11. They found him to be an intelligent person. 12. She heard him talking gaily in the garden. 13. I would like you to help me with the translation. 14. I wish the matter to be settled today, 15. I don't expect them to get back before next Friday. 16. Everyone believes him to be a promising artist. 17. I understood him to say that he would help them. 18. I want you to look through these letters. 19. I would like you to change your mind. 20. We didn't expect them to agree with this point of view. 21. I would like you to look through the web-sites tomorrow. 22. Mother wanted her son to become a lawyer and earn much money. 23. The teacher expected the best student to learn the report by heart for the conference. 24. He would like his son to receive the golden medal at the coming championship. 25. She doesn't want you to come without your daughter. 26. I had my diploma thesis bound vesterday.

Exercise 14. Underline the Complex Object in the following sentences. translate them into Ukrainian.

1. We believe electric current to be a quantity of electrons flowing in the circuit per second of time. 2. Various methods cause electrons to move from one atom to another. 3. We know the electrons to flow from the negative terminal of the battery to the positive one. 4. We know the impurity concentration to be an important factor in solid-state technique. 5. We know the electric charges to be positive and negative. 6. We know a transistor to have two junctions and three electrodes called an emitter, a collector and a base.7. We know the simpliest semiconductor device to be a junction diode. 8. We know a junction-solid-state device having three electrons to be a transistor. 9. We consider current to be increased by increasing the e.m.f. 10. When the current flows along the conductor we notice a magnetic field be developed around it. 11. We know the use of electronics to raise the development level of many branches of engineering. 12. We know solid-state devices to be made of semiconductor crystals. 13. We know electronics to be the branch of science and technology which studies the conduction of electricity through gases or vacuum. 14. The only force that make electrons move is that of caused by the fields of other electrons. 15. We know the electron to be the smallest known invisible unit of the electric charge. 16. We know different kinds of rays to be emitted by radioisotopes. 17. Now we know neutrino to have a rest mass of about 30 electron-volts.

3 СУБ'ЄКТНИЙ ІНФІНІТИВНИЙ КОМПЛІЕКС (THE SUBJECTIVE INFINITIVE COMPLEX)

Якщо речення We saw him run to the train (Ми бачили, як він біг до поїзда), до складу якого входить об'єктний інфінітивний комплекс, перетворити на пасивне - He was seen to run to the train (Бачили, як він біг до поїзда), то інфінітив to run виражатиме дію, яку виконує особа, позначена займенником he. Отже, he і to run утворюють синтаксичний комплекс. Цей комплекс має функцію складного підмета, тому що присудок речення was seen відноситься не лише до займенника he, а до всього комплексу he...to run (як він біг). Через те, що до складу комплексу входить інфінітив, а весь комплекс виконує роль підмета речення (subject), він називається суб'єктним інфінітивним комплексом (Subjective Infinitive Complex), див. таблицю 3.1.

Першою частиною суб'єктного інфінітивного комплексу може бути займенник і іменник у загальному відмінку.

The boy was seen to run there. Бачили, як хлопець біг туди.

Отже, суб'єктний інфінітивний комплекс складається з двох частин. Перша частина комплексу — іменник у загальному відмінку або особовий займенник у називному відмінку. Друга частина комплексу — інфінітив, що виражає дію, яку виконує або якої зазнає особа або предмет, позначений іменником або займенником.

Ця функція інфінітива називається "суб'єктний предикатив", тому що дія, виражена інфінітивом, є нібито другим присудком до суб'єкта (підмета) речення в даній конструкції.

They were heard to discuss the possibility. Чули, як вони обговорювали таку можливість.

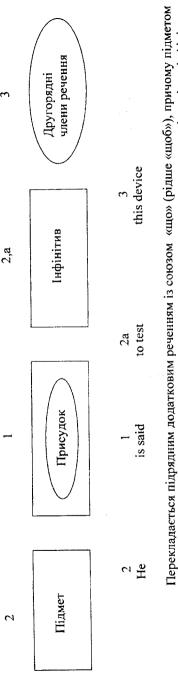
В деяких граматиках сполучення "they + to discuss" разом називається "складний підмет" (the Complex Subject), оскільки, по суті, в реченні йдеться про те, що було чути не тільки \ddot{i} х, а й як вони обговорювали можливість.

Особливістю суб'єктного інфінітивного комплексу ϵ те, що перша і друга його частини відокремлені одна від одної присудком речення.

Дієслова і словосполучення, що вживаються в якості першого компонента такого присудка, необхідно запам'ятати, оскільки вони допомагають розпізнавати конструкцію в реченні. Їх можна поділити на певні групи і розглянути особливості їх вживання і перекладу на українську мову.

Слід зазначити, що наступні дієслова вживаються в даній конструкції тільки в *пасивному* стані.

Суб'єктний інфінітивний комплекс (складний підмет) Subjective Infinitive Complex t Таблиця 3.1



цього звороту.

підрядного речення стає при перекладі підмет всього речення, а присудок відповідає інфінітиву

1. Суб'єктний інфінітивний комплекс вживається з дієсловами, що означають думку (погляд), припущення, сподівання:

to think	думати	is thought	вважають, що
to believe	вірити	is believed	допускається,
to assume		is assumed	передбачається,
to suppose	припускати	is supposed	(як) припускають, допускають,
to consider	вважати	is considered	вважається,
to expect	сподіватися	is expected	сподіваються,
to know	знати, встановлювати	is known	
to find	знаходити, встановлювати	is found	як відомо,

The meeting is expected to begin this

morning.

Сподіваються, що збори почнуться сьогодні вранці.

I was supposed to meet him.

Передбачалось, що я зустріну його.

He was thought to have gone.

Думали, що він пішов.

2. Суб'єктний інфінітивний комплекс вживається з дієсловами, що означають ствердження, повідомлення:

to estimate	підраховувати, встановлювати	is estimated	
to state	повідомляти, стверджувати	is stated	(як) стверджують,
to say	говорити, повідомляти, стверджувати	is said	(як) повідомляють,
to report	повідомляти, доповідати	is reported	***

He is said to write a new novel.

Кажуть, що він пише новий роман.

The delegation is reported to have arrived in Geneva.

Повідомляють, що делегація прибула до Женеви.

The passport is stated to be valid.

Встановлено, що цей паспорт дійсний.

3. Суб'єктний інфінітивний комплекс вживається з дієсловами, що виражають сприймання за допомогою органів чуттів:

to see	бачити	is seen	бачать, видно
to hear	чути	is heard	чують, чути
to feel	відчувати	is felt	відчувають
to notice	помічати	is noticed	помічають
to observe		is observed	спостерігають
to watch	спостерігати	is watched	очевидно

Birds were heard to sing in the garden.

Було чути, як співають пташки у салу.

He was seen to enter the house.

Бачили, як він входив у будинок.

4. Суб'єктний інфінітивний комплекс вживається з дієсловами, що виражають наказ, прохання, дозвіл, примус:

to order	наказувати
to ask, to request	просити
to allow, to permit	дозволяти
to make, to cause, to force	примушувати

They were ordered to leave the hall.

Їм наказали залишити зал.

He was made to put on his coat.

Його примусили одягнути пальто.

Примітка. У суб'єктному інфінітивному комплексі інфінітив вживається з часткою to після всіх дієслів.

5. Суб'єктний інфінітивний комплекс вживається з деякими дієсловами в активному стані:

to seem	эларатися	
to appear	здаватися	
to happen	THOUTHOUSE	
to chance	траплятися	
to turn out	DVIGD TEMLOG	
to prove	виявлятися	

He seemed to be thinking about something.

Здавалось, що він про щось думає.

She proved not to listen to him.

Виявилось, що вона не слухає його.

She didn't seem to have heard what I said.

Здавалось, що вона не почула, що я сказав.

Her mother had chanced to look into her room

Мати випадково заглянула в її кімнату.

6. Суб'єктний інфінітивний комплекс вживається з словосполученнями:

to be sure	безперечно, безумовно.
to be certain	напевно
to be likely	вірогідно, певно, ймовірно
to be unlikely	малоймовірно

We are not likely to meet often.

Навряд чи нам доведеться часто зустрічатися

He is certain to be sleeping.

Він, напевно, зараз спить.

We are sure to learn of it

Ми, напевно, дізнаємося про це.

3.1 Переклад суб'єктного інфінітивного комплексу на українську мову

Речення з суб'єктним інфінітивним комплексом на українську мову перекладаються здебільшого складнопідрядними реченнями. Переклад слід починати з присудка, який в українській мові перетворюється на неозначено-особове або безособове головне речення. Перша частина комплексу (іменник або займенник), яка є підметом англійського речення, стає підметом підрядного додаткового речення, а інфінітив перекладається особовою формою дієслова, що стає присудком підрядного речення:

His father is said to work at this plant.

Кажуть, що його батько працює на цьому заводі.

He was supposed to work Sunday afternoons and evenings. (Dreiser)

Передбачалося, що він буде працювати по неділях після полудня і вечорами.

He seemed to be looking for words. (Greene)

Здавалося. що він добирає слова.

Речення з дієсловом-присудком, що означає наказ, прохання, дозвіл, примус, а також з дієсловами to consider, to believe, to think перекладаються на українську мову простими неозначено-особовими або безособовими реченнями; а інколи й простими особовими реченнями:

The pupils were allowed to use dictionaries

Учням дозволили (дозволялося) користуватися словниками.

She is considered to be the best singer.

її вважають (вона вважається) найкращою співачкою.

Речення з дієсловом-присудком to prove, to turn out перекладаються простими особовими реченнями:

He turned out to be a good chess-player.

Він виявився хорошим шахістом.

Речення з присудком, вираженим словосполученнями to be likely, to be sure, to be certain, а в багатьох випадках і дієсловами to seem, to appear перекладаються простими реченнями з вставними словами:

He is sure to ring you up.

Він, напевно, зателефонує вам.

They are likely to be late.

Вони, очевидно, запізняться.

She seems to have spoken on the subject before. (Parker)

Вона, здається, говорила на цю тему раніше.

ВПРАВИ

Exercise 1. Make up five sentences from each table using the Subjective Infinitive Complex.

He She You They	is are was were	reported said	to know this language. to be writing a play. to have finished school. to have arrived in Kyiv. to have been teaching for five years.
--------------------------	--------------------------	------------------	--

			_ 1
He	am is	expected known	to arrive in Kyiv tomorrow. to be very strong in body.

She	are	believed	to be interested in chemistry.
We	was	considered	to make a present for her.
They	were	supposed	to be a lover of music.

I am seen He is heard She are watched We was You were	to cross the street at that place. to play volley-ball. to burst out laughing. to unlock the door. to approach the school building.
---	---

I	seem(s)	to understand spoken English.
He	appeared	to have recognized me.
She	happened	to be cooking dinner.
We	proved	to know the city very well.
They	chanced	to meet them at the exhibition.

I He We You They	am is are was were	sure certain likely unlikely	to come back in time. to know French. to lose the match. to solve the problem. to get an excellent mark.
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Exercise 2. Transform the sentences using the Subjective Infinitive Complex instead of the Objective Infinitive Complex.

Model: I saw her read the letter. -She was seen to read the letter.

1. We heard her sing a folk song. 2. I saw him put his coat on. 3. They heard the clock strike nine. 4. We saw the rider disappear in the distance. 5. We saw the plane take off. 6. They expected him to return in a fortnight. 7. We know her to be a talented actress. 8. Everybody supposed him to be a foreigner. 9. Everybody considered him to be a great man. 10. I expect the telegram to be sent tomorrow.

Exercise 3. Transform the following complex sentences into simple ones using the Subjective Infinitive Complex.

- A. 1. It is said that they work in the field. 2. It is believed that she knows several foreign languages. 3. It is said that the film is very interesting. 4. It is supposed that he understands Spanish. 5. It is reported that the cosmonauts feel well.
 - B. 1. It is said that Kate is preparing for her entrance examinations. 2. It is

said that they are working in the field. 3. It is reported that the painter is working at a new picture. 4. It is believed that he is writing a historical novel.

- C. 1. It is reported that the delegation arrived in Paris on the 10th of September. 2. It is reported that the spaceship has reached the moon. 3. It is believed that this house was built in the 18th century. 4. It is said that she has been teaching mathematics for thirty years.
- D. 1. It is expected that he will arrive on Monday. 2. It is supposed that the book will be published next year. 3. It was expected that the film would be shown in May. 4. It was supposed that the weather would be fine in April. 5. It is expected that he will buy a car.
- E. 1. It seems that they live in the same house. 2. It seems that he is composing a new symphony. 3. It seems that he knew it long ago. 4. It seems that she is listening. 5. It proved that you were right. 6. It turned out that the text was very difficult.

Exercise 4. Transform the sentences according to the models.

Models: It is (im) probable that he will come tomorrow.—

He is (un) likely to come tomorrow.

He will certainly come.— He is sure to come.

He will probably come.— He is likely to come.

- A. 1. It is probable that it will rain before evening. 2. It is improbable that she will forget her promise. 3. It is probable that the winter will be very cold this year. 4. It is probable that they will be late. 5. It is improbable that this medicine will help him.
- B. 1. They will certainly like this film. 2. The doctor will certainly do his best. 3. He will probably forget the address. 4. She will probably catch cold. 5. He will certainly do his duty. 6. The weather will probably change.

Exercise 5. Translate the following sentences paying attention to the Complex Subject.

1. Zhukovsky is known to have been a wonderful lecturer and teacher. 2. The expedition is said to have collected very interesting material concerning natural resources of that region. 3. A big group of constructors was reported to have been sent to that area. 4. A new town is supposed to be built in this area. 5. They are believed to have arrived at the place of destination. 6. Cold weather was not expected to set in so soon. 7. The average temperature in May this year is reported to have been considerably lower than last year. 8. Black colour is known to absorb light rays most intensively. 9. He is unlikely to be forced to do something if he doesn't want to. 10. This invention is believed to help save up much metal. 11. When translating the text at the exam the students were allowed

Exercise 6. Translate the following sentences into Ukrainian paying attention to the Subjective Infinitive Complex.

1. The river is supposed to flow in this direction. 2. His childhood is said to have been very difficult. 3. You are expected to take these things for granted. 4. He didn't seem to notice me. 5. The circumstances seem to have become strange indeed. 6. He is said to have owned a very good library. 7. He was told to find out a few more things about the whole business. 8. The man doesn't seem to recognize you. 9. She seems to have done it especially for you. 10. You're not supposed to mark other people's books. 11. The Victoria Falls are said to be very beautiful. 12. She was said to have the first edition of the book. 13. He was expected to buy a cheap edition of the dictionary. 14. This doesn't seem to be the right key. 15. The man seems to be a stranger here. 16. You're supposed to be grateful when somebody does something of the kind for you. 17. She seems to be used to the thought that they'll have to move to another flat. 18. For some reason or other she does not seem to be grateful at all. 19. It seems to be an interesting comparison. 20. She is believed to have been a librarian in those days.

Exercise 7. Find the Subjective Infinitive Complex in the following sentences and translate them into Ukrainian.

1. He is thought to have been a very good singer. 2. They are expected to send a reply today. 3. The man was told to move his car. 4. They are said to have moved to a new flat. 5. Who is supposed to sign the letter? 6. The doctor is supposed to have prescribed you something. 7. This process is sure to make a new kind of plastic. 8. The results of the experiment are believed to be very good. 9. The new instrument is expected to help scientists solve many important problems. 10. The members of the committee are understood to have come to an agreement. 11. He was known to give more attention to his spelling. 12. He is said to have offered them his services. 13. In the 19th century the dark areas on Mars were thought to be seas. 14. We were supposed to spend the day on board the ship. 15. The seamen were not supposed to go ashore that day. 16. The expedition is said to have made a very important discovery. 17. They were expected to cover 300 miles that day. 18. He is understood to be curious about these things. 19. She is known to have been interested in the subject. 20. They were heard to agree to do it. 21. The ship is expected to be here on Tuesday. 22. They are supposed to have followed him. 23. People are supposed to be able to ski there all the year round. 24. Steve was assumed to be very good at this sort of thing. 25. They were believed to have known the secret at that time. 26. He was expected to hunt for some challenging job. 27. She was supposed to arrange her friend's arrival by letter. 28. He is considered to have made the right

choice. 29. Helen is thought to apply for a job as a typist.

Exercise 8. In this exercise you have to read a sentence and then write another sentence with the same meaning using the Subjective Infinitive Complex.

Example: It is believed that the wanted man is living in New York.

The wanted man is believed to be living in New York.

1. It is said that many people are homeless after the floods. Many people are said 2. It is known that the Prime Minister is in favour of the new law. The Prime Minister 3. It is expected that the government will lose the election. The government 4. It is thought that the prisoner escaped by climbing over the wall. The prisoner 5. It is believed that the thieves got in through the kitchen window. The thieves 6. It is alleged that he drove through the town at 90 miles an hour. He 7. It is reported that two people were seriously injured in the accident. Two people 8. It is said that three men were arrested after the explosion. Three men
Exercise 9. There are a lot of stories about Arthur but nobody knows whether they are true. Make sentences with supposed to.
Example: People say that Arthur eats snails. Arthur is supposed to eat snails.
1. People say that Arthur is very rich. Arthur 2. People say that he has 22 children. He 3. People say that he sleeps on a bed of nails. He 4. People say that he won a lot of money gambling. He 5. People say that he writes poetry. He
Exercise 10. Now you have to use supposed to with its other meaning. In each example what happens is not what is supposed to happen. Use supposed to or not supposed to with one of these verbs: elean come be win smoke phone study take cycle.
Examples: Tom, you're smoking! But you know you are not supposed to smoke in this room.
Why are the windows still dirty? You were supposed to clean them.
1. What are the children doing at home? They at school. 2. He in the evenings but he always goes out. 3. Don't put sugar in your tea. You know you sugar. 4. Oh dear! I Ann but I completely forgot. 5. They arrived very early, at 2.00. They until 3.30. 6. She the grant but her potential rival left her behind. 7. Most days John to work but it is raining today and he is taking his car.

Exercise 11. This time you have to make sentences with seem and appear using the Subjective Infinitive Complex.

Examples: Is he waiting for someone? He appears to be waiting for someone. Has she lost weight? She seems to have lost weight.

1. Is Tom worried about something?. He seems . 2. Does Ann like Jack?
She appears 3. Is that man looking for something? He appears 4.
Has that car broken down? It seems 5. Have they gone out? They appea

Exercise 12. Read and translate the following sentences into Ukrainian. Pay attention to the Subjective Infinitive Complex.

1. Light is proved to travel in straight lines. 2. Light intensity proves to be measurable. 3. The speed of light in free space is proved to be a measured constant. 4. This property seems to refer to a restricted number of materials. 5. The property appears to have been mentioned frequently in the past. 6. They are likely to be familiar with this phenomenon. 7. The approach is assumed to provide an appropriate solution to the problem.

Exercise 13. Make an assumption using the verbs given in brackets.

Model: The value increases. (assume) - The value is assumed to increase.

1. These values are in good agreement with the experimental ones. (consider) 2. This density changes with temperature. (know) 3. The magnitude provides slow shift in energy. (be likely) 4. The product contains two components. (assume) 5. The distance is shown indirectly. (expect) 6. The altitude is uniform during this period of time. (seem) 7. The path is reduced twice. (appear) 8. The value is derived from the above equation. (suppose).

Exercise 14. Answer the following questions. Make a generally accepted judgement using the verbs given in brackets.

Model: Does this value change? (expect) - It is expected to change.

1. Does this metal become glowing at 300°C? (expect) 2. Is the luminous intensity of a firefly measurable? (know) 3. Does platinum become glowing at this temperature? (assume) 4. Does this substance emit visible light? (see) 5. Is light from a fluorescent lamp incandescent? (doubt) 6. Are the two surfaces at

equal distance from the point source? (find).

Exercise 15. Translate the following sentences into English using the Subjective Infinitive Complex.

1. Відомо, що ці речовини мають одні і ті ж самі властивості. 2. Відомо, що ці властивості дуже добре вивчено. 3. Ці дані, напевно, були дуже приблизні. 4. Напевно, цей прилад працював без поломок. 5. Припускається, що цей блок буде використаний в нашому експерименті. 6. Стало відомо, що вони вже користувались схожим приладом. 7. Припускають, що вони зараз працюють над складною проблемою. 8. Передбачалося, що він буде працювати по неділях після полудня і вечорами.

Exercise 16. Translate the following sentences into Ukrainian. Mind that the verb to prove in the Active Voice is translated by виявляється; in the Passive Voice it is translated by доведено.

1. They proved to have provided all for the experiment. 2. The technique of the investigation proved to be a success. 3. Lasers proved to be of great help in medicine and industry. 4. An ordinary light was proved to consist of waves all out of phase with each other. 5. All the waves in a laser beam were proved to have the same wavelength. 6. A laser beam proved to have a very definite colour. 7. The laser beam proved to be intermittent (дискретний).

Exercise 17. Translate the following sentences into Ukrainian paying attention to the Complex Subject.

1. These devices are found to be in many respects more reliable than vacuum tubes, 2. Solid-state devices are observed to operate well under the conditions of definite temperature range. 3. A junction solid-state device having three electrodes is known to be a transistor. 4. Under these conditions the diode is said to be space charge limited. 5. The experiment was considered to be very dangerous. 6. This law is generally taken to apply to all gases. 7. Light waves are now believed to be due to the motions of the electrons within the atoms. 8. This method happens to give satisfactory results. 9. Many sources of x-rays are supposed to exist in the universe. 10. A non-ionised clean air is considered to be a good insulator. 11. Electrons are thought to be in different groups around nucleus, 12. A lighted fluorescent light is unlikely to be too hot to the touch. 13. The valve is said to be "cut-off". 14. The useful range of values of anode potential for linear amplification is seen to be limited. 15. It is desirable in most applications of the diode that no current should flow under this condition and this is found to be true for anode voltages up to a certain value. 16. The atom is considered to consist of a positively charged nucleus and a number of negatively charged electrons revolving around the nucleus in circular orbits. 17. A highfrequency current is known to radiate electromagnetic energy. 18. The amplifying effect in a vacuum tube is known to be based on the control of an electron flow in a vacuum. 19. The conductivity is found to increase very strongly with increasing temperature. 20. Copper is claimed to have relatively large conductive value.

Exercise 18. Find infinitive complexes in the following sentences and state their functions. Translate the sentences.

- 1. Then he seemed to hear a voice. (Gordon) 2. I saw her look at him. (Dickens)
- 3. What do you want me to do? (Heym) 4. Jude watched her disappear in the direction of the hotel. (Hardy) 5. She made her brother talk of himself. (Wilde) 6. I never expected you to ask him at all. (Shaw) 7. My father doesn't want us to know each other. (Galsworthy) 8. He seemed to be looking for words. (Greene) 9. Her face seemed to have become much more youthful. (Gaskell) 10. We saw him enter the station. (Gaskell) 11. Mr. Rochester is not likely to return soon. (Bronte) 12. She seemed not to listen to him. (Wilde) 13. Clyde felt himself
- (Bronte) 12. She seemed not to listen to him. (Wilde) 13. Clyde felt himself tremble. (Dreiser) 14. I don't like to hear you speak so of Harry. (Gaskell) 15. You don't seem to understand how hard it is. (Tressel)

Exercise 19. Translate into English using infinitive complexes.

- А. 1. Ми бачили, як вона переходила вулицю. 2. Я помітив, що вона розгорнула книжку. 3. Учні бачили, як приземлився літак. 4. Я чула, як вони співали цю пісню. 5. Ми помітили, що він встав і вийшов з кімнати. 6. Всі чули, як ти сказав це. 7. Вони бачили, що я біг додому. 8. Мати почула, що дитина заплакала.
- В. 1. Я хочу, щоб ви зробили це сьогодні. 2. Мені хотілося б, щоб ви прийшли на збори. 3. Його батько хоче, щоб він став лікарем. 4. Мені не подобається, коли він говорить так повільно. 5. Я хочу, щоб ти залишився тут. 6. Я не хочу, щоб ви йшли сьогодні в кіно.
- С. 1. Ми сподівалися, що він приїде у середу. 2. Я не думав, що ти запізнишся. 3. Ви вважаєте її добрим організатором? 4. Лікарі сподіваються, що він скоро видужає. 5. Вчені вважають, що це місто було засноване в XII столітті. 6. Ми сподіваємося, що наша волейбольна команда виграє матч.
- D. 1. Учитель змусив нас вивчити вірш напам'ять. 2. Що примусило вас іти туди в таку погану погоду? 3. Ми примусимо його прибрати кімнату. 4. Дощ змусив мене залишитися тут. 5. Я не змушую вас робити це. 6. Він не змушує їх працювати над проектом на цьому тижні. 7. Ситуація примусила мене негайно прийняти рішення.
- Е. 1. Кажуть, що він зараз живе в Києві. 2. Кажуть, що він жив у Києві. 3. Повідомляють, що польська делегація прибула до Києва. 4. Вважають, що ця фортеця була збудована в X ст. 5. Вважають, що він дуже освічена

- людина. 6. Кажуть, що він найкращий спортсмен в університеті. 7. Відомо, що вона вивчала кілька іноземних мов.
- F. 1. Було чути, як наближався поїзд. 2. Кожного ранку її бачили в крамниці. 3. Чули, як вона співала в сусідній кімнаті. 4. Ніколи не бачили, щоб він сердився. 5. Було видно, як високо в небі летів літак.
- G. 1. Вона, здається, знає французьку мову. 2. Здається, він одержав ваш лист. 3. Здавалося, що вони не слухають його. 4. Сталося так, що ми зустрілись у Полтаві. 5. Він виявився здібним математиком. 6. Очевидно, ви забули про це.
- Н. 1. Він, напевно, прийде сьогодні ввечері. 2. Вони, очевидно, знають про це. 3. Навряд, щоб вона дістала цю книжку. 4. Цей фільм, безсумнівно, сподобається вам. 5. Ми, мабуть, не підемо туди. 6. Він, очевидно, запізниться.

4 ДІЄПРИКМЕТНИК (THE PARTICIPLE)

Дієприкметник – це неособова форма дієслова, яка має властивості дієслова, прикметника або прислівника. В англійській мові є два дієприкметника: Present Participle (дієприкметник теперішнього часу) або Participle I і Past Participle (дієприкметник минулого часу) або Participle II.

Дієприкметник в англійській мові має форму теперішнього часу (Present Participle), минулого часу (Past Participle) і перфектну форму (Perfect Participle), а також форми активного і пасивного стану (див. таблицю 4.1).

Таблиця 4.1 - Форми дієприкметників та їх переклад

Е		Стан
Група	Active	Passive
Participle I	asking < запитуючий запитуючи	опитуваний (тобто якого опитують) веing ним (тобто коли аsked його опитували) бувши опитаним (тобто коли його опитали)
Participle II	-	asked – опитаний (when) asked коли його опитали
Perfect Participle	having asked запитавши	having been asked - бувши запитаним (тобто коли його запитали)

4.1 Вживання дієприкметників

Present Participle Active

Present Participle Active виражає дію, одночасну з дією, вираженою дієсловом-присудком. Якщо присудок стоїть в теперішньому часі, то дія, що виражена Present Participle, відноситься до теперішнього; якщо присудок стоїть в минулому часі, то дія, виражена Present Participle, відноситься до минулого; якщо присудок стоїть в майбутньому часі, то дія, виражена Present Participle, відноситься до майбутнього:

Knowing the English language well, he can translate newspaper articles without a dictionary.

Knowing the English language well, he was able to translate newspaper articles without a dictionary.

Knowing the English language well, he will be able to translate newspaper articles without a dictionary.

Знаючи добре англійську мову, він може перекладати газетні статті без словника.

Знаючи добре англійську мову, він міг перекладати газетні статті без словника.

Знаючи добре англійську мову, він зможе перекладати газетні статті без словника.

Present Participle може також виражати дію, яка збігається з моментом мовлення, незалежно від того, в якому часі дієслово-присудок.

Present Participle Active вживається в функції означення. В цій функції Present Participle вживається:

1. Перед іменником:

They looked at the flying plane.

Вони дивились на літак, який летів.

2. Після іменника:

The girl **answering** the question knows English well.

Дівчина, яка дає відповідь на питання, добре знає англійську мову.

Present Participle Active вживається в функції обставини. В цій функції Present Participle вживається:

1. В дієприкметникових зворотах для вираження обставини часу. Такі звороти відповідають підрядним реченням часу. В цьому випадку перед дієприкметником звичайно стоїть сполучник while або when:

When going home (=When I was going home) I met my brother.

Ідучи додому (=Коли я йшов додому), я зустрів брата.

2. В дієприкметникових зворотах для вираження обставини причини:

Knowing English well (=as he knew English well) he translated the article without a dictionary.

Знаючи добре англійську мову (=Так як він знав англійську мову), він переклав статтю без словника.

3. В дієприкметникових зворотах для вираження обставини способу дії:

He sat in the armchair **reading** a newspaper.

Він сидів в кріслі, **читаючи** газету. (Він сидів в кріслі і читав газету).

Форма Present Participle Active в сполученні з допоміжним дієсловом to be вживається для утворення часів групи Continuous. В цьому випадку Present Participle складає єдине ціле з дієсловом to be і перекладається теперішнім, минулим або майбутнім часом:

I am reading. I was reading. I shall be reading. Я читаю. Я читав. Я буду читати.

Present Participle Passive

Present Participle Passive вживається в функції означення в дієприкметникових зворотах, які відповідають означальним підрядним реченням з дієсловом в пасивному стані. В цій функції Present Participle вживається для вираження дії, яка відбувається в теперішній момент (момент мовлення):

Yesterday the professor told us about the experiments now being carried on in his laboratory (=which are now being carried on in his laboratory).

Вчора професор розказував нам про дослідження, які проводяться зараз в його лабораторії.

Present Participle Passive вживається в функції обставини в дієприкметникових зворотах для вираження причини і часу. Такі звороти відповідають підрядним реченням причини і часу з дієсловом в пасивному стані:

Being asked to take part in this expedition, he agreed at once.

Коли його попросили взяти участь в цій екпедиції, він одразу погодився.

Being interested in this problem he joined our expedition.

Він приєднався до нашої експедиції, тому що цікавився цією проблемою.

Past Participle

Past Participle вживається в функції означення:

1. Перед іменником:

A broken cup was lying on the table.

Розбита чашка лежала на столі.

2. Після іменника в дієприкметникових зворотах, які відповідають означальним підрядним реченням з дієсловом в пасивному стані:

Our firm is interested in the automobiles **produced** by this plant.

Наша фірма цікавиться автомобілями, які випускаються цим заводом.

Past Participle вживається в функції обставини.

Well designed the device will function properly.

Якщо прилад добре спроектований, він буде працювати відповідним чином.

Perfect Participle Active

Perfect Participle Active вживається в функції обставини і виражає дію, що передує дії, яка виражена дієсловом-присудком.

Perfect Participle Active вживається в дієприкметникових зворотах для вираження обставини причини. Такі звороти відповідають обставинним підрядним реченням причини з дієсловом в формі Perfect:

Having fulfilled the terms of the contract we refused to admit the claim of the firm.

Ми відмовились визнати претензію фірми, тому що ми виконали всі умови.

Perfect Participle Active вживається також в функції обставини часу, коли необхідно підкреслити, що дія, виражена дієприкметником, передує дії дієслова-присудка:

Having collected all the material (=After he had collected all the material), he was able to write a full report on the work of the commission.

Зібравши весь матеріал (=Після того як він зібрав весь матеріал), він зміг написати повний звіт про роботу комісії.

Perfect Participle Passive

Perfect Participle Passive вживається в функції обставини причини і часу і виражає дію, яка передує дії, вираженій дієсловом-присудком:

Having been asked the students continued with their work in the lab.

Після того як студенти були опитані (після того як студентів опитали), вони продовжували свою роботу в лабораторії.

Таким чином, дієприкметник виконує тільки дві функції в реченні — означення та обставини (див. таблицю 4.2).

ВПРАВИ

Exercise 1. Form Participle I (Indefinite, Active, Passive) from the following verbs and translate them into Ukrainian:

to build, to grow, to think, to determine, to move, to obtain, to produce, to get, to develop, to return, to make.

Exercise 2. Form Participle II from the following verbs and translate them into Ukrainian:

to bind, to send, to add, to achieve, to develop, to decide, to leave, to equip, to write, to do, to maintain.

Exercise 3. Translate the following word-combinations into Ukrainian:

A. the student attending all the lectures; the plan containing many details; the workers building a new house; the engineer using a new method; the engineer carrying out the research.

	ПЕРЕ	ПЕРЕКЛАДАЄТЬСЯ	
		дієприкметником	The girl asking the question is from our group.
	впнепвнео	на	Дівчина, яка задас питання, з нашої групи.
	Canarenna	-учий, -ючий,	The student being asked by the teacher now is our monitor.
		-ачий, -ячий	Студент, зараз опитуваний викладачем, наш староста.
Participle I			Asking me about it she smiled.
Active: Ving: asking			Питаючи мене про це (коли вона питала мене про це),
Passive: being + Ved/V ₃	обставина	дієприкметниковим вона посміхнулась.	вона посміхнулась.
		зворотом	Being asked to take part in this work he agreed at once.
			Коли його попросили взяти участь в цій роботі, він
			одразу погодився.
Participle II	означення	дієприкметниковим зворотом	The question asked by the teacher was not easy. Зворотом нелегким.
Active: —		дієприкметником,	When asked to help he agreed at once.
Passive: Ved/V ₃ : asked	обставина	обставинним підрядним	Коли його попросили допомогти, він одразу погодився.
		реченням	
Perfect Participle			Having asked some questions the students left the teacher's
Active:			room,
having + Ved/V ₂ :			Після того як студенти задали декілька питань, вони
having asked	обставина	підрядним	пішли з викладацької.
Passive:		реченням	Having been asked by the teacher the students left the room.
having been + Ved/V ₂ :			Після того як студенти були опитані викладачем (після
having been asked		e e e e e e e e e e e e e e e e e e e	того як викладач опитав студентів), вони пішли з
וומאוווק פיטוו מפונים			AVENTODII.

B.using the new methods; constructing new machines; using the new equipment; refusing to give an explanation; developing new technology.

C.having calculated the distance; having introduced new methods of work; having installed new equipment; having obtained the necessary information; having passed all examinations.

D.the achieved results; all developed countries; the information obtained recently; help offered by the teacher; the research done in the laboratory.

Exercise 4. Translate the following word-combinations into English.

Студент, що вивчає англійську; методи, що покращують дослідницьку роботу; студент, що складає екзамен; інженер, що використовує новітні досягнення; студент, опитаний викладачем; листи, знайдені в столі; годинник, зроблений в Японії; машина, сконструйована молодим інженером; обладнання, встановлене в лабораторії; вивчаючи іноземну мову; читаючи книгу; відвідуючи лекції; прочитавши цікаву книжку; встановлюючи нове обладнання; отримавши нову інформацію; закривши двері; закінчивши інститут.

Exercise 5. Translate the sentences into Ukrainian paying attention to Participle I and Participle II and their functions in the sentence.

1. All the engineers working at the Ministry of Foreign Trade must know foreign languages. 2. You must learn all the words given on page 125. 3. Travelling about Siberia, he saw a lot of newly-built towns. 4. When speaking at the meeting yesterday, I forgot this fact. 5. The question discussed at the meeting was very important. 6. The boy sometimes went to sleep while watching TV. 7. Not knowing his address, I couldn't visit him. 8. He liked to sit on the sofa smoking a cigarette and watching TV.

Exercise 6. Express the idea contained in the clause by the Participle complex.

1. Students who read a lot in English know the language better than those who don't read at all. 2. While I was reading the book you gave me yesterday, I found a lot of new words. 3. I live in a house which was built more than a hundred years ago. 4. Since I didn't know my friend's new address, I could hardly hope to find him. 5. In this shop you can buy things which are made in different regions of Ukraine. 6. Once when I was walking in the wood, I found a flower which I had never seen before. 7. I always read books which describe the lives of great people with interest. 8. What's the name of the teacher who's examining Group three? 9. When we discussed this book, we found out a lot of controversial things. 10. When he was asked the same question, he didn't know what to say either. 11. As I was very busy, I couldn't help them.

Exercise 7. Make up five sentences from each table.

I He/She We You They	approached came up to pointed to called	the woman the man the boys the girls the children	reading a newspaper. sitting on the bench. playing basket-ball. working in the garden. digging potatoes.	
----------------------------------	--	---	--	--

The man The woman The boy The girl The pupil The man standing at the window making the report approaching us crossing the street	is my best friend. lives in our house. is a good swimmer. works at this plant. dances very well.
--	--

I sat He/She stood We approached me You went away They read the letter	smiling. reading a newspaper. singing. trembling. listening to the song.	
--	--	--

Entering the room	I	apologized to her.
Opening the door	he/she	decided to tell her the truth.
Seeing her	we	greeted her.
Coming home	you	recognized her at once.
Hearing her voice	they	found nobody there.

When	reading the story	I	heard a knock at the door.
While	writing a letter	he/she	
	playing chess	we	used a dictionary.
	preparing the report	you	fell asleep.
Ja .	watching television	they	forgot about it.
	translating the text		remembered you.
	read the book	I	decided to take a short rest.
Harring	written the letter	he/she	went shopping.
Having	cleaned the room	we	switched on the TV set.
	done it	you	went to the post-office.
	finished it	they	went for a walk.

I	was reading	a book	printed in our town.
He/She	bought	the newspaper	published last month.
We	looked for	an article	received this morning.
You	took	the magazine	written by Professor Brown.
	brought	the letter	intended for the conference.
They	used	the paper	13:1

The agreement	concluded by them	serves the cause of peace.
	signed last year	was soon broken.
The document		is useful for both sides.
The contract		has been carried out.
		was approved by our people.

Exercise 8. Transform the following sentences using participle phrases instead of the subordinate clauses.

- A. Model: The boys who live in this house formed a football team.— The boys living in this house formed a football team.
- 1. Most of the people who work at our factory have received comfortable flats in new houses. 2. Many pupils who learn English are members of our English club.
- 3. The man who sells newspapers showed me the way to the post-office. 4. The students who live on the left bank of the river cross this bridge twice a day.
- 5. The woman who teaches English at our school studied in Kyiv.
- B. Model: The girls who are watering flowers are my friends.— The girls watering flowers are my friends.
- 1. The man who is making the report is our history teacher. 2. The workers who are repairing the road go home by bus. 3. The girl who is reciting the poem is our teacher's daughter. 4. The boys who are playing hockey live in our house.
- 5. The men who are working in this field of electronics go to the exhibition.
- C. Model: When we arrived in London, we went sightseeing the city.— Arriving in London, we went sightseeing the city.
- 1. When she heard her name, she turned round. 2. When we saw our teacher, we stopped and waited for her. 3. When he came home, he switched on the TV set.
- 4. As I entered the hall, I saw my friends dancing round the fir-tree. 5. As I went out of the shop, I met my schoolmate.

- D. Model: When I read this story, I came across many new words.— When reading this story, I came across many new words.
- 1. When the pupils discussed this novel, they expressed their thoughts in good literary language. 2. When Jane cooked dinner, she forgot to salt it. 3. When Paul studied at the University, he published several scientific articles. 4. While I was waiting for you, I read this magazine.

E. Model: When she finished her work, she went home.— Having finished her work, she went home.

1. After we had passed our examinations we went to a summer camp. 2. As I had lost my key, I couldn't get in. 3. When Nick had a dictionary, he did not have to go to the reading-hall every day. 4. As we had booked tickets beforehand, we went to the theatre half an hour before the performance began. 5. After they received the telegram, they packed and left for Glasgow.

F. Model: We live in the city which was founded 1.500 years ago.— We live in the city founded 1.500 years ago.

1: We live in a house which was built last year. 2. She received a telegram which was sent yesterday. 3. I've got a TV set which was made in Lviv. 4. The decisions which were adopted at the conference are supported by many scientists. 5. The machines which are made at our plant are exported to many countries of the world.

Exercise 9. Replace one of the homogeneous predicates by Participle I.

Model: The girls walked home and sang.—The girls walked home singing.

1. She looked at me and smiled. 2. The children sat and watched television. 3. The girl spoke and trembled. 4. The children ran about and shouted. 5. He turned over the pages of a book and looked at the pictures. 6. The man read a book and made notes from time to time.

Exercise 10. Find the participles, state their form and function in the sentence. Translate the sentences.

1. Dressing myself as quickly as I could I went for a walk. (*Dickens*) 2. She came into the dressing-room to look for things belonging to their father and

mother. (Gaskell) 3. Mary stood for a time in silence, watching and listening. (Gaskell) 4. Still looking at me, she shook her head while I was speaking. (Dickens) 5. I saw a passing shadow on her face. (Dickens) 6. He walked around, saying nothing. (Heym) 7. Mary sat still looking at the writing. (Gaskell) 8. We sat there talking about our pleasant old Canterbury days. (Dickens) 9. They ran to the steps leading down the water. (Gaskell)

Exercise 11. Translate the following sentences paying attention to the difference in translation between Participle I and Participle II.

PARTICIPLE I

- 1. The film following the report showed
- 2. The discussion following the meeting showed
- 3. His article following the research was
- 4. A number of works following the experiments were
- 5. The lecture following the demonstration of the experiment was
- 6. The discussion following the report was

PARTICIPLE II

- 1. The film followed by a discussion showed
- 2. The experiment followed by a lecture showed ...
- 3. His scientific work followed by an article was
- 4. The theory followed by our professor was
- 5. The lecture followed by a demonstration of a film was...
- 6. The method followed by us was \dots

Exercise 12. Translate the following sentences paying attention to participles. Define their functions.

1. Introducing new words the teacher explained some of their meanings in English. 2. While introducing new words the teacher gave some examples. 3. The new words introduced at the last lesson are to be repeated at the next lesson. 4. The words introduced are not very difficult to remember as they are of the international origin. 5. The new words being introduced at this lesson are easy to comprehend as they are international ones. 6. Being introduced new words should be repeated by the students in chorus. 7. Having introduced the new words the teacher asked us to repeat them after him. 8. Heaving been introduced the new words were repeated by the students. 9. When introduced new words were repeated by the students many times.

Exercise 13. Translate the Ukrainian words and word-combinations given in brackets using Participle I or Participle II.

1. The research work (що проводиться) at the laboratory is of great

importance for our Institute. 2. The engineer (що проводить) this research is a physicist. 3. The students (що відвідують) these lectures are from various departments. 4. The lecture (прочитана) by this scientist was challenging. 5. (Закріпивши) the bar in a chuck, the operator began to turn it. 6. Intelligent tools (які містять) the microprocessor and ROM are the same as those (які використовуються) while working on the terminal. 7. The apparatus (який перетворює) heat into mechanical work is called the heat engine. 8. (Будучи) the main component of chips the silicon is widely used in microelectronics. 9. The experiments (які проводяться) attract attention of all the scientists.

Exercise 14. Translate the following sentences into English using the participles.

1. Проводячи вимірювання, ми знайшли 2. Вимірювання, зроблені з великою точністю, були 3. Проводячи вимірювання, ми записали 4. Збільшуючи об'єм, зверніть увагу на 5. Експеримент, що слідував за дослідженням, показав 6. Метод, якому ми слідували, був розроблений 7. Використавши цей метод зварювання, ми одержали хороший результат. 8. Визначаючи відстань, ми повинні знати 9. Визначена таким чином відстань буде дорівнювати

Exercise 15. Make up five sentences from each table paying attention to the Objective Participle Complex.

I	saw	me	playing tennis.	
He	heard	you	quarrelling.	
She	watched	him	swimming across the river.	
We	observed	her	skating on the pond.	
You	noticed	us	climbing a tree.	
They	found	the boys	whispering something.	
I	was	seen	entering the department store.	
He/She	were	heard	running away.	
We		watched	crying.	, 4. 1)
You		observed	playing the violin.	
They		noticed	climbing over the fence.	
I	had	my	hair cut.	,
He	will have	his	coat cleaned.	
We		our	shoes mended.	
You		your	dinner cooked.	
They		their	dress made.	

Exercise 16. Transform the following complex sentences into simple ones using the Objective Participle Complex.

Model: I saw them as they were working in the field.— I saw them working in the field.

1. I saw him as he was picking flowers in the park. 2. We watched them as they were playing hockey. 3. The teacher observed the pupils as they were writing compositions. 4. I saw the girl as she was crossing the street. 5. She watched him as he was repairing his car. 6. We saw wild geese as they were flying to the South.

Exercise 17. Combine the given two sentences into one using the Objective Participle Complex.

Model: The girls were singing a folk song. I heard it.— I heard the girls singing a folk song.

1. The woman was shouting at the boys. We heard it. 2. The birds were singing in the trees. She heard it. 3. The man was trying to unlock the door. I noticed it, 4. The boy was whistling. They heard it. 5. The children were swimming in the river. We watched it.

Exercise 18. Paraphrase the following sentences using the Objective Participle Complex.

Mo de l: The hairdresser did Ann's hair. — Ann had her hair done.

1. The tailor made a suit for him. 2. The worker repaired his car 3. The photographer took a photograph of him. 4. The typist typed his article for him. 5. The waitress brought them dinner. 6. His wife washed and ironed his shirt. 7. Their daughter cooked supper for them. 8. The porter brought his luggage into the car.

Exerrise 19. Translate into English using the Objective Participle Complex.

1. Ми спостерігали, як хлопці грали в футбол. 2. Я бачила, як діти пили чай. 3. Вони чули, як її батько розмовляв німецькою мовою. 4. Ми бачили, як він сідав у трамвай. 5. Я бачив, як човен наближався до берега. 6. Ми помітили, як вона сміялася. 7. Учні бачили, як приземлявся літак. 8. Мені відремонтували радіо-приймач. 9. Їй зробили зачіску. 10. Тобі полагодили черевики? 11. Нам купили квитки на концерт. 12. Їй закріпили лампу біля ліжка. 13. Вони спостерігали, як вантажівка перетинала поле. 14. Він хоче, щоб цю статтю надрукували в збірці.

Exercise 20. Translate the following sentences into Ukrainian paying attention to the participles.

1. The boy lay sleeping when the doctor came. 2. The broken arm was examined by the doctor. 3. While being examined, the boy could not help crying. 4. Having prescribed the medicine, the doctor went away. 5. The medicine prescribed by the doctor was bitter. 6. The dress bought at the department store was very beautiful. 7. While using a needle you should be careful not to prick your finger. 8. While crossing the street one should first look to the left and then to the right. 9. People watching a performance are called an audience. 10. Being very ill, she could not go to school. 11. The first rays of the rising sun lit up the top of the hill. 12. The tree struck by lightning was all black and leafless. 13. Being busy, he postponed his trip. 14. The door bolted on the inside could not be opened.

Exercise 21. Open the brackets using the Present Participle or the Perfect Participle.

1. (to do) his homework, he was thinking hard. 2. (to do) his homework, he went for a walk. 3. (to sell) fruit, he looked back from time to time, hoping to see his friends. 4. (to sell) all the fruit, he went to see his friends. 5. (to eat) all the potatoes, she drank a cup of tea. 6. (to drink) tea, she scalded her lips. 7. (to run) in the yard, I fell and hurt my knee. 8. (to look) through some magazines, I came across an interesting article about UFOs. 9. (to write) out and (to learn) all the new words, he was able to translate the text easily 10. (to live) in the south of our country, he cannot enjoy the beauty of St. Petersburg's White Nights in summer. 11. (to talk) to her neighbor in the street, she did not notice how a thief stole her money. 12. (to read) the story, she closed the book and put it on the shelf. 13. (to buy) some juice and cakes, we went home 14. (to sit) near the fire, he felt very warm.

Exercise 22. Open the brackets using Participle I or the Perfect Participle. Translate the sentences into Ukrainian.

Compare the usage: translating – перекладаючи having translated – переклавши

1. a) The man (arranging, arranged) the party is our tutor. b) The party (arranging, arranged) by our university club attracted enthusiastic audience. 2. a) The house (surrounding, surrounded) by tall trees is very beautiful. b) The wall (surrounding, surrounded) the house was very high. 3. a) Who is that boy (doing, done) his homework at the table? b) The exercises (doing, done) by the pupils were easy. 4. a) The girl (washing, washed) the floor is my sister. b) The

floor (washing, washed) by Helen looked very clean, 5, a) We listened to the girls (singing, sung) Ukrainian folk songs, b) We listened to the Ukrainian folk songs (singing, sung) by the girls. 6. Do you know the girl (playing, played) in the garden? 7. The book (writing, written) by this scientist is very challenging. 8. Translate the words (writing, written) on the blackboard. 9. We could not see the sun (covering, covered) by dark clouds. 10. The (losing, lost) book was found at last. 11. (Going, gone) along the street, I met Mary and Ann. 12. Read the (translating, translated) sentences once more. 13. Name some places (visiting, visited) by you last year. 14. I picked up the pencil (lying, lain) on the floor. 15. She was reading the book (buying, bought) the day before. 16. Yesterday we were at a conference (organizing, organized) by the pupils of the 10th form. 17. (Taking, taken) the girl by the hand, she led her across the street. 18. It was not easy to find the (losing, lost) stamp. 19. I shall show you a picture (painting, painted) by Hogarth. 20. Here is the letter (receiving, received) by me vesterday, 21. Look at the beautiful flowers (gathering, gathered) by the children. 22. His hat (blowing, blown) off by the wind was lying in the middle of the street. 23. "How do you like the film?" he asked, (turning, turned) towards me. 24. When we came nearer, we saw two boys (coming, come) towards us. 25. I think that the boy (standing, stood) there is his brother.

Exercise 23. Find the participles in the following sentences and translate them into Ukrainian.

1. Being busy I couldn't help them. 2. It was a small house built in 1830. 3. Going along the street yesterday I met my old friend. 4. When speaking at the meeting a week ago I forgot this fact. 5. Translating this article I learned much interesting from the history of the old English cities. 6. Not knowing the street we couldn't visit him. 7. Yesterday we received a letter sent by him on November, 20. 8. I recognized the boy playing near us. 9. In the bus we met a group of tourists speaking an unknown language. 10. The people, sitting at the table spoke and laughed loudly.

Exercise 24. Find Participle II in the following sentences and translate them into Ukrainian.

1. He answered through the locked door. 2. They turned into the large alley lit up with Chinese lamps. 3. The housekeeper had come out of her room attracted by the vilent ringing of the bell. 4. Accompanied by his father he entered the room. 5. Crushed by his imprisonment he had soon found a dull relief in it. 6. When questioned about the story she didn't want to answer. 7. As if torn with inner conflict, she cried. 8. He shook his head as though lost in wonder and admiration. 9. Her spirit, though crushed, was not broken. 10. She has found me unchanged, but I have found her greatly changed.

Exercise 25. Translate the following sentences into Ukrainian paying attention to different functions of the participles.

1. The student reading a book is my friend. 2. Having read a lot of books on this question, he was able to make a very interesting report. 3. When he was a little boy, he liked to listen to stories being read by his mother. 4. The book read by this student was returned to the library. 5. Having been read by the students, the magazines were returned to the library. 6. Being very tired we refused to go to the cinema. 7. Having lost the key, we could not get into our room. 8. Reading the data carefully she made up her mind to change them. 9. Unless checked the results can't be applied in the research. 10. He is responsible for safety engineering being provided in time. 11. He objects to the meeting being fixed for Monday. 12. We know of this methodical textbook being used by many students. 13. Testing these devices we sometimes find defects in them. 14. Reading stories about adventures he remembered his green years.

Exercise 26. From each pair of sentences make one sentence using Participle I.

Example: She was sitting in an armchair. She was reading a book. - She was sitting in an armchair reading a book.

1. Jill was lying on the bed. She was crying. Jill was 2. I got nome.
I was feeling very tired. I got 3. The old man was walking along the
street. He was talking to himself. The old man 4. Father was sitting in an
armchair. He was smoking a pipe. Father was
In these sentences one thing happens during another.
Example: Jim was playing tennis. He hurt his arm Jim hurt his arm playing
tennis.
5. Ann was watching television. She fell asleep. Ann 6. The man
slipped. He was getting off the bus. The man 7. The boy was crossing the
road. He was knocked over. The boy 8. The fireman was overcome by
smoke. He was trying to put out the fire. The fireman 9. She was
shouting. She ran out of the house.

Exercise 27. This time make sentences beginning Having + Participle II.

Example: We finished our work. We went home. - Having finished our work, we went home.

1. We bought our tickets. Then we went into the theatre. 2. They had dinner. Then they continued on their journey. 3. Sue did all her shopping. Then she went for a cup of coffee. 4. He visited his grandparents. Then he hurried to

his friend's birthday. 5. We found a hotel. Then they looked for somewhere to have dinner. 6. She crossed the road. Then she looked back.

Example: I felt tired. So I went to bed early. - Feeling tired, I went to bed early.

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Exercise 28. Now make sentences beginning -ing or Not -ing.

1. I thought they might be hungry. So I offered them something to eat.
Thinking 2. She is a foreigner. So she needs a visa to stay in this country.
3. I didn't know his address. So I couldn't contact him. Not 4. The
man wasn't able to understand English. So he didn't know what I said 5.
He has travelled a lot. So he knows a lot about other countries. Having
6 We had grown moonly all now manney Common and the first to the start of the start
6. We had spent nearly all our money. So we couldn't afford to stay in a hotel.
. 7. He is unemployed. So he hasn't got much money 8. She doesn't
have a car. She finds it difficult to get around.
Exercise 29. In this exercise you have to rewrite the sentences. Each time use
the information in hypothete to make a name of the David L. I.
the information in brackets to make a complex with Participle I.
Example: That girl is Australian, (she is talking to Tom). The girl talking to
Tom is Australian.
1. A plane crashed into the sea yesterday. (it was carrying 28 passengers).
A plane yesterday. 2. When I was walking home, there was a man. (he was
following me). When 3. I was woken up by the baby. (she was crying). I
4. At the end of the street there is a path. (the path leads to the river) At
. 5. Some paintings were stolen from the palace. (they belong to the
Queen). Some
Exercise 30. This exercise is similar but this time you have to make a complex
with Participle II.
with 1 articipie 11.
Example. The man was taken to hospital. (he was injured in the accident).
The man injured in the accident was taken to hospital.
1. The window has now been repaired. (it was broken in last night's
storm). The window repaired. 2. Most of the suggestions were not very
practical. (they were made at the meeting). 3. The paintings haven't been found
yet. (they were stolen from the museum). 4. Did you hear about the boy? (he
was knocked down on his way to school this morning). Did?. 5. Our
friends have given us a photo. (it was taken in the Bahamas.)

Exercise 31. Complete these sentences with the following verbs. Each time you have to put the verb in the correct form:

ring blow call live offer invite post read sit study wait work

1. I was woken up by a bell ringing. 2. None of the people invited to the
party can come. 3. Tom has got a brother in a bank in London and a sister
economics at university in Glasgow. 4. Somebody Jack phoned
while you were out. 5. All letters today should arrive tomorrow. 6. When I
entered the waiting-room there was nobody except for a young man
by the window a magazine. 7. A few days after the interview, I received a
letter me the job. 8. There was a tree down in the storm last night. 9.
Sometimes life must be very unpleasant for people near airports.

Exercise 32. Translate the following sentences into Ukrainian paying attention to the forms and functions of the participles.

1. The people spoken about yesterday were good scientists. 2. Having turned off the light we couldn't see anything in the room. 3. The latest model now being tested is of great importance. 4. Well done the device will be sent to the exhibition. 5. The algorithm chosen is a modified version of the mentioned model. 6. Having been signed the application was sent to the American embassy. 7. Some paintings belonging to the Queen were given to the National Gallery. 8. While being checked the device showed good characteristics. 9. The devices having been checked appeared to have particular properties.

Exercise 33. Translate the sentences paying attention to different forms of the participles.

1. Having been shown the wrong data I could not initiate them. 2. Being well prepared for the examination the students could answer all the questions asked by examiners. 3. He heard the voices coming through the open windows. 4. The explanation given was not complete. 5. This metal when examined showed valuable peculiarities. 6. A magnet being broken into two can form two new complete magnets. 7. Having predicted the properties of some elements Mendeleev left several blanks in his table. 8. Some very complicated models are investigated in the paper. 9. When arranged properly the components could show better characteristics.

Exercise 34. Find the predicate first, then define the function of the participles in the sentences and translate them into Ukrainian.

1. The students spoken about at the meeting yesterday completed this work successfully. 2. The task set was not an easy one. 3. Some very complicated models are investigated in the paper. 4. The latest model now being

tested accounts for many of the previously unknown phenomena. 5. For the investigation being conducted at present the lack of such data is of no importance. 6. As a starting point of the investigation the algorithms developed in the paper were exercised in various models. 7. The algorithm chosen in this study is a simplified and slightly modified version of Wagner's model, which is one of the models presented in Reference 1. 8. The results obtained showed the stability of the system under conditions given above.

Exercise 35. Translate the following sentences into Ukrainian paying attention to Participle I and Participle II.

1. He referred to experimental results while explaining the phenomenon in terms of multiple reflections. 2. We found the first series of experiments completed. 3. Speaking on this subject, mention should be made of high radiation intensity. 4. Allowing for these changes, we may predict time behaviour. 5. The methods of measurements developed lately differ greatly from the old ones. 6. The successful results of the experiments received at this laboratory are very important for the new technological process being developed. 7. While making the experiment we made use of all the data available. 8. Unless checked the results can't be applied in the research. 9. The experiments of many other scientists following Rutherford's research proved his predictions.

Exercise 36. Write questions to the italicized parts of the sentence.

1. Having been warmed to 0° ice began to melt. 2. The data so far obtained were of no interest. 3. Having been used for a long time the device partly lost its efficiency. 4. The distance travelled during the next hour changed greatly. 5. While being used the device showed poor characteristics. 6. Knowing length and time we can define velocity. 7. If cooled water becomes ice. 8. Having been well tested the machine was put into operation.

Exercise 37. Translate the following sentences from Ukrainian into English.

1. Завершуючи серію експериментів, студенти одержали цікаві дані. 2. Завершивши першу серію експериментів, вони почали обробляти (process) отримані дані. 3. Міряючи температуру води, звичайно користуються термометром. 4. Обговоривши отримані результати, експериментатори зрозуміли, що вони недостатньо точні. 5. Працюючи з радіоактивною речовиною, ви повинні бути обережні. 6. Забезпечивши лабораторію усім необхідним, дослідницька група змогла успішно продовжувати свою роботу. 7. Вивчивши неохідні умови, вчені приступили до виконання досліду. 8. Отримавши позитивні результати, дослідники включили їх у доповідь.

Exercise 38. Translate the following sentences into Ukrainian paying attention to the participles.

1. He heard the voices coming through the open window 2. Waiting for him I looked through the magazines lying on the table. 3. They remained at home refusing to go anywhere that day. 4. The channel linking the two seas is being built now. 5. The explanation given was not complete. 6. The new materials recommended for bridge construction were described in the article written by our professor. 7. The results received were of great importance for further work. 8. A balsa tree found in South America is lighter than any other. 9. Having passed all the examinations he left for Kiev, 10. Having been shown the wrong way I could not find his house. 11. Having waited for him for half an hour they went home. 12. Having obtained the necessary results they stopped their experimental work. 13. When studying elements Mendelevey found that they could be divided into nine groups. 14. When writing a telegram we must use as few words as possible. 15. When burnt coal produces heat. 16. When reconstructed the theatre looked more beautiful than before, 17. Being built in a new way modern houses have better facilities. 18. Being obtained in the laboratory the new substance had some valuable properties. 19. Being well prepared for the laboratory work the students could perform all the tasks quickly.

Exercise 39. Translate the following sentences paying attention to the functions of Participle I,II and the Perfect Participle.

1. Working at his new device the inventor made numerous experiments. 2. The units used to measure time, space and mass are called fundamental units. 3. Atoms are composed of a positively charged central core or nucleus and electrons. 4. Having made a great number of experiments with different substances the chemists found that most of them could be decomposed into other substances. 5. The operator examines the moving parts of the machine carefully. 6. The electric current passing through a wire will heat that wire. 7. Going into chemical reactions elements entirely change their properties. 8. When inspecting relays great precaution should be taken not to touch the relay itself but only to watch its operation. 9. Having finished his experiment the tester left the lab. 10. Having been tested in action the new device was recommended to production. 11. The technique installed in our machine shop will greatly help us in our work. 12. At first sight the diesel spoken of looks like a gasoline, 13. If arranged according to their atomic weights the elements exhibit an evident periodicity of properties. 14. For the device called electronic electricity must flow across the space inside the device.

Exercise 40. State the forms and functions of the participles; translate the following sentences into Ukrainian.

1. Discussing chemical reactions we ought first to make clear what a chemical reaction is. 2. The heat generated by the friction of the match on the box agitated the molecules in the tip of the match. 3. When combined with the oxygen of the air the match was lighted. 4. While burning different substances combine with oxygen. 5. Having discussed chemical reactions we proceeded to the experiments. 6. Having overcome the electrical bond that holds the atoms together, the molecule breaks into fragments. 7. Raising the temperature we increase the agitation of the molecules. 8. Decreasing the temperature we slow down the reaction. 9. Having spent much time studying catalysts, the scientists now use them widely in chemical industry. 10. The catalysts being used in this reaction accelerate the chemical change. 11. The experiment being made at our laboratory shows the actions of catalysts. 12. The temperature used depended upon the substances entering the reaction. 13. The figures following show the dependence of the rate of reaction on temperature. 14. Efforts being made in the development of chemical industry meet great approval. 15. The success achieved in the development of economics resulted in a considerable growth of the well-being of the Ukrainian people. This does not mean, however, that we can be satisfied with the results obtained. 16. Science has opened out possibilities for the conquest of nature hardly dreamed of a few years ago. 17. The experiments referred to in our article demonstrate the action of catalysts in chemical reactions. 18. The substance acted upon by heat changed its composition. 19. The molecules of a substance affected by a catalyst are changed more easily. 20. This reaction, when completed, will give us a new proof of the use of catalysts in living systems. 21. Sometimes a molecule breaks into two fragments, if struck with enough violence to overcome the electrical bond that holds its atoms together.

Exercise 41. Translate the following sentences into Ukrainian paying attention to the translation of Participle II with adverbial modifiers:

ì		e)	
so	так, таким чином	so far]	досі
thus	rak, rakmir miliom	thus far	досі

1. The values thus found are of some interest. 2. The results so far received are not accurate enough. 3. The problem so explained was easily understood. 4. The articles thus far written on the subject are of no interest. 5. The work so done provided us with new data. 6. The method thus far used by us was effective enough. 7. The results thus achieved were of great help. 8. The measurements so far made are to be repeated.

Exercise 42. Find the participles in the following sentences, state their forms and functions and translate them into Ukrainian.

1. If heated molecules of the material move faster, 2. The device measuring voltage in the circuit is called voltmeter. 3. Connecting a condenser and a coil in series it is possible to obtain an oscillatory circuit. 4. An electron bombarding the anode at high speed may produce the liberation of several electrons. 5. The resistance introduced into the circuit by the valve is high. 6. The voltage – current characteristics shown are of great importance. 7. The electrons liberated resulted in an avalanche across the valve. 8. Having applied a positive pulse of voltage to the control electrode we made the valve conducting. 9. A positive pulse of voltage applied made the valve conducting, 10. Both these forces tend to urge each emitted electron back to the body. 11. For any given metal there is a fixed rate of electron emission at every temperature level. 12. The power required for the control of electrons is very low, 13. The space occupied by an electron valve is only a few cubic centimetres and its weight is several grams. 14. Special methods developed in electronics permitted to obtain an accuracy of measurement, 15. The second requirement is a source of moving charged particles, 16. The relationship between the voltage applied to the valve and the current through it is shown in Fig.2. 17. A cloud of electrons known as a space charge cloud is then built up in the interelectrode region, 18. This current called the saturation current, depends upon the temperature of the cathode, 19. The tunnel diode is a two-terminal active element used for many functions. 20. A conductor is a material having free charges.

Exercise 43. Translate the following sentences defining the function of Participle II given bold-faced.

1. The theory of electromagnetic waves described by Maxwell shows that light is the result of electromagnetic oscillations. 2. Under some conditions the anode current in the diode rises to a large value limited by the resistance of the external circuit. 3. The electron avalanches result in a greatly enhanced valve current. 4. For the negative anode potential conditions no electrons emitted by the cathode can pass to the anode. 5. The positive ions produced in the avalanche are accelerated towards the negative anode. 6. The voltage-current characteristics shown are taken into account. 7. The electrons liberated resulted in an avalanche across the valve. 8. The anode voltage reduced to a low value stopped conduction in the thyratron. 9. A positive pulse of voltage applied to the control electrode made the valve conductivity. 10. Compared to vacuum tubes they have smaller size and weight, 11. For any given metal there is a fixed rate of electron emission at every temperature level. 12. The power required for their control is very low. 13. Special methods developed in electronics permitted to obtain an accuracy of measurements. 14. A coil inductance depends upon the cross section of the cone placed within the coil. 15. A cloud of electrons **known** as a space charge cloud is then built up in the interelectrode region.

Exercise 44. Translate the sentences paying attention to Participle II in the post – position.

1. The action is similar to that of a diode, except that the grid still has some retarding effect on the electrons because of its shielding action, and hence the plate current is somewhat less than it would be with grid removed entirely. 2. The higher is the instant magnitude of the voltage investigated, the more is the spot deflected from the centre of the tube screen. 3. The retrace must be very rapid in order not to lose the information contained in the input signal, 4. Since moving charges comprise an electric current, the stream of electrons to the plate is an electric current, called the plate current. 5. The arriving electrons are absorbed into the positive terminal of the battery and an equal number of electrons flow out of the negative battery terminal and return to the cathode, thus replenishing the supply of electrons lost by emission. 6. The total number of electrons emitted by the cathode of a diode is always the same at a given operating temperature. 7. Since it is made up of electrons, this cloud constitutes a negative charge in the interelectrode space that has a repelling effect on the electrons being emitted from the cathode. 8. The simplest combination of elements constituting an electron tube is the diode shown in Fig. 14. 9. To obtain a steady image on the oscillograph screen it is necessary for each trace produced in each period of scanning to overlay most accurately the previously obtained trace. 10. With the p-type germanium biased positively the holes are repelled by the battery voltage toward the junction. 11. Although exaggerated in the illustration, the centre or n-type portion of the sandwich is extremely thin in comparison to the p-regions. 12. An amplifier is an electron tube which builds up an ac signal applied to its input, 13. On leaving the amplifier, the amplifield signal reaches the vertical deflecting plates. 14. The scanning voltage supplied by the scanning circuit is fed to the horizontal deflecting plates.

Exercise 45. State the forms and functions of the participles and translate the sentences into Ukrainian.

1. Electrons, passing through the wire, create the current flow. 2. The discharge rate is often stated in terms of time, required to discharge the battery completely. 3. Experiments being conducted in the field of electricity are based on Ohm's Law. 4. Studying the capacity of a battery we learned that it is expressed in ampere-hour (AH). 5. Having defined that a car battery may have a capacity of 40 AH at the 10 hour rate, we state that it can deliver a current of 4 A for 10 hours. 6. If emitted by a strong source of light the rays will cast bright light. 7. I saw my neighbour examining his car. 8. I saw the car being examined by the mechanic of our enterprise. 9. Having been calculated thoroughly the data

were used in the further research.

Exercise 46. Translate the following sentences into Ukrainian paying attention to the functions of Participle I and Participle II.

1. The bipolar junction transistor consists of two p-n junctions formed by a sandwich of doped semiconductor material. 2. Fig. 29 shows a transistor connected into a simple common-emitter circuit. 3. No base current is flowing whilst the switch is closed, allowing the current to flow from battery into the base of the transistor. 4. The important point to note is that the collector-base junction is reverse-biased with the resulting potential barrier preventing any flow of majority carriers. 5. Neglecting leakage, the current in the collector circuit is effectively zero with switch S open.

Exercise 47. Put questions to the words and word-combinations in bold type. Translate the sentences paying attention to the participles.

1. The external force applied to a circuit to overcome the opposition to the flow of current is measured in volts. 2. The voltage is equal to the current multiplied by the resistance. 3. The electrical current passing through a specified solution of nitrate of silver in water deposits silver. 4. This formula is read as the voltage squared divided by the resistance. 5. The current equals voltage divided by the resistance. 6. Having measured voltage and resistance we can find the value of the current. 7. Being learned Ohm's Law gives the possibility to measure the current in a circuit. 8. Having been set down the equation can be used for defining missing quantity. 9. When studied well the problem can be solved successfully. 10. While making experiments the scientist discovered the law of measuring three basic electrical units.

Exercise 48. Substitute the subordinate clauses for Participle Complexes.

1. The external force which is applied to a circuit to overcome the opposition to the flow of current is measured in volts. 2. The voltage is equal to the current which is miltiplied by the resistance. 3. The electrical current that is passing through a specified solution of nitrate of silver in water deposits silver. 4. The resistance is equal to the wattage that is divided by the current squared. 5. The current that is passing through the conductor equals 2 amperes.

Exercise 49. Translate the following sentences paying attention to different forms of the participles.

1. Having lost some of its electrons the atom has a positive charge. 2. Using

a transformer you can increase or decrease the voltage or current. 3. The pentode operating as a high frequency amplifier is of wide use. 4. Lenz's law explains the conservation of energy principle when applied to induced voltages and currents. 5. A gas introduced changed the characteristics of high vacuum diodes. 6. The significance a semiconductor achieved is due to the electrons being raised to the conduction band. 7. The concentration of impurities when regulated controls the conductivity. 8. An external field when applied gives the flow of electrons and the conduction of electricity takes place. 9. Having made many tests the laboratory assistant got interesting results. 10. Having been tested under favorable conditions the machine was successfully put into operation. 11. We know of silver and copper being very good conductors of electricity. 12. When heated the cathode emits large quantities of electrons. 13. Electrons moving in one direction form the electric current. 14. The results achieved depended on the methods used. 15. The particles striking the surface and causing emission are primary electrons. 16. The electrons flowing towards the screen will not in general be absorbed.

Exercise 50. Translate the following sentences paying attention to different functions of Participle I and Participle II.

1. Every resistor has a certain amount of inductance and capacity associated with it. 2. The insulating medium that separates the plates of a condenser is known as the dielectric and it plays an important role in determining the characteristics of the condenser. 3. A diode is a two-element vacuum tube containing an emitter of electrons known as the cathode and a collector electrode termed the anode or plate. 4. The emitter may be either an indirectly heated cathode or a filament. 5. A triode is a three-electrode vacuum tube containing an emitting electrode called the cathode, a control electrode called the grid, and a current-collecting electrode called the anode or plate. 6. Some typical characteristics of a triode, showing the way in which the plate current varies with grid voltage for various fixed values of plate voltage, are given in Fig.13. 7. The suppressor grid, though operated at zero potential, is able to pass electrons freely through the space betwen the wires. 8. The space current drops because the current returned from the screen-grid-plate region increses the space charge around the cathode. 9. Some typical curves showing how space current and plate current vary with plate voltage are shown in Fig.14. 10. Phase distortion occurs when the relative phases of the various components being amplified are not the same in the output as in the input. 11. A transformer used to couple a transmission line, microphone, or other low impedance source of energy to the grid of a tube is termed an input transformer. 12. Semiconductor devices are almost exclusively of a type known as "junction" devices. 13. One region called n-type material is so prepared chemically that it has an excess number of electrons associated with some of its atoms. 14. The techniques employed in the fabrication of standard semiconductor devices are also the ones used in the functional block construction. 15. The point-contact germanium diode exhibits negative resistance when biased highly in the reverse direction. 16. Being an inherently fast circuit, remarkable speeds may be attained. 17. The tunnel diode is capable of many logic and memory functions and the addition of input currents being used to switch the device from one stable state to the other is expedient. 18. A number of subjective tests were performed with trained and untrained listeners.

Exercise 51. State the forms and functions of the participles and translate the sentences into Ukrainian.

1. It is a two-terminal device having high resistivity in one derection and lower resistivity in the other. 2. Charge carriers injected into one diode affect the resistivity, and hence the current flow in the other diode. 3. The crystalline lattice can be changed by tantalum or titanium being added to semiconductors to obtain crystals with the required electrical properties. 4. The wire is usually enameled with the enamel being cleaned off where the slider touches. 5. Every resistor has a certain amount of inductance and capacity associated with it. 6. A perfect condenser when discharged gives up all the electrical energy supplied to it in charging. 7. The insulating medium that separates the plates of a condenser is known as the dielectric. 8. A circuit consisting of a resistance, inductance, and capacity connected in series with a voltage applied as shown in Fig.3 is termed a series resonant circuit. 9. Practically all the power delivered to the input terminals of such an impedance matching network finds its way to the load. 10. An active network is a network containing one or more sources of energy or some sink of energy. 11. The term two-terminal is applied to networks operated under conditions shown in Fig.9. 12. The electron is the particle that constitutes most of the current flow encounted in vacuum tubes. 13. Other charged particles called ions may exist. 14. In any conductor there is a large number of free electrons moving around with various velocities. 15. The number of liberated secondary electrons that succeeded in escaping from a surface depends upon the potential conditions surrounding the bombarded surface. 16. Most vacuum tubes are designed so that the emitting surface gives off a surplus of electrons.

5 НЕЗАЛЕЖНИЙ ДІЄПРИКМЕТНИКОВИЙ КОМПЛЕКС (THE ABSOLUTE PARTICIPLE COMPLEX)

В українській мові підрядне обставинне речення (наприклад, часу або причини) може бути замінене дієприслівниковим зворотом, якщо в головному і підрядному реченнях підмет той самий, хоч в одному з них він може бути виражений іменником, а в іншому — відповідним особовим займенником.

Наприклад: Коли Петро повернувся з Києва, він розповів нам про виставку. Повернувшись з Києва, Петро розповів нам про виставку. (В обох реченнях підмет позначає ту саму особу.)

Якшо в головному і підрядному реченнях підмети різні, то така заміна неможлива.

В англійській мові заміна обставинного підрядного речення зворотом з participle можлива і тоді, коли в головному і підрядному реченнях підмети різні.

Hаприклад: When Peter came home from Kyiv, we asked him to tell us about the exhibition. Peter coming home from Kyiv, we asked him to tell us about the exhibition

Peter coming home from Kyiv не підрядне речення, а незалежний дісприкметниковий комплекс (the Absolute Participle Complex), що складається з іменника у загальному відмінку (або особового займенника у називному відмінку) і дісприкметника. У цьому комплексі Peter виконує роль підмета по відношенню до дієприкметника і не є підметом усього незалежному дієприкметниковому комплексі вживатися всі форми participle. У реченні незалежний дісприкметниковий комплекс виконує функції обставин (часу, причини, способу дії, умови);

The rain having stopped,

we went home.

Коли дощ ущух, ми пішли додому.

The day being very fine, she went for a walk.

Оскільки день був дуже гарний, вона пішла на прогулянку.

The article deals with optoelectronics. particular attention being paid to logic arrays.

Стаття присвячена оптоелектроніці, причому особлива увага приділяється логічним матрицям.

Незалежний дієприкметниковий комплекс може стояти на початку або в кінці складного речення (див. схему 5.1).

Незалежний дієприкметниковий комплекс може вволитись прийменником with. Такий комплекс вживається у функції ооставини способу дії або супровідних обставин і перекладається на українську мову злебільшого самостійним реченням або дієприслівниковим зворотом:

She was sitting on the ground, with her head and one arm lying on a chair. одна рука-лежали на стільці. (Dickens)

Вона сиділа долі, а голова її і

He was standing, with his arms crossed Він стояв, схрестивши руки і and his head bent. (Galsworthy)

опустивши голову.

Cxeмa 5.1 **Незалежний дісприкметниковий комплекс** (Absolute Participle Complex)

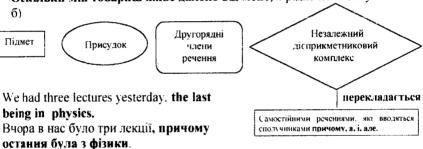


перекладається:

обставинними підрядними реченнями, вставними сполучниками коли, якщо, оскільки, після того як.

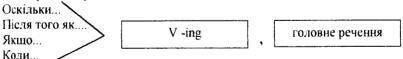
My friend living far from me, I seldom see him.

Оскільки мій товариш живе далеко від мене, я рідко його бачу.

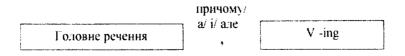


Графічно цей зворот можна відобразити таким чином.

а) Коли незалежний дієприкметниковий комплекс стоїть на початку складнопідрядного речення :



б) Коли незалежний дієприкметниковий комплекс стоїть в кінці складнопідрядного речення :



ВПРАВИ

- Exercise 1. Transform the following complex sentences into simple ones using the Absolute Participle Complex.
- A. Model: As the weather was fine, we went for a walk. The weather being fine, we went for a walk.
- 1. As my friend lives far from here, I go to his place by bus. 2. As the play was very popular, it was difficult to get tickets. 3. As it is rather cold, I put on my coat. 4. As his mother teaches English, he knows the language very well. 5. As her son was ill, she could not go to the theatre.
- B. Model: As my brother had locked the door, I couldn't get into the room.

 My brother having locked the door, I couldn't get into the room.
- 1. As our teacher had visited India, we asked him to tell us about that country. 2. When the match had ended, the people went home. 3. As my friend had bought the tickets beforehand, we did not need to hurry. 4. After the sun had risen, we continued our way. 5. As his sister has broken his spectacles, he had to buy a pair of new ones.
- C. Model: As the bridge was destroyed, we couldn't cross the river. The bridge being destroyed, we couldn't cross the river.
- 1. As all shops were closed, we couldn't buy anything. 2. As the road was being repaired, I couldn't go there by bus. 3. As the book was being printed, we hoped to get it soon. 4. As houses are built very quickly nowadays, we'll soon get a new flat. 5. As the waiting-room was being cleaned, the passengers were not let in.
- **D.** Model: When the work had been done, they went home. The work having been done, they went home.
- 1. When the house had been built, we got a new flat. 2. As the key had been lost, she couldn't get into the room. 3. As the road had been repaired, we could go there by bus. 4. When the waiting-room had been cleaned, the passengers were let in. 5. As all the tickets had been sold out, we couldn't see the performance.

Exercise 2. Translate into English using the Absolute Participle Complex.

1. Оскільки вітер дув з півночі, було дуже холодно. 2. Оскільки вчитель був хворий, у нас вчора не було уроку фізики. 3. Коли лист був написаний, я відніс його на пошту. 4. Коли батько прийшов, усі сіли за стіл обідати. 5. Оскільки було вже пізно, всі крамниці були зачинені. 6. Оскільки телефон був несправний, я не міг подзвонити вам. 7. Коли мій брат закінчив школу, наша сім'я переїхала до Луцька. 8. Коли уроки закінчились, учні пішли додому.

- **Exercise 3.** Translate the following sentences into Ukrainian paying attention to the Absolute Participle Complex in bold type.
- 1. Some atomic power stations having been built all over Ukraine, many scientists are worried about the ecological situation. 2. The working day being over, the city transport was overcrowded. 3. They all went away, he remaining at home. 4. All the problems having been solved, they stopped the discussion. 5. Nobody being on the highway, he was driving his car very fast. 6. The experiment having been made, everybody was interested in the results.
- **Exercise 4.** Translate the sentences with the Absolute Participle Complex in bold type paying attention to its position in the sentence.
- 1. The meeting being over, we went home. 2. The question being too difficult, no one could answer it. 3. The translation of the text being ready, I shall show it to you. 4. Her brother being ill, she could not go to the institute that day. 5. The vacation being finished, we began our studies. 6. We had six lessons yesterday, the last being in English. 7. There are some pictures in this book, one being the map of England. 8. Radio was invented in Russia, its inventor being the Russian scientist A. S. Popov. 10. The experiment having been carried out, we decided to have some rest. 11. To translate this text without a dictionary is difficult for him, the text containing too many new words. 12. The work having been completed, we went home. 13. The equipment having been received, we began the experiments from the very beginning. 14. The dictionaries having been brought, they began translating the text.
- **Exercise 5.** Translate the following sentences into Ukrainian paying attention to the Absolute Participle Complex.
- 1. Industry is a single complex, its constituent parts being closely interwoven and interlinked. 2. All preparations being made, they started the experiment. 3. The day being warm, we opened the windows. 4. Weather permitting, we shall be able to get there on Monday. 5. The article deals with microwaves, with particular attention being paid to radio location. 6. With the experiments having been carried out, they started new investigation. 7. The speed remaining constant, the train will cover this distance in seven hours. 8. Mass being a physical concept, we define it in terms of certain laws of physics. 9. An object moving with constant velocity, the distance traveled is directly proportional to the time. 10. Electric appliances find wide application in every home, a microwave oven being one of them. 11. The motor having been tested, we began to use it in our work. 12. All the substances are made of molecules, molecules being made of atoms. 13. The experiment has been completed, good results having been obtained.

Exercise 6. Translate the following sentences paying attention to the Absolute Participle Complex.

1. Today the atom is regarded as an electric system, the nucleus being in the center of it. 2. Some of electrons (having been) lost, the atom has a positive charge. 3. The atom containing an equal amount of protons and electrons, it is electrically neutral. 4. The problem being very simple, everybody understood it. 5. Electrons moving through a wire, electrical energy is generated. 6. Atoms contain various fundamental particles, an electron being one of them. 7. The laboratory (being) equipped with modern instruments, important experiments can be made. 8. Metals being good conductors, they are often used in power-engineering, copper being one of them. 9. The voltage (having been) measured, the students started the experiment. 10. Electrons moving in one direction, an electric current results.

Exercise 7. Translate the following sentences into Ukrainian paying attention to the Absolute Participle Complex.

1. The e.m.f. being unidirectional, the current is called direct. 2. The force changing its direction periodically, the current is known as alternating. 3. All other factors being constant, the current is directly proportional to the conductivity. 4. The e.m.f. driving the electrons, they are moving along the circuit. 5. One coulomb passing the point in a circuit per second, the current strength is 1 ampere. 6. An electric current is a quantity of electrons flowing in a circuit per second of time, the ampere being the unit of measure of current. 7. The force being doubled, the rate of electron flow is doubled. 8. An electron leaving the surface, the metal becomes positively charged. 9. All metals are conductors of electricity, their conductivity ranging from silver which is 1.06 times as effective as copper, to steel which is only about 0.1 times as effective as copper. 10. The speed of electrons being extremely great, we cannot measure it by ordinary methods. 11. There exist various kinds of light, each corresponding to some definite colour.

Exercise 8. Pay attention to the Absolute Participle Complex in the following sentences and translate them into Ukrainian.

1. Electrical energy being released, a force called electromotive force is developed. 2. An e.m.f. is present, whenever free electrons are moved from atoms, any of the above-named methods being used to produce such electron motion. 3. This charge being always negative, the e.m.f. is indirectional. 4. The transmitter is connected in series with its power supply and receivers/indicators, these devices being situated at the receiving end. 5. If this is not provided for, electrons will acumulate at the end of the wire, their repulsion back along the wire stopping the current flow. 6. There are two general methods by which a

continuous supply of electrical charge is obtained, one being by means of a battery, and the other being by means of an electric generator. 7. The cell being charged, a certain quantity of electricity is passed through it.

- Exercise 9. Find the Absolute Participle Complex in the following sentences and translate them into Ukrainian.
- 1. The laser beam being off, the energy for the next flash is building up. 2. White light is a mixture of all possible wavelengths, all of them being out of step with each other. 3. All the waves in a laser beam having the same wavelength, it has a very definite colour, the red colour being one of the most widely seen colours in them. 4. An ordinary beam of light diverges, laser beam carrying its energy in a compact form. 5. In the metric system the unit of distance is the meter, other units of distance being obtained by multiplying the meter by ten or a multiple of ten. 6. Light from an incandescent gas at low or moderate pressure passing through a diffraction grating, its spectrum consists of several coloured lines on a black background. 7. Kinematics being the study of motion, we study in it position, velocity and acceleration. 8. The corpuscular theory being discovered at that time, it could explain the formation of shadows by opaque objects.
- **Exercise 10.** Translate the following sentences paying attention to the position of the Absolute Participle Complex.
- 1. The temperature of the material rising, the movement of its molecules is speeded up. 2. The new method having been studied in detail, the committee decided to introduce it at nearly all the plants. 3. The pressure removed, the air springs back to its original volume. 4. The two propellers turn in opposite directions, one being on the hollow shaft and placed slightly ahead of the other. 5. Electrical energy being released, electromotive force is developed. 6. This field can be detected by electroscope, the strength being measured by an electrometer. 7. The device having been carefully tested, it was put into operation. 8. The calibration is not appreciably affected by small changes in anode or filament voltage, permissible tolerances being indicated upon the instrument.
- **Exercise 11.** Translate the Absolute Participle Complexes into Ukrainian. Mind their position at the beginning of the complex sentence.
- 1. All other conditions being equal, friction will vary directly with the weight of the object; the heavier the body, the greater will be the friction. 2. The equipment having been received, we began the experiments from the very beginning. 3. Our laboratory having been built, we could continue our research work there. 4. The speed of light being extremely great, we cannot measure it by

7

ordinary devices. 5. The satisfactory measurements having been obtained, they could finish their research, 6. The gas being colorless, we did not notice its formation. 7. Copper being a good conductor of electricity, it is widely used in electrical engineering. 8. Our laboratory being supplied with different new instruments, the students can do their practical work there. 9. Knowledge being the most valuable wealth of our times, the information theory became of great importance for the national economy. 10. The computer electronic memory recording all the operator's commands, the picture of deviations was produced. 11. The latest developments of science and technology having been applied, we could improve the production quality. 12. It should be noted, that this prism disperses white light into its component colours, the band of colours in the prism being an example of the dispersion of white light, 13. Zink being the cheapest metal with a strong tendency to lose electrons, we commonly use it for the production of electric current. 14. The gas being compressed, the number of molecules in each cubic centimeter is increased. 15. Temperature remaining the same, the volume of a gas varies inversely with the pressure. 16. Automation having been firmly established in space research, our spaceships employ automatic instruments in the study of cosmic space. 17. Natural radioactivity having been discovered, many scientists became interested in it.18. Radium having been discovered, scientists found that effects produced by it were caused by the break-up of its atoms. 19. Many technical and scientific problems being solved by our scientists, the first spaceflight could be realized. 20. With the various parts of the system clearly defined, the stability criteria can be used with full confidence. 21. When heat is applied at one spot, copper being a very good conductor, it is rapidly transferred throughout the whole mass. 22. The data being reliable, you can rely on them. 23. The theory having been discussed, they could proceed to practice. 24. The laboratory being provided with necessary instruments, they could carry out the work successfully. 25. Liquid lubricants evaporating in vacuum, scientists developed solid lubricants for space engineering, 26. The direct current circuits of a stage being separated electrically by capacitors or transformers, this makes it possible to have a common direct current source for all valves of the amplifier. 27. A bar magnet being placed in a uniform magnetic field, a moment of force will produce rotating of the bar to line it up with the field. 28. The anode being maintained at a positive potential with respect to the cathode, the electrons are attracted to it. 29. The electric current passing through the device, we can measure light intensity incident on the cathode.

Exercise 12. Translate the Absolute Participle Complexes which are placed at the end of the complex sentence into Ukrainian.

1. The balanced state may be obtained by adjustment of the potentiometer, the release of the battery key discharging the capacitor after each trial adjustment of the potentiometer. 2. It is well known that conductors will emit

electrons from their surface if there exists a potential gradient at their boundary of the order of 106 volts per cm, this phenomenon being known as cold emission. 3. Electrons may be emitted from certain materials when they are subjected to rays of light energy, this occurrence being known as photo-electric emission. 4. The heater filament is a tungsten wire loop placed inside the tube. the loop being coated with an insulating material such as aluminium oxide which is not affected by heat. 5. When the potential at A is sufficiently positive with respect to that at point B, a current I amperes flows through the valve into the load resistance R ohms, the current magnitude depending upon the voltage across the diode and upon the value characteristic. 6. The single diode circuit of fig 13.5 rectifies only alternate half-cycles, the other half-cycle being suppressed: it is termed a half-wave rectifier. 7. In this arrangement two diodes are connected in anti-phase, one valve rectifying the positive half-cycles and the other the negative. 8. Grid current is produced under certain conditions when the grid is positive to the filament, some of the electrons on their way to the anode being attracted and absorbed by the grid. 9. The various forms of feedback oscillator depend in principle on the continuous transfer of energy from the anode circuit to the grid circuit, the latter in turn controlling the energy in the anode circuit. 10. Oscillation always tends to occur in a high-frequency amplifier, the energy being fed back due to the self-capacitance between the grid and the anode. 11. Various methods are adopted to prevent this undesirable occurrence, a screen grid valves being usually employed. 12. Two different modulation methods are in general use, (i) amplitude modulation (AM) in which the amplitude of the carrier current is varied by the modulating frequency, the carrier frequency remaining constant, (ii) frequency modulation (FM) in which the carrier frequency is varied by modulating frequency, the amplitude of the carrier wave remaining constant. 13. With the grid modulator the audiofrequency signal is applied to the grid of a value in series with the carrier voltage of constant frequency, both alternating voltages being applied through the transformer. 14. The audio-frequency input is fed to the grid of the lowfrequency amplifier or modulating valve V2, the anode current for this valve being derived from the same h.t. source. 15. The voltage under test is then applied across the input terminals to the grid circuit: the rectified current gives a direct reading in volts, the scale having been previously calibrated against a standard instrument. 16. The bridge circuit generally used for this purpose is shown in fig. 13, R being the load resistance. 17. When B is positive to A the conditions are reversed, rectifiers 3 and 4 being in the conducting direction with rectifiers 1 and 2 not conducting. 18. A transformer is shunted across the line circuit, the secondary winding being closed with the rectifier networks A and B. 19. The process is repeated indefinitely, the potential on the anode rising gradually and collapsing almost instantaneously, producing what is termed a "saw-tooth" waveform. 20. The far end of the glass envelope is flattened to form a viewing screen, the inner surface being coated with a fluorescent material.

21. The valve is usually a voltage-operated device: the transistor is currentoperated, the emitter-base voltage being always small, 22. The indium pellets are used, one containing gallium (emitter) in solid solution and the other containing antimony (or arcenic). 23. The operation of this switching rectifier is turn-on and turn-off being measured in microseconds, 24. A extremely fast. magnet being broken into two, two complete magnets result, two new poles appearing at the fracture. 25. If the temperature is increased the molecules are given additional speeds, more of them breaking through the surface of the liquid. thus increasing the vapor density, 26. Matter is said to exist in four states; solid, liquid, gaseous and plasma, the latter being a hot ionized gas. 27. The scientists have made a number of experiments, some of them being very important for our work. 28. Voltage amplifiers mostly operate in class A, power amplifiers also operating in other classes. 29. Each stage introduces some distortion in the signal being limited, this placing a practical limit on the number of stages. 30. The efficiency of a class A amplifier is not above 25%, it being able to attain 80% in class C.

Exercise 13. Translate the following sentences paying attention to the Absolute Participle Complex.

1. Some electrons having been lost, the atom has a positive charge. 2. Every electron emitted from a body having a minute negative charge, the space outside the body becomes negatively charged. 3. The properties of the three types of electron emission are given in the table, it being the result of vast investigation and profound studies. 4. The triode is normally operated under space-charge limited conditions, an electron cloud forming close to the cathode surface. 5. The control electrode is maintained at a potential equal to or negative with respect to K, the anode being maintained at high positive potential, 6. All types of valves can be used as oscillators, the triode being the most commonly employed. 7. Consequently this electron tube acts as a rectifier, the plate being the anode and the heated filament the cathode. 8. The phenomenon is called secondary emission, the emitted electrons being secondary electrons, 9. In fact the emitter is said to inject holes into the semiconductor, the emitter current being composed of electrons. 10. The grid being made less and less negative, the plate can move easly to attract electrons and plate current increases. 11. There being two pairs of mutually normal plates, the electron beam can be deflected in horizontal and vertical planes. 12. These positive ions destroy the space charge near the cathode, the current flowing through the valve freely. 13. The first type is called a filament cathode; the second is known as a heater cathode, the filament merely acting as a store or heater. 14. The solution is made somewhat more complex due to the close proximity of the grid wires to the cathode, the effect of the grid being the greatest at those parts of the cathode close to the grid wires.

6. ГЕРУНДІЙ (THE GERUND)

Герундій — це неособова форма дієслова із закінченням -ing, що має властивості дієслова й іменника.

Як і інфінітив, герундій називає дію: reading читання, listening слухання.

В українській мові немає форми, яка відповідала б герундію. Слова *читання, слухання* — іменники, що утворились від дієслів, але не мають граматичних ознак дієслова.

6.1 Дієслівні властивості герундія

Герундій має такі дієслівні властивості:

1. Герундій перехідних дієслів вживається з прямим додатком:

I like reading books.

Я люблю читати книжки.

She began preparing food.

Вона почала готувати їжу.

2. Герундій може мати означення, виражене прислівником:

They continued listening attentively.

Вони продовжували уважно слухати.

3. Герундій має неозначену й перфектну форми, вживається в активному і пасивному стані. За формою герундій збігається з відповідними формами Present Participle.

Про форми герундія дивись схему 6.1.

6.2 Іменникові властивості герундія

Герундій у реченні виконує такі властиві іменнику синтаксичні функції:

1. Підмета:

Smoking is harmful.

Палити — шкідливо.

2. Предикатива:

His hobby is **collecting** stamps.

Його улюблене заняття — колекціонувати поштові марки.

атро.

3. Додатка (прямого і прийменникового):

He likes talking to me. She is fond of painting. Він любить розмовляти зі мною.

Вона любить малювати.

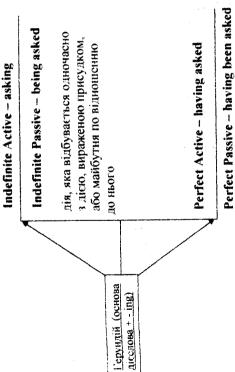
Форми герундія

Я знаю, що він перекладає цей текст. I know of his being sent to this conference.

I know of his translating this text.

Я знаю, що його посилають на цю

конференцю.



l know of his having translated the article.

Я знаю, що він переклав статтю.
I know of the article having been translated by the student.

Я знаю, що стаття перекладена студентом

виражену присудком, тобго передус

дії, вираженій присудком речення.

дія, яка закінчилась раніше за дію,

79

Крім того, герундій має ще такі іменникові властивості:

1. Перед герундісм може вживатися прийменник, що відноситься до нього:

Nobody thought of going

Ніхто й не думав лягати спати.

to bed. (Gaskell)

2. Перед герундієм, як і перед іменником, може вживатися присвійний займенник або іменник у присвійному відмінку:

Don't fear my forgetting

Не бійтесь, що я забуду її.

her.

Would you mind my

Ви не заперечуєте, якщо я

opening the window?

відчиню вікно?

I insist on my sister's staying at home.

Я наполягаю на тому, щоб моя сестра залишилася вдома.

Про функції герундія з урахуванням властивостей дієслова й іменника дивись схему 6.2.

6.3 Вживання герундія

Герундій — єдина дієслівна форма, перед якою може вживатися прийменник. Тому герундій вживається після дієслів, прикметників і виразів, які вимагають додатка з прийменником:

Thank you for telling me.

Дякую, що ви сказали мені.

She could not keep from

Вона не могла стриматися, щоб не

crving.

заплакати.

I am fond of reading.

Я люблю читати.

Після деяких дієслів герундій вживається без прийменника. Серед них ϵ такі, після яких може вживатися тільки герундій, на відміну від інших, які можуть вживатися і з герундієм, і з інфінітивом. Після таких дієслів вживається тільки герундій:

1. to avoid уникати; to finish закінчувати; to suggest пропонувати; to leave off, to give up переставати щось робити; to go on, to keep on продовжувати; cannot help не можу не (робити чогось). В українській мові після відповідних дієслів вживається інфінітив:

We finished **dressing**. Ми закінчили одягатися. Тhey went on **eating**. Вони продовжували їсти. Я не можу не запитати.

2. to enjoy *отримувати задоволення*, насолоду; to excuse, to forgive вибачати; to put off, to postpone відкладати; to delay затримувати;

Схема 6.2		Функції герундія та його переклад	його переклад
		Перекладається:	Reading is useful.
	підмет	інфінітивом	Читати корисно.
		іменником	Читання корисне.
	частина складеного		
	іменного присудка	інфінітивом	Our aim is reading English well.
		іменником	Наша мета – добре читати англійською.
	прямий додаток	інфінітивом	He likes reading books.
		іменником	Він любить читати книжки.
			читання книг.
Le-	частина складеного		
рун-	дієслівного присудка	інфінітивом	He began reading this book.
дій		іменником	Він почав читати книжку.
			читання (книжки).
	прийменниковий		
	додаток	іменником	He thought of reading this book.
		підрядним додатк.,	Він думав про те, щоб прочитати цю
	٠.	реченням	книжку.
Завжди з			
приймен-	означення	іменником	There are many ways of translating Gerund into
никами			Ukrainian.
			Є багато способів перекладу герундія на українську
		іменником	MOBy.
	обставина	з прийменником	After reading this book he returned it to me.
		дієприслівником,	Прочитавши пю книжку, він повернув її мені.
	± a	підрядним реченням	Після того, як він прочитав цю книжку

відкладати; to fancy уявляти (в окличних реченнях); to mind заперечувати (вживається в питальних і заперечних реченнях). В українській мові після відповідних дієслів вживається іменник або підрядне речення:

I don't mind telling you.

(Dickens)

Fancy going for a walk in

Я не проти того, щоб розповісти вам.

Уявіть собі прогулянку в таку погоду!

3. to want, to need, to require *потребувати*. Після цих дієслів герундій вживається в активному стані з пасивним значенням. В українській мові після цих дієслів вживається іменник або інфінітив у поєднанні зі словами треба, потрібно:

The house needs repairing.

such weather!

Будинок потребує ремонту (треба відремонтувати).

Герундій або інфінітив вживається після дієслів to begin, to start починати; to continue продовжувати; to propose запропонувати; to like любити; to try намагатися; to refuse відмовлятися (щось зробити); to intend мати намір; to forget забувати; to prefer віддавати перевагу:

The children began playing. Then they began to whisper. (Gaskell)
She continued sitting motionless. (Gaskell)

He continued **to live** with his parents. (Hornby)

Діти почали гратися.

Тоді вони почали говорити пошепки. Вона продовжувала сидіти нерухомо.

Він продовжував жити із своїми

батьками.

У деяких випадках значення дієслова змінюється залежно від того, чи вжито воно з інфінітивом чи з герундієм. Так, дієслово to stop у поєднанні з герундієм означає перестати щось робити, а у поєднанні з інфінітивом — зупинитися, щоб щось зробити:

They stopped reading the notice.

Вони перестали читати об'яву.

He stopped to read the

Він зупинився, щоб прочитати об'яву.

notice.

Герундій вживається як безприйменниковий додаток до прикметників like *схожи*й, busy *зайнятий*, worth *вартий*:

She was busy translating

Вона була зайнята перекладом статті.

the article.

They were not worth looking at.

I don't feel like working.

На них не варто було дивитися.

У мене нема настрою працювати.

Герундій вживається у функції означення (найчастіше прийменником of), що стоїть після означуваного іменника:

She had come with the intention of saying something definite. (Galsworthy)
You have always been in the habit of giving her playthings. (Bronte)

Вона прийшла з наміром сказати своє рішення.

Ви завжди мали звичку давати їй іграшки.

Герундій без прийменника вживається в ролі означення, що стоїть перед означуваним іменником і виражає призначення предмета, позначеного цим іменником:

writing-paper nanip для письма dancing place місце для танців

У такій же позиції в ролі означення вживається і Present Participle. Але на відміну від герундія, дієприкметник теперішнього часу виражає не призначення предмета, а дію, яку виконує особа або предмет, виражені означуваним іменником:

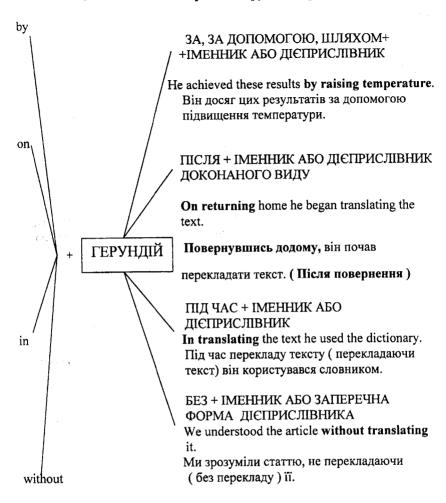
а dancing girl - дівчина, що танцює

Герундій з прийменником вживається в функції обставин (часу, способу дії та ін.):

They ate without talking. Upon reaching the park he waited and waited and Carrie did not come. (Dreiser) Вони їли, не розмовляючи. Прийшовши до парку, він чекав і чекав, а Керрі не приходила.

У ролі обставин з таким самим значенням вживається і дієприкметник теперішнього часу. Але на відміну від герундія, якому в цій функції завжди передує прийменник, дієприкметник теперішнього часу ніколи не вживається з прийменником. Тому в реченні On coming home he began to work слово coming - герундій, а в реченні Coming home he began to work Coming є дієприкметником, хоч обидва речення на українську мову перекладаються однаково — Прийшовши додому, він почав працювати.

Про переклад герундія з прийменниками дивись схему 6.3.



6.4 Комплекси з герундієм

Герундій у реченні може відноситись до підмета або додатка. Так у реченні **He** stopped **working** and smiled *Biн припинив роботу і усміхнувся* дія, виражена герундієм (working), відноситься до підмета (він працював, а потім припинив роботу).

У реченні I don't forgive you for being late for dinner \mathcal{A} не пробачаю вам того, що ви запізнилися на обід герундій відноситься до додатка. Але

герундій може також відноситися до іменника або займенника, що не є підметом чи додатком речення. Цей іменник чи займенник (суб'єкт герундія) завжди стоїть перед герундієм і позначає особу або предмет, що виконує дію або зазнає дії, вираженої герундієм. Поєднання герундія з таким іменником або займенником становить герундіальний комплекс:

Don't fear my forgetting your help. (Gaskell)

Не бійтесь, що я забуду вашу допомогу.

Перша частина герундіального комплексу — іменник у присвійному чи загальному відмінку або присвійний займенник. Друга частина-герундій, що виражає дію, яку виконує або якої зазнає особа чи предмет, позначений першою частиною комплексу:

They were afraid of my finding out the truth. (Dickens) They told us of Peter's coming there.

Вони боялися, що я взнаю правду.

Вони сказали нам, що Петро приходив туди.

Якщо іменник, до якого відноситься герундій, не вживається в присвійному відмінку, він ставиться перед герундієм у загальному відмінку, але при заміні його займенником вживається, як правило, присвійний займенник:

I hadn't much hope of his plan working. (Braine)
I hadn't much hope of its working.

У мене було мало надії, що його план буде ефективним. У мене було мало надії, що він (план) буде ефективним.

Іменник у загальному відмінку може бути першою частиною герундіального комплексу, навіть якщо цей іменник взагалі може вживатися в присвійному відмінку. Іноді першою частиною герундіального комплексу може бути також особовий займенник в об'єктному відмінку:

I remember his sister taking part in the concert. I do not like him going there.

Пам'ятаю, що його сестра брала участь у концерті. Мені не подобається, що він йде туди.

Герундіальний комплекс становить один складний член речення і в реченні може бути:

а) підметом:

Your coming here is very desirable.

Ваш приїзд сюди дуже бажаний.

б) додатком (безприйменниковим і прийменниковим):

Forgive my saying it.
I insist upon your staying.

Вибачте, що я сказала це. Я наполягаю на тому, щоб ви залишились.

в) означенням:

I don't know the reason of your leaving.

Я не знаю причини вашого від'їзду.

г) обставиною:

I entered the room without his seeing it.

Я ввійшла до кімнати так, що він і не побачив цього.

Про переклад герундіальних комплексів дивись схему 6.4.

6.5 Герундій і віддієслівний іменник

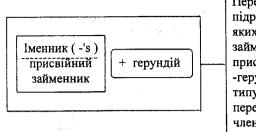
Віддієслівний іменник (the verbal noun)— це іменник, утворений від дієслова за допомогою закінчення -ing. На відміну від герундія віддієслівний іменник не має дієслівних властивостей, а лише властивості іменника:

- а) віддієслівний іменник може вживатися з артиклем, вказівними і присвійними займенниками і має форму множини: the sittings of the commission засідання комісії; the making of a new outlook формування нового світогляду; our likings are regulated by the circumtances наші уподобання керуються обставинами;
- б) віддієслівний іменник, утворений від перехідних дієслів, не вживається з прямим додатком; він приймає додаток з прийменником: the raising of living standard підвищення життєвого рівня;
- в) віддієслівний іменник означається прикметником (а не прислівником, як герундій та інші дієслівні форми):

I like **rapid** reading. **Fast** driving was dangerous in this region.

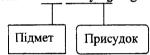
Мені подобається швидке читання. Швидка їзда була небезпечною в цьому регіоні.

Схема 6.4 Переклад герундіальних комплексів



Перекладається, як правило, підрядними реченнями, підмет яких відповідає присвійному займеннику або іменнику в присвійному відмінку, а присудок герундію цього звороту. Вибір типу підрядного речення при перекладі залежить від того, яким членом речення є герундій.

We know of his studying English.



Ми знаємо, що він (про те, що він) вивчає англійську мову.

2. Герундій 🖈 підмет:

Freud's having devoted his life to psychoanalysis is known to everybody.



Те, що Фрейд присвятив своє життя психоаналізу, відомо всім.

6.6 Герундій і дієприкметник в функції обставини

Зверніть увагу на можливість однакового перекладу герундія і дісприкметника в ролі обставини часу і способу дії (герундію в цих функціях обов'язково передує прийменник).

In copying
(gerund)
Coping
(participle)

this text he made a few mistakes.

При списуванні цього текста (переписуючи цей текст), він зробив декілька помилок.

On receiving
(gerund)
Receiving
(participle)
Having received
(participle)

my telegram he answered at once. Після отримання телеграми (отримавши телеграму) він одразу відповів.

After finishing (gerund) Having finished (participle) the experiment they discussed the results. Після закінчення досліду (закінчивши дослід) вони обговорили результати.

By reading (gerund) aloud every day Reading (participle) aloud every day

you will improve your pronunciation.

Читаючи вголос кожен день (щоденим читанням вголос; тим, що будете читати вголос кожен день), ви покращите свою вимову.

Without + gerund перекладається на українську мову заперечною формою дієприслівника.

He left without saying goodbye. Він пішов, не сказавши "до побачення" (не попрощавшись).

You will not be able to translate this article without knowing these rules.

Ви не зможете перекласти цю статтю, не знаючи цих правил.

Однак з української мови на англійську заперечна форма дієприслівника активного стану перекладається різними способами. Якщо український дієприслівниковий зворот не знаючи, не прочитавши є обставиною способу дії (відповідаючи на питання як, яким способом?), він перекладається на англійську мову герундієм з прийменником without. Якщо такий дієприслівниковий зворот є обставиною причини (відповідаючи на питання чому?), він перекладається на англійську мову дієприкметником в заперечній формі.

Він пішов, не закінчивши цю роботу вчора (і при цьому не закінчив роботу).

He went away without finishing this work yesterday.

Не закінчивіши (оскільки він не закінчив) цю роботу, він не міг поїхати в суботу.

Not having completed this work, he couldn't leave on Saturday.

ВПРАВИ

Exercise1. Translate the following sentences paying attention to the difference between the Participle and the Gerund.

PARTICIPLE

- 1. Measuring the temperature we used
- 2. Increasing the length we change
- 3. Escaping from the cathode electrons flow to
- 4. Accelerating the particles we direct them along
- 5. Using a strong magnet we direct the particles to
- 6. Finding this ratio we can derive....
- 7. Heating this alloy we can define....
- 8. Solving this problem he discovered
- 9. Calculating the speed we must

GERUND

- 1. Measuring the temperature will help you in ...
- 2. Increasing the length is necessary in some cases.
- 3. Escaping will not begin till we heat the cathode.
- 4. Accelerating can be made by means of
- 5. Using a magnet is not necessary here.
- 6. Finding the ratio is very important in our case.
 - 7. Heating increases the speed of molecules.
- 8. Solving such problems helps us greatly.
- 9. Calculating the speed will not give us ...

Exercise 2. Define the functions of the Gerund and translate the sentences into Ukrainian.

1. Solving physical problems is a difficult job. 2. His having solved the problem surprised me. 3. Our aim is solving easy problems. 4. He likes solving difficult problems. 5. I know of the problem having been solved. 6. The way of solving the problem is not easy. 7. In solving the problem he made some mistakes. 8. On solving the problem he proceeded to making experiments. 9. By solving the problem he got the required results. 10. You cannot do without solving this problem.

Exercise 3. Translate the following sentences paying attention to different forms of the Gerund.

1. Reading English books is necessary. 2. Speaking foreign languages is of great importance for every educated person. 3. Traveling into space has always been one of the greatest dreams of man. 4. He began studying English at school. 5. I like translating technical books from English into Ukrainian. 6. For ages mankind has dreamed of reaching the top of the world, the North Pole.

7. There are many ways of translating Gerund into Ukrainian. 8. He was afraid of connecting this device into the circuit. 9. His task was using these materials for constructing the device. 10. After studying theory we can begin experimenting. 11. Before finishing the experiment we could not write the report. 12. An instrument for measuring current is called an ammeter and for measuring voltage a voltmeter. 13. The device for determining the direction is called a compass. 14. Think before speaking.

Exercise 4. Translate the following sentences paying attention to different forms of the Gerund.

1. I know of his coming to Kyiv. 2. I know of his having come to Kyiv. 3. I knew of his having come to Kyiv. 4. I shall know of his having come to Kyiv. 5. I do not like interrupting other people. 6. I do not like being interrupted. 7. He remembers having interrupted you during your report. 8. He remembers having been interrupted by you during his report. 9. We were tired of skating so long. 10. Everybody knows of his having written one book and writing another. 11. We know of her having lived there many years ago. 12. Our aim is mastering English. 13. Mastering English is not an easy task. 14. He likes reading such kinds of books. 15. After finishing the experiments the students left the laboratory. 16. I succeeded in having finished my work in time. 17. They insisted on their being examined by the doctor. 18. He insisted on this letter being sent today. 19. We objected to his being sent to London.

Exercise 5. Translate the following sentences paying attention to the translation of the Gerund with prepositions.

1. On reading the article he decided to translate it into Ukrainian. 2. Many specialists have taken part in liquidating the consequences of the Chernobyl catastrophy. 3. Our engineer succeeded in creating a new device. 4. You can master English by reading books and newspapers every day. 5. By doing nothing we learn nothing. 6. She left the room without saying a word. 7. We spoke about the difficulties of reading such books without consulting the English-Ukrainian dictionary. 8. As it was late she went away without waiting for me. 9. Experiments showed that all gases expand on heating. 10. On carrying on one of his experiments, Faraday discovered electromagnetic induction. 11. At the present time radio can be used in orientating the airplane or in fixing the airplane's position. 12. The teacher asked her students not to go away without speaking to her.

Exercise 6. Translate the following sentences paying attention to the gerundial complexes.

1. We are speaking of your friend's having gone to the expedition. 2. His being sent to the USA was very important for his work. 3. His being invited to

take part in this conference is natural as everybody knows of his having made interesting experiments in physics. 4. The engineer told us about his having been invited to that research institute. 5. Nobody knew of her having left for the Middle East. 6. I remember having seen this film. 7. The director informed them of the construction of the plant having been completed. 8. The new device was put into mass production on having been carefully tested. 9. Our engineer's having constructed a new type of the electronic device was not known to us. 10. The atomic theory not only succeeded in having introduced the order into chemistry but it also took the first place in physics. 11. The workers succeeded in completing the construction of the plant in time because of their having introduced new methods of work.

Exercise 7. Make up five sentences from each table.

I He/She We You They	Ve agreed to thought of		visiting that museum. doing morning exercises. buying the tickets beforehand. helping them. learning the poem by heart.	
l He/She We You They	suggested finished couldn't help enjoyed gave up		playing hockey smoking. meeting them. learning English.	
After Before On	finishing school coming home recovering getting there leaving for Kyiv	l he/she we they	decided to go there. had a short rest. spent a week at home. began to work. booked a ticket.	

Exercise 8. Transform the sentences using the Gerund instead of the Infinitive.

Model: My father began to work at this plant 20 years ago. — My father began working at this plant 20 years ago.

1. We continue to study English. 2. The children like to play basket-ball. 3. The boy started to run. 4. His mother intends to spend her holiday in the Crimea.

5. They preferred to get there by plane. 6. She tried to open the window but couldn't. 7. I have just begun to translate the text.

Exercise 9. Combine the sentences using the Gerund.

Model: You helped me. I thank you for it. - I thank you for helping me.

1. You gave me a dictionary. I thank you for it. 2. The woman showed me the way. I thanked her for it. 3. You explained to us this grammar rule. We thank you for it. 4. Ann passed me the salt. I thanked her for it. 5. Nick bought a notebook for Pete. Pete thanked him for it. 6. He repaired my TV set. I thanked him for it.

Exercise 10. Transform the following sentences using gerundial phrases instead of the subordinate clauses.

- A. Model: I think I'll go to Minsk next week I think of going to Minsk next week.
- 1. I think I'll go to the theatre tomorrow. 2. I think I'll join them. 3. I thought I would buy that coat. 4. Tom thinks he will play hockey on Saturday. 5. She thought she would take a taxi. 6. We think we shall visit him in the hospital.
- B. Model: After he finished school, he worked at a plant. After finishing school he worked at a plant.
- 1. After they passed their exams, they went to the Caucasus. 2. Before we moved to this town we lived in Kyiv. 3. After she wrote the letter she went to the post-office. 4. Before you cross the street you must look to the left and then to the right. 5. I turned off the light before I left home. 6. We met him after we walked about two miles.
- C. Models: She insisted that she should go to the library. She insisted on going to the library.

She insisted that she should be sent to the library. – She insisted *on being sent* to the library.

1. He insisted that he should show them the way. 2. He insisted that he should be shown the way. 3. They insisted that they should help me. 4. They insisted that they should be helped with their work. 5. I insisted that I should examine them in the afternoon. 6. I insisted that I should be examined first. 7. We insisted that we should pass the exam before June. 8. He insisted that he should carry the heavy case himself. 9. She insisted that she should be offered a better job. 10. She insisted that she should offer them some money they needed.

Exercise 11. Paraphrase the following sentences using the Gerund.

- A. Model: I want very much to get a letter from you. -I am looking forward to getting a letter from you.
- 1. I want very much to visit that exhibition. 2. She wanted very much to go to the country. 3. He wants very much to be offered this job. 4. We want very much to see this performance. 5. I want very much to be invited to the conference.
- B. Model: It gave me much pleasure to see this performance. I enjoyed seeing this performance.
- 1. It gave me much pleasure to work with him. 2. It gave me much pleasure to read this story. 3. It gave me much pleasure to play tennis. 4. It gives him much pleasure to ride a bicycle. 5. It will give him much pleasure to listen to this lecture.
- C. Model: It is useless to learn rules without examples. It is no use *learning* rules without examples.
- 1. It is useless to invite her. She won't come. 2. It is useless to grow tomatoes in this region. The summer is too short here: they won't ripen. 3. It is useless to teach her to play the piano. She has no ear for music. 4. It is useless to go shopping now. Most of the shops are closed. 5. It is useless to go to the theatre now. The tickets are sold out.

Exercise 12. Transform the following complex sentences into simple ones using the Gerund

- A. Model: I am sorry that I trouble you. Excuse me for troubling you.
- 1. I am sorry that I ring you up so late. 2. I am sorry that I turned on the radio when you are working. 3. I am sorry that I came so late. 4. I am sorry that I broke your pencil. 5. I am sorry that I went home without waiting for you.
- B. Model: I am sorry that I did not tell you about it. I am sorry for not telling you about it.
- 1. I am sorry that I did not help you yesterday. 2. I am sorry that I didn't wait for you. 3. I am sorry that I did not do my homework. 4. I am sorry that I did not ring you up. 5. I am sorry that I did not answer your letter.

Exercise 13. Combine the following couples of sentences into one using the Gerund.

- A. Models: I am his pupil. I am proud of it.—I am proud of being his pupil. I was his pupil. I am proud of it.—I am proud of having been his pupil.
- 1. He works with professor Collins. He is proud of it. 2. He worked with professor Collins. He is proud of it. 3. He is playing chess with a champion. He is proud of it. 4. He was playing chess with a champion. He is proud of it. 5. She made many mistakes. She is ashamed of it. 6. She makes many mistakes. She is ashamed of it.
- B. Models: I am often invited there. I am proud of it. —I am proud of being often invited there.

I was invited there. I am proud of it. — I am proud of having been invited there.

- 1. He is given an important task. He is proud of it. 2. He was given an important task. He is proud of it. 3. She is loved by the pupils. She is proud of it. 4. She was loved by her pupils. She is proud of it. 5. The boy is praised by the teacher. He is proud of it. 6. The boy was praised by his teacher. He is proud of it.
 - C. Model: We sang together. We enjoyed it. —We enjoyed singing together.
 - 1. I saw this film. I enjoyed it. 2. She played the piano. She enjoyed it. 3. Tom collects stamps. He enjoys it. 4. The boys played football. They enjoyed it. 5. We bathed in the river. We enjoyed it.
- D. Model: They went home. They did not wait for me. —They went home without waiting for me.
- 1. I translate the text. I did not use the dictionary. 2. Mary left home. She did not lock the door. 3. He went to bed. He did not take off his shirt. 4. The boy continued to speak. He did not look at us. 5. The man saved the child. He did not give his name.
- E. Model: I did not take a taxi. I went there by bus. Instead of taking a taxi, I went there by bus.
- 1. We did not go to the Crimea. We spent the summer in the country. 2. He was not preparing for his exam. He was playing chess. 3. I did not learn the

story by heart. I prepared to retell it. 4. I shall not go to the cinema. I shall watch television. 5. I won't write her a letter. I'll send her a telegram.

- F. Model: Mother is busy. She is cooking dinner. Mother is busy cooking dinner.
- 1. Tom is busy. He is repairing his bicycle. 2. Jane is busy. She is washing her dress. 3. I was busy. I was preparing my report. 4. The children are busy. They are cleaning the room. 5. The teacher was busy. She was correcting our tests. 6. The director was busy. He was signing the papers.
- G. Model: This radio set is good. I advise you to buy it. —This radio set is worth buying.
- 1. This book is interesting. I advise you to read it. 2. This film is good. I advise you to see it. 3. This house in not very old. I advise you to repair it. 4. This museum has many interesting things. I advise you to visit it. 5. Many scientific works are published in this language. I advise you to learn it.

Exercise 14. State the form and syntactic function of the Gerund in the following sentences. Translate them into Ukrainian.

1. Would you mind lending me two matches? (Shaw) 2. Dick went on asking about various friends. (Lindsay) 3. She was saving her from being questioned and examined. (Gaskell) 4. He had thought of taking Steve along with him. (Gordon) 5. I insist on being treated with a certain degree of consideration. (Shaw) 6. I don't mind telling you. (Dreiser) 7. She had stopped asking about the time. (Heym) 8. She has the gift of being able to work sixteen hours. (Shaw) 9. At the back of the house two women were busy washing. (Abrahams) 10. He was afraid of being poor. (Shaw) 11. I recollect talking about it. (Dickens). 12. So he gave up trying to get breakfast. (Jerome) 13. I had a dim recollection of having seen her at the theatre. (Dickens)

Exercise 15. Answer the following questions using the Gerund in the answers.

1. What are you fond of doing? 2. Are you fond of skating? 3. What do you like better: skiing or skating? 4. Do you remember going to school for the first time? What can you say about that day? 5. What films have you seen lately? Which of them is worth seeing? 6. How many English books have you read this year? Which of them are worth reading? 7. What do you dream of becoming? 8. What are you busy doing now? 9. What do we use for cutting

bread? 10. What do we use for writing? 11. What do we use scissors for? 12. Is it possible to learn English without working hard? 13. What book did you read last? Did you enjoy it? Why? 14. Did you enjoy traveling by air? Why? 15. Where do you intend spending your holidays? 16. Do you sometimes dream of visiting a certain place you were happy once?

Exercise 16. Make up five sentences from each table.

I He She We You They Insisted or Insisted	to his her our your their	Going there. being sent there. coming back. being given this task. being invited to the party. inviting to the party.
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I He She We You They	am is are was were	pleased with sure of surprised at proud of	my your his our their Jane's	behaving so. having said it. having been praised. playing so well. being invited there. having won the match.
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Exercise 17. Combine the sentences using gerundial complexes.

Model: They lost the game. I am surprised at it. —I am surprised at their having lost the game.

1. Nick studies very well. His father is proud of it. 2. Kate failed in the examination. We are surprised at it. 3. He will come in time. I am sure of it. 4. She plays the piano very well. I am pleased with it. 5. Our football players won the match. We are proud of it. 6. They are here. I am surprised at it. 7. He will be a good specialist. They are sure of it. 8. Our students won the brain-ring game. The dean is pleased with it.

Exercise 18. Paraphrase the sentences using gerundial complexes.

Models: I want him to take the floor. — I insist on his taking the floor.

I don't want him to be sent there. — I object to his being sent there.

1. I want Kate to recite this poem. 2. They wanted me to take part in the competition. 3. I don't want Jane to stay here alone. 4. The teacher wanted the pupils to do this exercise. 5. Mother did not want Mary to go to the cinema. 6. I don't want him to be elected chairman. 7. I want her to be sent to the conference.

Exercise 19. Change the following complex sentences into simple ones using gerundial complexes.

Model: When she plays, I enjoy it. — I enjoy her playing.

1. When you quarrel I dislike it. 2. When you open the window I don't mind it. 3. When they dance I enjoy it. 4. When he gets an excellent mark his parents are pleased with it. 5. If you make noise I dislike it. 6. When you don't know the lesson, I am surprised at it. 7. If you pass your examination well I'll be proud of it. 8. When you smoke in the room I hate it.

Exercise 20. Ask your groupmate:

1. if he enjoys traveling by sea; 2. if he likes playing chess; 3. if he objects to your opening the window; 4. whether he agrees to your using his dictionary; 5. if he intends going to Riga this year; 6. whether he is ashamed of making spelling mistakes; 7. if he is sure of passing his examination well; 8. if he dreams of becoming a doctor; 9. if he insists on your playing chess with him; 10. whether he is fond of skating; 11. if his mother is afraid of his catching cold; 12. whether he is afraid of catching cold; 13. whether he is afraid of your catching cold; 14. whether the film he saw last is worth seeing; 15. whether the book he read last is worth reading. 16. whether my sister is delighted of her playing baseball with professional players. 17. whether he is astonished at being invited to the party. 18. if she hates standing in long queues; 19. whether she doesn't mind sleeping late on Sundays; 20. if he would like to give up borrowing money.

Exercise 21. Find gerundial complexes in the following sentences and state their syntactic function. Translate the sentences.

1. I will not stand your encouraging people as you do. (Shaw) 2. He thought of Jem's coming that night. (Gaskell) 3. We made merry about Dora's wanting to be liked. (Dickens) 4. Will you give me a certificate of your being unable to go? (Gaskell) 5. Forgive my saying it. (Hardy) 6. They don't like Kate's indulging in fantasy all the way. 7. I thought of Albert Einstein's having devoted his life to the theory of relativity. 8. The customs officer gave us an explanation for our luggage being liable to duty. 9. The lazy student complained of his not having enough time to study.

Exercise 22. Answer these questions using the verbs given.

Examples: Why do you never fly? (hate) I hate flying.

Why does Tom go to the cinema so often? He likes going to the cinema.

1. Why do you always wear a hat?(like) 2. Why does Ann watch television so often? (enjoy) 3. Why do you never go to the cinema? (not /like) 4. Why does Jack take so many photographs? (like) 5. Why don't you work in the evenings? (hate) 6. Why does you friend ride a bicycle so seldom? (not/like)

Exercise 23. Put the verb into the correct form: - ing or to + infinitive.

Examples: I enjoy being alone.

Would you like to come to a party?

1. Do you mind ... (travel) such a long way to work every day? 2. Ann loves ... (cook) but she hates ... (wash) up. 3. I can't stand people...(tell) me what to do when I'm driving. 4. I don't like that house. I would hate ... (live) there. 5. Do you like ... (drive)? 6. When I have to catch a train, I'm always worried about missing it. So I like...(get) to the station in plenty of time. 7. I very much enjoy ... (listen) to classical music. 8. I would love ... (come) to your wedding but it just isn't possible. 9. Sometime I'd like ... (learn) to play the guitar. 10. He doesn't like ... (get up) early.

Exercise 24. Now you have to make your own sentences. Say whether you like or don't like the things in brackets expressed by the Gerund. Choose one of these verbs for each of your sentences:

(don't) like love hate enjoy don't mind can't stand (don't) feel like Example: (reading) I like reading very much.

- 1. (playing cards) I... 2. (learning languages) ... 3. (visiting museums) ...4. (lying on the beach in the sun) ... 5. (shopping) ... 6. (jogging) ... 7. (waiting for a long time) ... 8. (making love in public) ... 9. (being interrupted while eating) ... 10. (celebrating parties at the cafe) ...11. (taking on responsibility)...
- 12. (sewing on buttons)... 13. (making excuses) ... 14. (arguing about money) ... 15. (getting up early) ... 16. (writing thank-you letters) ... 17. (waiting at the doctor's) ... 18. (sleeping late) ... 19. (watching horror films) ... 20. (making new friends)... 21. (having coffee at night) ...

Exercise 25. Here is some information about Tom when he was a child.

- 1. He was in hospital when he was four. 4. He cried on his first day at school.
- 2. He went to Paris when he was eight. 5. He said he wanted to be a doctor.
- 3. He fell into the river.

 6. He was bitten by a dog.

He can still remember 1, 2 and 4. But he can't remember 3, 5 and 6. Make sentences beginning He can remember ... or He can't remember ...+ gerund.

1. He can remember being in hospital, etc.

Exercise 26. Your friend has some problems and you have to be helpful. For each problem write a question with try + gerund.

Example: I can't find anywhere to live. (put an advertisement in the newspaper). Have you tried putting an advertisement in the newspaper?

1. My electric shaver is not working. (change the batteries) 2. I can't contact Fred. He's not at home. (phone him at work) 3. I'm having difficulty sleeping at night. (take sleeping tablets) 4. The television picture isn't very good. (move the aerial) 5. I am afraid I have a cold. (take medicine for a cold).

Exercise 27. In this exercise you have to put the verb into the correct for: -ing or to + infinitive. (Sometimes either form is possible.)

Examples: Please remember to post this letter.

John intends to buy (or buying) a house.

1. A: You lent me some money a few months ago. B: Did I? That's strange. I don't remember... (lend) you any money. 2. We tried... (put) the fire out but we were unsuccessful. We had to call the fire-brigade. 3. When you see Tom, remember... (give) him my regards, won't you? 4. What do you intend ... (do) about this problem? 5. Someone must have taken my bag. I clearly remember... (leave) it by the window and now it has gone. 6. When she saw what had happened, she began ... (laugh) loudly. 7. Sue needed some money. She tried... (ask) Gerry but he couldn't help her. 8. He tried ... (reach) the shelf but he wasn't tall enough. 9. 'Did you remember... (phone) Ann?' 'Oh no, I completely forgot.'

10. I asked them to be quiet but they continued ... (make) a lot of noise.

Exercise 28. In this exercise you have to read a sentence and then write a second sentence with the same meaning. Each time begin in the way shown.

Example: I phoned Ann and then I went out.- After phoning Ann I went out.

1. Tom went to bed but first he had a hot drink. Before ... 2. The plane took off and soon afterwards it crashed. Soon after... 3. We didn't eat at home. We went to a restaurant instead. Instead of ... 4. You put people's lives in danger if you drive dangerously. You put people's lives in danger by ... 5. He hurt his leg but he managed to win the race. In spite of... 6. Bill is a very good cook. Bill is very good at... 7. I don't intend to lend her any money. I have no intention of ... 8. George took more exercise and so lost weight. By ... 9. He was angry with me because I was late. He was angry with me for... 10. Tom thinks that doing nothing is better than working. Tom prefers doing nothing to

Exercise 29. Now read each situation and then write a sentence with without - ing.

Examples:

She ran five miles. She didn't stop. - She ran five miles without stopping. He left the room. Nobody saw him. - He left the room without anyone seeing him.

1. He translated the article. He didn't use a dictionary. He translated the article without ... 2. Look right and left before you cross the road. Don't cross ... 3. She got married. Nobody knew about it. She... 4. They passed the exams. Nobody helped them. 5. Tom left the room. He didn't finish his dinner. 6. The thief climbed through the window. Nobody saw him. 7. It's nice to go on holiday and not to worry about money.

Exercise 30. This time read each situation and write a sentence with look forward to + gerund.

Examples: You are going on holiday next week. How do you feel about this? I'm looking forward to going on holiday.

Sue is doing an examination next week. She's not very happy about it. How does she feel about it? She is not looking forward to doing the examination.

1. A good friend is coming to visit you soon, so you will see him/her again. How do you feel about this? I'm... 2. You are going to the dentist. You don't like visits to the dentist. How do you feel about it? ... 3. Carol is a schoolgirl. She hates school but she is leaving school next summer. How does she feel about this? She ... 4. It's raining cats and dogs but my brother is to go to the baker's. How does he feel about it? He ... 5. You are going to whitewash the ceiling in the kitchen but the weather is very fine and the sun is shining. How do you feel about it? 6. You are going on an excursion. How do you feel about this? 7. He is going to have a good rest in the country with his relatives. How does he feel about it?

Exercise 31. Make sentences using I prefer doing (something) to doing (something else).

Example: (driving/traveling by train) I prefer driving to traveling by train.

1. (praising Paris/ admiring London) I prefer praising Paris... 2. (phoning people/ writing letters) I prefer... 3. (going to the cinema/ watching film on television). 4. (dancing at the discotheque/ singing at the concert). 5. (staying at home/ going out). 6. (hunting for a challenging job/ fulfilling routine tasks). 7. (having early breakfasts/ drinking coffee at night). 8. (arranging an active rest/ sleeping at the daytime)Now rewrite sentences 2 and 3 using the structure "I prefer to do (something)...".

Exercise 32. Combine two sentences into one using the gerundial complexes.

Example: They combine two methods. It is of great value. - Their combining two methods is of great value.

1. He works at this problem. It is known to us. 2. He has made the experiment. It is important. 3. They have obtained some new data. It is very important. 4. The heater is connected to a relatively low voltage in this experiment. It is known to us. 5. A relatively low voltage increases the supply of electrons. It is important to remember. 6. He makes use of this new alloy. It will give good results. 7. The flow of plate current is governed by the voltage placed on the control grid. It is known to every student. 8. The plate current is measured by a milliammeter. It is trivial. 9. Static characteristics had been obtained under actual operating conditions. It was very important. 10. He makes the calculation regularly. It helps us in our work. 11. He had stopped making experiments. It was unknown to us. 12. They had changed manufacturing methods. It surprised us greatly.

Exercise 33. Translate the sentences into Ukrainian, paying aftention to the gerundial complexes.

1. His having made such a discovery interested everyone. 2. Our having fihished all the experimental parts in time did not surprise them. 3. Their having obtained the new equipment will help them greatly. 4. Her working in this field of electronics made a great contribution to their common research. 5. His having taken part in the optoelectronics conference was reported in the press. 6. Petrov's having invented the electric arc is known to everybody. 7. Their having found a new method of transmission will help us to send information better and faster. 8. Their having developed efficient radiolocation facilities was important to us. 9. His having applied new techniques for manufacturing amplifying signal devices interested everyone. 10. Their having used biotechnical and medical devices and systems will help them in their experiment. 11. Huyghen's having developed the wave theory brought him world renown.

Exercise 34. Translate the sentences into Ukrainian paying attention to the Gerund and gerundial complexes.

1. Knowing the physical properties of all the substances is very important to the chemist. 2. Ultimate weight is determined experimentally by employing some architecture of testing machines. 3. Elementary phosphorus is made by heating calcium phosphate with silica and carbon in an electric furnace. 4. Scanning is accomplished by changing the amount of electrons getting on the fluorescent screen. 5. Setting up an automatic control system takes considerable time during which the machine is idle. 6. We know of Newton's having developed the principles of general physical theory. 7. Measuring temperature is necessary in many experiments. 8. Experimenting is widely used in different branches of science and industry. 9. The best way to solve this problem is experimenting. 10. The engineer insisted on experimenting the best method to solve this problem. 11. We prefer working at the laboratory after classes to reading specialized literature at the library. 12. Conducting research is interesting for research – oriented students.

Exercise 35. Make these sentences imperative using the Gerund.

1. It's necessary to measure the distance (begin). 2. It's not important to do it now (stop). 3. It's better to heat water a little (keep on). 4. You must check the device (begin). 5. You needn't calculate these data (stop). 6. It's better to define it at once (start). 7. You will have time to treat this part (go on). 8. There is only one more experiment to make (go on). 9. It's very promising to use this array in the mathematical proof (start).

Exercise 36. Tranlate the following sentences into Ukrainian paying attention to the Gerund.

1. Reading English technical magazines is important for an engineer. 2. It is no use speaking to her. 3. I remember attending his lectures on history. 4. He re-members having added some water to the mixture. 5. They finished installing the apparatus only on Saturday. 6. After the failure they stopped following this rule. 7. They began doing the experiment in May. 8. He began determining the properties of the new material. 9. After failing in the examination in January he had to take it again in February. 10. After graduating from the Institute he worked in the Far North. 11. At the meeting they discussed different ways of improving their work. 12. There are different ways of obtaining the gaseous substance. 13. The problem of obtaining new power sources was discussed by the board of directors. 14. The organizers of the conference were informed of his refusing to take part in it. 15. We were informed of new results being obtained at the laboratory. 16. I remember his having been interested in languages since his childhood. 17. They learned of his having discovered effective means of memorizing difficult number combinations.

Exercise 37. Translate the following sentences paying attention to the Gerund.

1. I know of his having been sent to work to the electric networks enterprise. 2. What is the reason for his having left our city so suddenly? 3. We heard of the experiment having been started last week. 4. He improved his report by changing the end. 5. They objected to his remaining at home. 6. Instead of restoring the old theatre they decided to build a new one in the centre of the town. 7. New possibilities for applying atomic energy open up. 8. It is possible to set up power stations based on utilizing the heat of the sun. 9. The idea of creating a multi-stage rocket belongs to Tsiolkovsky. 10. Before being sent up the balloon was filled with a special gas. 11. What apparatus do we use for measuring air pressure? 12. Science requires experimenting. 13. Speaking foreign languages is of great importance for every cultured and well-educated person.

Exercise 38. Translate into English using the Gerund.

- А.1 Пробачте, що я взяв вашу книжку 2 Пробачте, що я запізнився 3. Пробачте, що ми турбуємо вас знов. 4. Пробачте, що ми не прийшли вчасно. 5. Пробачте, що я перебиваю вас. 6. Пробачте, що ми говорили так голосно. 7. Пробачте, що я телефоную вам так пізно.
- В. 1. Дякую вам за те. що ви показали мені дорогу до міста. 2. Дякую тобі, що ти допоміг мені дістати квитки. 3. Дякую, що ви провели мене додому. 4. Дякую, що ти розбудив мене. 5. Дякую, що ви пояснили мені це правило.
- С. 1. Я пам'ятаю, що бачив його в Києві. 2. Вона пам'ятає, що читала цю книжку. 3. Ми пам'ятаємо, що він працював разом з нами. 4. Він пам'ятає, що бачив цей фільм. 5. Я пам'ятаю, що вона вчилася в нашій школі.
- D. 1. Мене дивує, що вона робить так багато орфографічних помилок. 2. Мені дивно, що ти пропустив так багато уроків. 3. Мене дивує, що він сказав це. 4. Мені дивно, що ви так часто запізнюєтесь. 5. Мені дивно, що вони програди матч.
- Е.1. Учитель заперечував проти того, щоб ми сьогодні пішли в кіно. 2. Вони не заперечують проти того, щоб я приєднався до них. 3. Ви не заперечуєте проти того, щоб я відчинила вікно? 4. Я заперечую проти того, щоб це питання обговорювалося сьогодні.
- F. 1. Він наполягав на тому, щоб усі прийшли завтра о 8 годині. 2. Вона наполягала на тому, щоб я пішов до лікаря. 3. Я наполягаю на тому, щоб вона негайно поїхала до Києва. 4. Я наполягаю на тому, щоб її негайно послали до Києва. 5. Ми наполягаємо на тому, щоб цей будинок було відремонтовано.
- G. 1. Це залежить від того, чи прийде він вчасно. 2. Все залежить від того, чи буде погода хороша. 3. Ваша поїздка залежить від того, чи дістанете ви квитки. 4. Успіх нашої роботи залежить від того. чи

допомагатимете ви нам. 5. Це залежить від того, чи буде відчинений магазин.

- Н. 1. Ми з нетерпінням чекали, коли він повернеться. 2. Учні з нетерпінням чекають, коли вони поїдуть на екскурсію. 3. Вона з нетерпінням чекає, коли її запросять на вечір. 4. Ми з нетерпінням чекаємо, коли буде видана ця книжка. 5. Я з нетерпінням чекаю, коли буду працювати на заводі.
- I. 1. Вона пішла з дому, не вимкнувши телевізора. 2. Я не міг підготувати доповідь, не прочитавши цих статей. 3. Учні пішли додому, не обговоривши це питання. 4. Ми не можемо піти до театру, не купивши квитків заздалегідь. 5. Він пішов, не попрощавшись.
 - J. 1. Замість того, щоб іти до нього, ви можете зателефонувати йому.
- 2. Замість того, щоб купити цю книжку, я взяв її в шкільній бібліотеці. 3. Замість того, щоб іти до лісу, ми залишилися вдома. 4. Замість того, щоб їхати туди трамваєм, він пішов пішки. 5. Замість того, щоб посилати туди телеграму, я напишу йому лист.
- К. 1. Я вивчив багато слів, читаючи щодня англійські книжки. 2. Ми можемо встигнути на поїзд, взявши таксі. 3. Він дуже допоміг нам, пояснюючи правила. 4. Ви можете запитати його про це, зателефонувавши йому. 5. Я краще запам'ятовую слова, вживаючи їх у реченнях.
- L. 1. Я не мав нагоди поговорити з ним. 2. У неї не було надії купити квиток на цю виставу. 3. Він має добру звичку записувати кожне слово в словничок. 4. € різні способи перекладу герундія на українську мову. 5. Вони не мали можливості користуватися магнітофоном.
- М. 1. Цей будинок вимагає ремонту. 2. Підлогу треба пофарбувати. 3. Діти потребують догляду. 4. Черевики треба полагодити. 5. Фільм треба обговорити. 6. Цей автомобіль треба відремонтувати.
- N. 1. Мій товариш зайнятий ремонтом телевізора. 2. Вона зайнята перекладом статті. 3. Ми зайняті: обговорюємо дуже важливе питання. 4. Учні зайняті: садять дерева в шкільному садку.
- О. 1. Цей фільм варто подивитися. 2. Цей роман варто прочитати і обговорити. 3. Це оповідання заслуговує на те, щоб його переклали на українську мову. 4. Ці факти варто згадати. 5. Телевізор варто купити.

Exercise 39. State the functions of the gerunds and verbal nouns in the following sentences.

A. 1. Studying small structures is accomplished with the help of a microscope. 2. Scientists began working at the problem of magnifying the power of microscopes more than 200 years ago. They were greatly interested in improving the lenses. 3. The experiments of the physicists resulted in making much more powerful microscopes. 4. Doubling the power of the ordinary microscope became possible by means of an ultraviolet microscope. 5. Instead of using ultraviolet light, scientists turned their attention to studying electrons. 6.

Using electron microscopes scientists succeeded in bringing to view the fine structure of every material. 7. Upon making a number of experiments atomic physicists solved the problem of building a very powerful microscope. 8. Scientists succeeded in building electron microscopes with a great magnifying power. 9. Building a microscope using an electron beam in place of the usual beam of light provided a means of studying the smallest particles. 10. By solving the problem of constructing the electron microscope scientists were able to bring to view the fine structure of every material. 11. By making use of the properties of electrons physicists succeeded in constructing an electron microscope.

B. 1. Upon being heated, the molecules begin moving about very rapidly. 2. Drinking water is a prime necessity for plants and animals. 3. It is simple enough to heat a vessel of water to the boiling point. It is also a simple matter to cool water to its freezing point, but we must have more complex equipment unless the weather is cold enough to do it for us. 4. The most important way of changing mechanical energy into heat energy is by means of electricity. 5. When an object suddenly starts moving, we understand at once that something has acted or is acting upon it to produce the change. 6. In considering the chemical properties of metals the first thing that must be noted is that they vary widely in degree of chemical activity. 7. Alloys are usually prepared simply by melting two or more metals together and then allowing this liquid mixture to cool and solidify. 8. There are two general reasons why man has tried to make synthetic materials instead of being satisfied with those already existed.

Exercise 40. Translate the sentences into Ukrainian paying attention to the Gerund.

1. This has an effect of eliminating the dip or kink present in the anode characteristic of the screen grid value. 2. Various methods depending on the employment of a non-linear impedance are available for effecting amplitude modulation. 3. In making a measurement the input terminals are first short-circuited. 4. In an instrument of this type a single battery is used for heating the cathode, biasing the grid and providing the positive anode potential. 5. If the gas becomes ionized it is capable of conducting electricity. 6. The number of ions may be increased by raising the temperature of gas. 7. The energy given up by the positive ions on reaching the cathode is converted to heat. 8. The cathoderay tube is an instrument for showing pictorially the variations in pulse duration or current occurring in a circuit. 9. A convenient method of gradually raising the anode potential is to connect it to a capacitor C which is charged through a resistance R. 10. For the purpose of making measurements a transparent scale may be fitted to the screen. 11. A television system is considered to possess means for transmitting sounds synchronously with visual images. 12. Many

difficulties could be avoided by using heterojunctions. 13. Saying that an atom is the smallest particle of any substance means that no substance can exist in any more subdivided form. 14. As matter and weight are closely connected we usually measure the amount of matter in an object by weighing it. 15. The transformer is a device for raising or lowering voltage. 16. It would be impossible to simplify the production process without applying this device. 17. If biological experiments are going on, the problem of developing the technology for growing plants in space conditions will be solved. 18. The first problem is determining the trajectory described by the points of a moving body. 19. In using the transformer one can increase the voltage of the alternating current. 20. On leaving the metal surface the electrons can produce considerable currents.

Exercise 41. Find the gerunds in the following sentences, define their functions and translate them into Ukrainian.

1. On making a lot of experiments Faraday discovered the electromagnetic induction. 2. Heating makes molecules move faster. 3. Our success depends on being supplied with the necessary equipment. 4. He is busy checking the equipment for the experiment. 5. The way of avoiding these difficulties is unknown at present. 6. This procedure will give us the possibility of determining both the state estimation and the time delay. 7. The idea of using this technique is new and somewhat unexpected. 8. We insist on treating another important element in this technique. 9. On pressing the button you will get the information desired. 10. He is used to working under pressure. 11. Many solids can be changed to gases by heating. 12. All aspects of the life depend on our understanding the properties of matter. 13. There are different ways of charging a body with electricity. 14. One can increase the current by reducing the resistance of the circuit. 15. On being heated to a sufficient temperature any body becomes a source of light. 16. We succeeded in simplifying the calculations of some magnetic strength. 17. There is one more point worth mentioning. 18. This device should be put into operation without stopping the experiment. 19. In recend years man has succeeded in controlling chemical reactions.

Exercise 42. Translate the sentences into Ukrainian paying attention to the Gerund.

1. After heating the cathode the electron emission is produced from its surface. 2. After leaving the cathode emitted electrons are attracted to the positively charged anode. 3. The flow intensity can be increased by raising the temperature of the cathode. 4. By using serial electronic amplifier stages it is possible to increase current, voltage and power. 5. An initial experiment was made to reduce the interelectrode capacitance of a triode by reducing electrode dimensions. 6. Vacuum tubes can be used for getting high frequency steady-

state oscillations. 7. Getting high-frequency steady-state oscillations is necessary for broadcasting. 8. The degree of sensitivity in this case falls rapidly with impurity content increasing. 9. Our understanding of thermoelectric devices will be increased by studying tunnel diodes. 10. After leaving the magnetic field the electrons will travel on to the screen in a straight line as in Fig. 41. 11. Electrons can pass through the control grid unimpeded, but the electric field at the cathode surface can be changed by varying the electric potential of the control grid. 12. Before reaching a receiver a signal must be modulated and radiated through. 13. The addition of an impurity element to a pure piece of semiconductor has the effect of increasing its conductivity. 14. Before discussing the p-n junction we must define a term frequently used in a device terminology, i. e. bias. 15. This cannot be done by using the same two valves in any other way. 16. The emission rate can be increased by raising the temperature of the cathode. 17. The electrons flow to the cathode because of its having lost electrons and being less negative than the negative side of the battery. 18. As an aid in solving the temperature sensitivity problem, new high-temperature materials are being developed.

ЛІТЕРАТУРА

- 1. Грамматика английского язика (на английском языке): Пособие для студентов. Под ред. Проф.. Б. А. Ильиша. К, 1997, 214 с.
- 2. Грамматика английского язика (на английском языке): Учебник для студентов педагогических институтов / В. Л. Каушанская и др. Л.: Просвещение. 1973. 319 с.
- 3. Граматика сучасної англійської мови: Довідник / Л. Г. Верба, Г. В. Верба. Л.: Логос, 1997. 341 с.
- 4. The Random House Dictionary of the English Language, *Laurence Urdang, Stuart Berg Flexner*, New York: College Edition. 1969. 1534.
- 5. English Grammar in Use: aself-study reference and practice book for intermediate students / *Raymond Murphy* Cambridge University Press. 1985. 328.
- 6. English Grammar, M. A. Ganshina, N. M. Vasilevskaya, Higher School Publishing House, 1964. 547.
- 7. Английская грамматика для всех : Справ. пособие / И. П. Крылова, Е. В. Крылова. М. : Высш. шк., 1989. 271с.

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