

MINISTRY OF HEALTH OF UKRAINE
NATIONAL UNIVERSITY OF PHARMACY

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ENGLISH IN PHARMACY: A GUIDE FOR PHARMACY STUDENTS

The textbook for applicants for higher education

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NUPh
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The textbook provides materials aimed to develop lexical, grammar and speaking skills in accordance with the work program "The English Language" for applicants for higher education of medical and pharmaceutical universities at B2+ level.

The manual consists of 3 modules and contains lexical exercises, texts and speaking activities for introduction to the speciality; drugs technology, names, classes, administration; and foreign educational environment.

"English in Pharmacy: A Guide for Pharmacy Students" includes theoretical materials and exercises on the main topics of English grammar.

The textbook is intended for classroom and individual work while studying the discipline "The English Language". It can appear helpful for scientists and teachers in their professional activities.

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PREFACE

“English in Pharmacy: A Guide for Pharmacy Students” is unique in that it provides a guide for teaching reading, speaking and grammar skills to pharmacy students.

The textbook provides materials in accordance with the work program "The English Language" for applicants for higher education of medical and pharmaceutical universities at B2+ level.

The manual consists of 3 modules and contains texts, lexical exercises, and speaking activities for: introduction to the speciality; drugs: technology, names, classes, administration; foreign educational environment.

“English in Pharmacy: A Guide for Pharmacy Students” includes theoretical materials and exercises on the main topics of English grammar.

The goal of the textbook is to help students focus on and develop reading, speaking and grammar skills while teachers provide the necessary assistance with background and interpretation for specific materials need to learn.

The textbook is intended for classroom and individual work while studying the discipline "The English Language". It can appear helpful for scientists and teachers in their professional activities.

MODULE I

INTRODUCTION TO THE SPECIALITY

UNIT 1

VOCABULARY AND READING	National University of Pharmacy
GRAMMAR: THEORY AND PRACTICE	Pronouns: Personal, Object, Relative, Demonstrative, Indefinite, Reflexive, Possessive and Interrogative
SPEAKING	National University of Pharmacy

NATIONAL UNIVERSITY OF PHARMACY

TEXT

Vocabulary

Academy of Sciences	Академія наук
applicant for higher education	здобувачі вищої освіти
article	стаття
associate professor	доцент
chemist's shop	аптека
compound	сполука
correspondent form of study	заочна форма навчання
credit test	залік
faculty	факультет
hospital	лікарня
member	член
pharmaceutical plant	фармацевтичний завод
research	дослідження, досліджувати
science	наука
scientific society	наукове товариство
scientist	вчений
senior lecturer	старший викладач

teaching staff	викладацький склад
text-book	підручник
to carry out	виконувати
to conduct a seminar	проводити семінар
to deliver a lecture	читати лекцію
to fail an exam	провалити іспит
to find an application	знайти застосування
to found	засновувати
to investigate	досліджувати
to pass an exam	скласти іспит
to take an exam	складати іспит
to treat	лікувати

Read and translate the text.

To start with, the history of pharmaceutical education in Kharkiv dates back to the beginning of the 19th century and connects with the Kharkiv Imperial University, where a pharmaceutical laboratory was opened in 1812.

Almost a hundred years later, in 1921, the Kharkiv Pharmaceutical Institute was founded. In October 1992 the Institute became the Academy of Pharmacy and in 2002 it got the status of the University. In the 21st century, the National University of Pharmacy is still the only institution of higher education in the pharmaceutical industry in Ukraine.

At present, the National University of Pharmacy is the largest center of education and science in Ukraine. The University's staff equals a lot of employees, including scientific and pedagogical workers. Among the teaching staff there are some academicians, many professors, associate professors, senior lecturers. Some of them are members of the Academy of Sciences. The teachers deliver lectures,

conduct seminars and practical classes. Also, they publish a lot of scientific articles, monographs and textbooks for applicants for higher education. The scientists of the University carry out great research work. They investigate and synthesize new compounds, create new drugs for treating people.

There are such faculties in the University as pharmaceutical faculty, medical-pharmaceutical faculty, faculty for foreign citizens' education and industrial pharmacy, managing and administration faculty.

In the structure of the University, except faculties and departments, there are also Institute of Qualification Improvement for Pharmacists, NUPh College, Scientific and Research Laboratories, Clinical Diagnostic Center with Clinical Diagnostic Laboratory, Scientific library, Botanic garden and etc.

During the period of studies applicants for higher education study theoretical and practical subjects. At the end of each year they have practice in chemist's shops, botanical stations, pharmaceutical plants and hospitals. Many applicants for higher education are members of scientific societies, where they can master specific knowledge in different fields of science. What is really important, the results of their work often find practical application. Some of the applicants for higher education continue their scientific work taking a post-graduate course of the University.

There are all forms of studying at the University, such as full time form of education, correspondent and distance forms.

Task 1. Answer the questions.

1. Where do you study?
2. What year are you in now?
3. What specialties does the National University have?
4. What subjects are there at the University?
5. What faculties are there at the University?
6. What is a scientific society?

7. What is the teaching staff of the University?
8. What forms of studying are there at the University?
9. What can be found in the structure of the University?
10. When and where do applicants for higher education have practice?
11. What do the scientists of the University do?
12. When was the National University of Pharmacy founded?
13. What do you know about the history of the University?
14. Where can the applicants for higher education continue their study?

Task 2. Which of the following statements are true and which are false?

1. According to the text, the Kharkiv Pharmaceutical Institute was founded in 1931.
2. As far as we know, nowadays, the National University of Pharmacy is not the only establishment of higher education in the pharmaceutical industry in Ukraine.
3. As we know, there are only academicians in the teaching staff of the University.
4. If an applicant for higher education wants to continue the scientific work, he or she can take a post-graduate course of the University.
5. According to the text, only Ukrainian citizens can study at the University.

Task 3. Complete the sentences choosing the correct option a, b or c.

1. We know that there are such faculties in the University as _____
 - a. medical-pharmaceutical faculty, faculty for foreign citizens' education and industrial pharmacy, managing and administration faculty.
 - b. pharmaceutical faculty, medical-pharmaceutical faculty, faculty for foreign citizens' education and industrial pharmacy, managing and administration faculty.
 - c. pharmaceutical faculty, medical-pharmaceutical faculty, managing and administration faculty.
2. As far as we know, at the end of each year applicants for higher education have practice in _____

- a. botanical stations, chemist's shops, pharmaceutical plants and hospitals.
 - b. chemist's shops, pharmaceutical plants and hospitals.
 - c. pharmaceutical plants, chemist's shops, supermarkets and hospitals.
3. According to the text, the history of pharmaceutical education in Kharkiv
-

- a. dates back to the beginning of the 18th century and connects with the Kharkiv Imperial University, where a pharmaceutical laboratory was opened in 1812.
- b. dates back to the beginning of the 19th century and connects with the Kharkiv Imperial University, where a pharmaceutical laboratory was opened in 1912.
- c. dates back to the beginning of the 19th century and connects with the Kharkiv Imperial University, where a pharmaceutical laboratory was opened in 1812.



Starting from 1860s, practical and laboratory trainings have taken a considerable place in the educational process. An hour per a week was assigned for practical classes in pharmacy and pharmacognosy.



Prepare a speech about «National University of Pharmacy», using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	I would like to tell you about Today I'd like to give you an overview of.. My topic is / will be very important for you because ... By the end of this talk, you will be familiar with ...
MAIN BODY <i>Tell the main information</i>	To begin with/First of all, I want to tell you about Next, I have to say that Also, you have to know that In my point of view, To my knowledge, ... As far as I know, Last but not the least, it is important to know that
SUMMARY <i>Sum it up</i>	Finally, ... To conclude... In conclusion... I'd like to finish/end by saying... Before I finish I'd finally like to say...

GRAMMAR: PRONOUNS

Personal Pronouns (Subject form)	Personal pronouns (Object form)	Possessive Pronouns	Absolute Possessive Pronouns
I	me	my	mine
we	us	our	ours
you	you	your	yours
they	them	their	theirs
he	him	his	his
she	her	her	hers
it	it	its	its

Pronouns make up a small subcategory of nouns. The distinguishing characteristic of pronouns is that they can be substituted for other nouns. For instance, if you're telling a story about your sister Sarah, the story will begin to sound repetitive if you keep repeating "Sarah" over and over again.



Sarah has always loved fashion. Sarah announced that Sarah wants to go to fashion school.

You could try to mix it up by sometimes referring to Sarah as "my sister," but then it sounds like you're referring to two different people.

Sarah has always loved fashion. My sister announced that Sarah wants to go to fashion school.

Instead, you can use the pronouns she and her to refer to Sarah.

*Sarah has always loved fashion. **She** announced that **she** wants to go to fashion school.*

Personal Pronouns (Subject and Object)

I, we, you, they, he, she, it are known as personal pronouns. Object pronouns are *my, us, you, them, him, her* and *it*.

We use object pronouns:

1) as the object of the verb:

Examples:

*Can you help **me** please?*

*I can see **you**.*

*She doesn't like **him**.*

*I saw **her** in town today.*

*We saw **them** in town yesterday, but they didn't see **us**.*

2) after prepositions:

Examples:

*She is waiting for **me**.*

*I'll get it for **you**.*

*Give it to **him**.*

*Why are you looking at **her**?*

*Don't take it from **us**.*

*I'll speak to **them**.*

Relative Pronouns

Relative pronouns make up another class of pronouns. They are used to connect relative clauses to independent clauses. Often, they introduce additional information about something mentioned in the sentence. Relative pronouns include **that, what,**

which, who, and whom. Traditionally, **who** refers to people, and **which** and **that** refer to animals or things.

Examples:

*The woman **who** called earlier didn't leave a message.*

*All the dogs **that** got adopted today will be loved.*

*My car, **which** is nearly twenty years old, still runs well.*

Demonstrative Pronouns

That, this, these and **those** are demonstrative pronouns. They take the place of a noun or noun phrase that has already been mentioned.

This is used for singular items that are nearby. **These** is used for multiple items that are nearby. The distance can be physical or metaphorical.

Examples:

*Here is a letter with no return address. Who could have sent **this**?*

*What a fantastic idea! **This** is the best thing I've heard all day.*

*If you think gardenias smell nice, try smelling **these**.*

That is used for singular items that are far away. **Those** is used for multiple items that are far away. Again, the distance can be physical or metaphorical.

Examples:

*A house like **that** would be a nice place to live.*

*Some new flavors of soda came in last week. Why don't you try some of **those**?*

***Those** aren't swans, they're geese.*

Indefinite Pronouns

Indefinite pronouns are used when you need to refer to a person or thing that doesn't need to be specifically identified. Some common indefinite pronouns are **one**, **other**, **none**, **some**, **anybody**, **everybody**, and **no one**.

Examples:

Everybody was late to work because of the traffic jam.

It matters more to **some** than others.

Nobody knows the trouble I've seen.

When indefinite pronouns function as subjects of a sentence or clause, they usually take singular verbs.

Reflexive and Intensive Pronouns

Reflexive pronouns end in **-self** or **-selves**: **myself**, **yourself**, **himself**, **herself**, **itself**, **ourselves**, **yourselves**, **themselves**.

Use a reflexive pronoun when both the subject and object of a verb refer to the same person or thing.

Examples:

Henry cursed **himself** for his poor eyesight.

They booked **themselves** a room at the resort.

I told myself it was **nothing**.

Possessive Pronouns

Possessive pronouns come in two flavors: limiting and absolute. **My**, **your**, **its**, **his**, **her**, **our**, **their** are used to show that something belongs to an antecedent.

Examples:

Sarah is working on **her** application.

*Just put me back on **my** bike.*

*The students practiced **their** presentation after school.*

The absolute possessive pronouns are *mine, yours, his, hers, ours,* and *theirs*. The absolute forms can be substituted for the thing that belongs to the antecedent.

Examples:

*Are you finished with your application? Sarah already finished **hers**.*

*The blue bike is **mine**.*

*I practiced my speech and the students practiced **theirs**.*

Interrogative Pronouns

Interrogative pronouns are used in questions. The interrogative pronouns are **who, what, which, and whose**.

Who wants a bag of jelly beans?

What is your name?

Which movie do you want to watch?

Whose textbook is this?

PRACTISE YOUR GRAMMAR: PRONOUNS

Task 1. Choose the best answer to complete each sentence.

1. This is _____ speaking.
 - A. John
 - B. he
 - C. he John
 - D. am
2. This student is as smart as _____ is.
 - A. I
 - B. me
 - C. she
 - D. we
3. The dog chewed on _____ favorite toy.

- A. it's
- B. it is
- C. its'
- D. its

4. Terry is taller than _____ am.

- A. I
- B. me
- C. she
- D. we

Task 2. Use the correct personal pronouns. Watch the words in brackets.

1. _____ is dreaming. (George)
2. _____ is green. (the blackboard)
3. _____ are on the wall. (the posters)
4. _____ is running. (the dog)
5. _____ are watching TV. (my mother and I)
6. _____ are on the table. (the text-books)
7. _____ is riding his bike. (Alec)
8. _____ is from Bristol. (Claire)
9. _____ has got a brother. (Diana)
10. Have _____ got a computer, Mary?

Task 3. Put in the personal pronoun in brackets in its subject or object form.

1. _____ lives in Liverpool. (he)
2. I met _____ in the University. (he)
3. They sing with _____ in the choir. (I)
4. Lisa likes _____. (it)
5. Excuse _____, is this the way to the University? (I)
6. _____ worked in the garden. (we)
7. Where are the cupcakes? Did you eat _____? (they)
8. Is _____ your sister? (she)
9. Where are _____ from? (you)

10. _____saw Jack in the laboratory. (we)

Task 4. Put in the correct personal pronouns or possessive determiners.

I am Robert and live in Bristol. This is Jack. _____ is _____ friend. _____ lives in Bristol, too. Sarah likes _____. _____likes _____ blue eyes very much. Sarah lives with _____older sister in a flat in Bristol. Bristol is _____hometown.

_____ is an old city with lots of sights.

Task 5. Choose the correct possessive pronouns.

1. Is this (your/ yours) textbook? Is it really (your/ yours)?
2. (Our/ ours) parents live in Hamburg.
3. Is this (her/ hers) guitar? Is it really (her/ hers)?
4. How old is (your/ yours) sister?
5. Where does (their/ theirs) team play?
6. Yesterday she sent (her/ hers) letter to London.
7. Are those (their/ theirs) trainers? Are they (their/ theirs)?
8. Ken has cut (his/him) finger.
9. The children finished (their/ theirs) game.
10. The University has (it/its) own swimming pool.

Task 6. Choose the correct reflexive pronouns (myself, yourself, himself, herself, itself, ourselves, yourselves, themselves).

1. Robert performed this experiment _____.
2. Lisa did her homework _____.
3. We helped _____to some Coke at the party.
4. Emma, did you take the photo by_____?
5. I wrote this poem _____.
6. He cut _____with the knife while he was doing the dishes.
7. The lion can defend _____.
8. My mother often talks to _____.

9. Tim and Gerry, if you want more milk, help _____.
10. Alice and Doris collected the stickers _____.

Task 7. Choose the correct demonstrative pronouns (this, that, these or those)

1. Look at _____ newspaper here.
2. _____ are my grandparents, and _____ people over there are my friend's grandparents.
3. _____ building over there is our University.
4. _____ is my mobile phone and _____ is your mobile phone on the shelf over there.
5. _____ photos here are much better than _____ photos on the book.
6. _____ was a great evening.
7. Are _____ your pencils here?
8. _____ bottle over there is empty.
9. _____ bricks over there are for your chimney.
10. John, take _____ folder and put it on the desk over there.

Task 8. Insert the correct pronouns.

1. Scientists are working hard to find cures for lots of diseases, but _____ haven't found a cure for the common cold yet.
2. Is this _____ coffee?
3. I haven't seen _____ for ages. They look great.
4. _____ always has a shower at about half past six in the morning.
5. _____ salary is paid into _____ bank account every month.
6. _____ English is getting better.
7. He told _____ to hurry up.
8. _____ is involved in all the discussions
9. Alexander Fleming discovered penicillin, but _____ did it by mistake.
10. Could _____ give _____ that gadget?
11. Can't _____ do it yourself?

12. Give _____ that book. Give it to _____.
13. I can do this job alone. _____ don't need _____ help.
14. Is everything clear to _____?
15. How are _____?
16. I'm sorry _____ was late for _____ party.
17. The company has offices in many places but _____ head office is in New York.

UNIT 2

VOCABULARY AND READING	My Future Speciality
GRAMMAR: THEORY AND PRACTICE	The verbs “ <i>to be</i> ”, “ <i>to have</i> ” in Present Simple Tense
SPEAKING	My Future Speciality

MY FUTURE SPECIALITY

Vocabulary

analytical chemist	хімік-аналітик
disease	хвороба
dispensing pharmacist	аптекарь
head of a department	завідувач кафедри; начальник відділу
health	здоров'я
higher educational establishment	вищий навчальний заклад
knowledge	знання
origin	походження
pharmaceutical education	фармацевтична освіта
pharmacy graduate	випускник аптеки
prepared drugs	підготовлені ліки
prescribed medicines	призначені ліки
ready-made drugs	готові ліки
recovery	відновлення
speciality	спеціальність
sphere	сфера
to achieve	успішно виконувати, досягати
to choose (chose, chosen)	обирати
to define	визначати

to devote	присвячувати
to dispense	розподеляти
to explain	пояснювати
to identify	ідентифікувати
to permit	дозволяти
to recognize	дізнаватися, впізнавати
to store	зберігати
to supply	поставляти

Read and translate the text.

I have chosen pharmacy as my future speciality. Pharmacy is the science which studies medicinal substances used for treating and preventing different diseases. Pharmacy studies recognizing, identifying, collecting, selecting, preparing, storing, testing, compounding and dispensing all medicinal substances.



A pharmacist or a provisor is a specialist with higher pharmaceutical education who is permitted by law to prepare drugs at chemist's shops, pharmaceutical plants, to check up the quality of the drugs, to dispense and supply them. A pharmacist together with a doctor devotes his life to protecting people's health. He is often called 'the second doctor'.

To become a pharmacist one should achieve knowledge of different subjects. Future specialists must know chemistry - the science explaining composition and transformation of matter, different fields of chemistry. Thus, *General Chemistry* deals with basic principles and inorganic substances, *Organic Chemistry* is the chemistry of carbon compounds, *Analytical Chemistry* studies qualitative and quantitative analyses of inorganic substances, *Biochemistry* studies biochemical processes taking place in the human body and in animals, *Toxicological Chemistry* deals with toxic substances and their action on the organism. *Botany* is the science

of plants, their structure, functions and classification, *Pharmacognozy* is the science of drugs of animal, vegetable and mineral origin. Of course, my future speciality is closely connected with drugs, that is why future pharmacists must know *Pharmacology* which is defined as the science of drugs and their action and other sciences.

The sphere of action of a pharmacist is broad: at a chemist's he may be a manager, or an assistant manager, a head of a department, a dispensing pharmacist, an analytical chemist. A manager is responsible for the work of all departments of a chemist's, it's financial, economic and administrative activity. A dispensing pharmacist takes prescriptions and delivers drugs. An analytical chemist controls the effectiveness of drugs, their technology and time of storing. A specialist with higher pharmaceutical education has the right to be the head of a drug storehouse or his assistant. A pharmacist may also work at a chemical analytical laboratory, which controls the quality of prepared drugs at pharmacies as well as ready-made drugs. Very often leading specialists of pharmaceutical factories are graduates of pharmaceutical academies.

At present the sphere of action of a pharmacist is becoming broader: it's worth to say about the specialists who work at numerous biochemical, clinical laboratories at sanatoria, hospitals, polyclinics. Many specialists have private chemist's shops which supply the population with all kinds of medicines, vitamins and things of medical care many of which are imported. Of course one can see pharmacy graduates teaching at higher educational establishments, schools of pharmacy, medical schools, secondary schools, etc.

Wherever a provisor works he must always remember that he works with people. There is no a provisor without love for his profession, a profound respect for people. His aim is to help an ill person to use the prescribed medicines in a better way, to strengthen a person's belief in a sooner recovery.

To sum up, we can say that a pharmacist is a specialist with higher pharmaceutical education who is permitted by law to prepare drugs at chemist's shops, pharmaceutical plants, to check the quality of the drugs, to dispense and

supply them. To become a pharmacist one should achieve knowledge in different subjects (chemistry, pharmacology, pharmacognosy, etc.). A pharmacist must always remember that he works with people.

Task 1. Answer the questions.

1. What is pharmacy which is your future speciality?
2. What are the duties of a pharmacist?
3. To become a provisor one should achieve knowledge of different subjects, shouldn't he? What are these subjects?
4. Where can pharmaceutical specialist work?
5. What is a manager responsible for? (a dispensing pharmacist, an analytical chemist)
6. Can you describe the work of a chemical analytical laboratory?
7. The sphere of action of a modern specialist is becoming broader, isn't it? Where else can he work?
8. What is the aim of a provisor as a medical worker?
9. What are you going to do after graduating from the academy?

Task 2. Fill in the gaps using the words from the box.

<i>maintain</i>	<i>respects</i>	<i>patients</i>	<i>pharmacist</i>
<i>colleagues</i>	<i>avoids</i>	<i>professional</i>	<i>diagnosis</i>

LEGAL RESPONSIBILITIES AND WORK ETHICS

Responsibility must be taken for the whole process of _____, prescribing and follow-up, including an awareness of limitations to expertise.

A _____ maintains professional competence. He has a duty to _____ knowledge and abilities as new medications, devices and technologies become available and as health information advances.

A pharmacist acts with honesty and integrity in _____ relationships.
A pharmacist _____ avoids discriminatory practices, behavior or work

conditions that impair professional judgment, and actions that compromise dedication to the best interests of _____.

A pharmacist respects the values and abilities of _____ and other health professionals.

A pharmacist _____ the covenantal relationship between the patient and pharmacist.

Task 3. Choose a suitable word given in the brackets to fill in each gap.

To become (an\ a) pharmacist one should achieve knowledge of different subjects. (A\ -) Future specialists must know chemistry - the science explaining composition and transformation of matter, different fields of chemistry. Thus, General Chemistry deals with basic principles (and\ but) inorganic substances. Organic Chemistry (are\ is) the chemistry of carbon compounds. Analytical Chemistry (study\ studies) qualitative and quantitative analyses of inorganic substances. Biochemistry (study\ studies) biochemical processes taking place in the human body and in animals. Toxicological Chemistry deals with toxic substances and their action (of\ on) the organism. Botany (are\ is) the science of plants, their structure, functions and classification. Pharmacognosy (are\ is) the science of drugs of animal, vegetable and mineral origin. Of course, my future speciality (are\ is) closely connected with drugs, that (are\ is) why future pharmacists must know Pharmacology which (are\ is) broadly defined as the science of (a\ -) drugs and their action and other sciences.



It is interesting to know that Benjamin Franklin was a pharmacist, while Agatha Christie was a pharmacy technician.



Prepare a speech about « My Future Speciality», using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	My topic is / will be very important for you because ... By the end of this talk, you will be familiar with ... I would like to tell you about Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	Firstly, I want to tell you about Secondly, I have to say that Also, you have to know that In my point of view, To my mind, ... To my knowledge, ... I believe, it is important to know that
SUMMARY <i>Sum it up</i>	To conclude... Finally, ... I'd like to finish/end by saying... Before I finish I'd finally like to say...

GRAMMAR: THE VERBS «*TO BE*» AND «*TO HAVE*» IN PRESENT SIMPLE TENSE

The verb **to be** is a key verb in English, playing a major part in many types of constructions, as in all other European languages. It has many usages and meanings, both as a main verb and as an auxiliary verb. It also acts differently in negative sentences and questions.

AFFIRMATIVE	I	am
	We	are
	You	
	They	
	He	is
	She	
	It	
QUESTION FORM	Am	I...?
	Are	we...?
		you...?
		they...?
	Is	he...?
		she...?
		it...?
NEGATIVE	I	am not
	We	are not (aren't)
	You	
	They	
	He	is not (isn't)
	She	
	It	

The verb **be** is used in the following patterns:

1) with a **noun**:

*I **am** a student of the National University of Pharmacy.*

2) with an **adjective**:

*The students **are** happy to study at this University.*

3) as an auxiliary verb with the **-ing** form to make **the continuous** aspect

*We **are** studying English at the moment.*

4) with the **-ed** form to make **the passive** voice

*The texts **are** read by the students.*

5) with a **prepositional phrase**:

*Ivan and his wife **are from Kharkiv**.*

The verb “have” as a main verb

Pronouns	Affirmative sentence	Negative sentence	Question
I	I have books.	I do not have books.	Do I have books?
you	You have books.	You do not have books.	Do you have books?
he, she, it	He has books.	He does not have books.	Does he have books?
we, you, they	They have books.	They do not have books.	Do they have books?

PRACTISE YOUR GRAMMAR: THE VERBS «TO BE» AND «TO HAVE» IN PRESENT SIMPLE TENSE

Task 1. Write negative and interrogative sentences.

1. You are a pharmacy student.

- _____

? _____

2. His friend is a first-year student.

- _____

? _____

3. Chemistry is an interesting subject

- _____

? _____

4. They are students of the pharmaceutical department.

- _____

? _____

5. We are at the lecture in anatomy now.

- _____

? _____

Task 2. Choose the correct form.

1. It _____ easy to study well.

A am **B** is **C** are

2. My best friends _____ third- year students.

A am **B** is **C** are

3. We _____ nearly ready to start the experiment.

A am **B** is **C** are

4. _____ it possible to know chemistry well?

A am **B** is **C** are

5. How much _____ it?

A am **B** is **C** are

6. Who _____ on the phone?

A am **B** is **C** are

7. Whose _____ those books?

A am **B** is **C** are

8. Everybody _____ working in the laboratory now.

A am **B** is **C** are

9. _____ anybody there?

A am **B** is **C** are

10. _____ Latin an interesting subject?

A am **B** is **C** are

Task 3. Put the verb “to be” in the correct form.

1. Their hostel _____ (to be) near the University. 2. They _____ (to be) second-year students? 3. My friends _____ (not to be) at the lecture in chemistry now. 4. We _____ (to be) members of scientific society. 5. It _____ (to be) a Latin class now?

Task 4. Put the verb “to have” in the correct form.

1. We (have\ has) a lot of books in English.
2. The teacher (have\ has) a new textbook.
3. My brother (have\ has) a great job.
4. Does he (have\ has) a Degree in Pharmacy?
5. They don't (have\ has) a lot of money.
6. My cousin and his wife (have\ has) three children.
7. Does your friend (have\ has) a sister?
8. Yes, my friend (have\ has) a sister.
9. My neighbor (doesn't have\ don't have) a big house.
10. They (doesn't have\ don't have) time to study every evening because they work at the chemist's shop.

Task 5. Complete the sentences with your personal information and tell about yourself.

1. I would like to introduce myself. My first name is _____.
2. My surname is _____.
3. I am _____ years old.
4. I am from _____, but now I live in _____.
5. I have a/an _____ family. There are _____.
6. My mother is _____. She is _____ years old. Her job is _____.
7. My father is _____. He is _____ years old. His job is _____.
8. I have _____ (sisters\brothers). They are _____.
9. I like _____.
10. I dislike _____.
11. As for me, I want to visit _____, because.
12. I think, I am a good student, because _____.

UNIT 3

VOCABULARY AND READING	Chemist's Shop
GRAMMAR: THEORY AND PRACTICE	The Noun and its Number
SPEAKING	Chemist's Shop

CHEMIST'S SHOP

TEXT

Vocabulary

chemist's department	відділ готових ліків
cold	застиуда
cough	кашель
dispensing pharmacist	рецептар
flu	грип
headache	головний біль
immediate	миттєвий
manager	завідуючий аптеки
medication	лікарський засіб
prescription department	рецептурний відділ
replenishing	поповнення
therapeutic tools	терапевтичні засоби
to affect	впливати
to compound	виготовляти, складати
to dispense	фасувати, відпускати
to store	зберігати

Read and translate the text.

The production and sale of drugs is a big business in many countries. Drugs affect and alter health. So they play a prominent role in society, as well as drug industry as a whole. This role includes discovery of new drugs, their development into useful therapeutic tools and production and distribution of existing medicines.

Nowadays most drugs are prepared by pharmaceutical manufacturers and are distributed to the chemist's shops or hospitals in suitable dosage forms.

A chemist's shop is a specialized shop where drugs are compounded, dispensed, stored and sold. An average chemist's shop has a hall for visitors, departments for selling drugs and proper working rooms. There are usually two departments in a large chemist's shop. At the chemist's department one can have a medicine immediately, other drugs have to be ordered at the prescription department.

A chemist's shop also has an assistant room, a room for washing, drying and sterilization, an analytical laboratory, a room for dispensing medicines, a room for storing. There are some requirements for the storage of drugs. The drugs for immediate use should be kept in refrigerators. Some drugs should be stored in cool place and protected from light.

At the chemist's medicines are distributed according to the therapeutic effect: drugs for cough, cardiac medicines, drugs for headache, flu and cold, antihypertensive and antihypotensive remedies.

Because of his knowledge the pharmacist should provide information required for the safe and effective use of both prescription and over - the - counter medications when supplying them to patients. The pharmacist serves as an information source of all aspects of drugs to his colleagues in the medical, dental and nursing professions.

The personnel of a chemist's shop consists of a manager, who is the head of it, a dispensing pharmacist, who takes prescription and delivers drugs, a chemist controlling the prescription, a chemist – analyst controlling the effectiveness of the drugs prepared. There is also a pharmacist who is in charge of the supply of the necessary medications and its replenishing.

Task 1. Answer the questions.

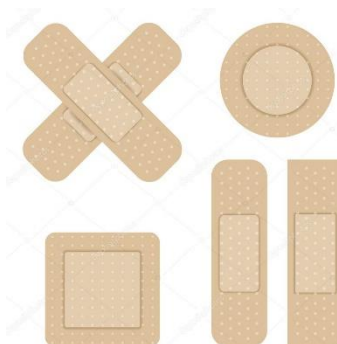
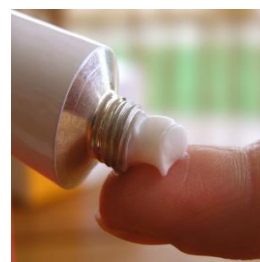
1. Why is drug industry a big business in many countries?
2. What kind of role do drugs play in society?
3. Where are most drugs produced nowadays?
4. How are they distributed?
5. What is a chemist's shop?
6. What departments and rooms does an average chemist's shop include?
7. What drugs are sold there?
8. What dosage forms do you know?
9. Where are drugs kept at the chemist's shops?
10. What information can pharmacist provide people with?

Task 2. Find the synonym in other column.

- | | |
|------------------------|----------------------|
| 1) drug | a) to produce |
| 2) big | b) consumers |
| 3) to distribute | c) suitable |
| 4) to include | d) at once |
| 5) to affect | e) to write out |
| 6) to prepare | f) as well as |
| 7) to manufacture | g) to demand |
| 8) visitors | h) to apply |
| 9) proper | i) spot |
| 10) immediately | g) medicine |
| 11) to prescribe | k) large |
| 12) also | l) to spread |
| 13) to require | m) to consist of |
| 14) to use | n) to have impact on |
| 15) place | o) to get ready |
| 16) to supply | p) to run |
| 17) source | q) origin |
| 18) to be in charge of | r) to provide |

Task 3. Match the pictures with the words in the box.

medicines	ointment	bandages	hot water bottle
cotton wool	mustard plaster		tincture



Task 4. Choose a suitable word given in the brackets to fill in each gap.

A chemist's shop (are\is) a medical institution in which you can have all the prescriptions made up and buy all the necessary things when you (are\is) ill. There (are\is) three types of chemist's shops in our country at present: municipal, hospital, private. All of them (are\is) licensed. (You\Your) can also buy some medicines at chemist's stalls. The chemist's shop consists of several (departments\ department): chemist's, wholesale, stock-in-trade and prescription department.

The prescription department provides medicines only by (the\ a) doctor's prescriptions. Ready-made medicines such as tablets, drops as well as injection solutions (are\ is) usually given out immediately at a patient's request. If (an\ a) patient needs some ointment, a tincture or powders he can order them and will get the prepared medicines in some hours. Sometimes medicines (are\ is) prepared in the presence of a patient having a prescription with the word "cito".

Task 5. Play the dialogue and make up a similar one.

AT THE PHARMACY

Pharmacist: Good morning, may I help you?

Customer: Could you please fill this prescription for me?

Pharmacist: Have you taken this medicine before?

Customer: No I haven't.

Pharmacist: You have to take one pill three times a day for seven days.

Customer: Are there any side effects?

Pharmacist: Yes. You may feel dizzy.

Customer: What about precautions?

Pharmacist: Don't drive when you take this medicine.

Customer: When will the prescription be ready?

Pharmacist: It'll be ready in a few minutes.

Customer: I've also had a runny nose for a couple of days, can you recommend something?

Pharmacist: This decongestant is very effective, but be careful using it. It causes drowsiness and you shouldn't drink any alcohol when taking it.



OK, I'll try it. I also need some band-aides and sun screen. Where

Customer: are those?

The band-aides are on aisle 3, on the left and the sun screen is on

Pharmacist: aisle 2, on the top shelf.

Thanks.

Customer: Will that be all?

Pharmacist: That should do it.

Customer: That comes to \$34.56.

Pharmacist: That's expensive! Why so much?

Customer: The prescription medication is expensive. It cost \$25.99. I may be

Pharmacist: able to get you a generic drug for about half that price, but I would have to consult your doctor first.

No, that's OK. Don't bother.

Customer: Here's your change. Have a good day.

Task 6. Find Ukrainian equivalents for some useful expressions from the dialogue.

1. May I help you?
2. I'd like to have this prescription filled.
3. What about precautions?
4. Can you recommend something?
5. Will that be all?
6. That's expensive!
7. To get smth for about half the price
8. Don't bother.
9. Here's your change.

Task 7. Match the words on the left with the correct meaning on the right.

___1) drowsy	a) feeling like you have to vomit
___2) nauseated	b) a kind of medicine used on skin
___3) pregnant	c) be more than
___4) precaution	d) a mother giving her milk to her baby
___5) dizzy	e) suggested
___6) nursing	f) sleepy
___7) exceed	g) expecting a baby
___8) recommended	h) amount of medicine to take
___9) dosage	i) feeling like everything is turning
___10) ointment	j) taking care so something bad doesn't happen



The fundamental difference between U.S. and U.K. pharmacies is that in the States, drugstores are shops where you can get not only medicines but also everyday essentials like cat food, cockroach traps and Christina Aguilera's new CD, 24 hours a day. In Britain, a chemist's shop is a place to pick up a prescription and get medications.



Prepare a speech about « Chemist's Shop », using the useful language from the table "The Structure of Your Speech. Useful Language". Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	To begin with, I want to tell you about First of all, I want to tell you about I would like to tell you about My topic is / will be very important for you because ... Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	Initially, I want to tell you about Secondly, I have to say that Also, you have to know that I think, To my mind, ... In my opinion, ... I believe, it is important to know that
SUMMARY <i>Sum it up</i>	Finally, ... I'd like to finish/end by saying... To conclude... Before I finish I'd finally like to say...

GRAMMAR: THE NOUN AND ITS NUMBER



There are two numbers in Noun-Number: Singular and Plural. When we speak about one person and one thing, we use the noun in singular form. Single means one. Plural number is used when the noun refers to more than one item. Countable nouns have both singular and plural forms. Uncountable nouns and mass nouns do not normally have a plural form. The regular plural ending of an English noun is **-s**.

<i>student</i>	<i>students</i>
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These are the exceptions to the normal pattern:

<i>singular noun ending</i>	<i>plural noun ending</i>
<i>-s, -ss, -ch, -x, -zz</i>	<i>-es</i>
<i>focus</i>	<i>focuses</i>
<i>church</i>	<i>churches</i>
<i>box</i>	<i>boxes</i>
<i>-o</i>	<i>-s or -es</i>
<i>hero</i>	<i>heroes</i>
<i>piano</i>	<i>pianos</i>
<i>potato</i>	<i>potatoes</i>

consonant + y	-ies
<i>baby</i>	<i>babies</i>
<i>hobby</i>	<i>hobbies</i>
vowel + y	-s
<i>key</i>	<i>keys</i>
<i>ray</i>	<i>rays</i>
-f	-s or -ves
<i>hoof</i>	<i>hoofs or hooves</i>
<i>shelf</i>	<i>shelves</i>
<i>roof</i>	<i>roofs</i>
-fe	-ves
<i>knife</i>	<i>knives</i>
<i>life</i>	<i>lives</i>
<i>thief</i>	<i>thieves</i>

Irregular plurals

Some nouns have two plural forms.

<i>fish</i>	<i>fish or fishes</i>
-------------	-----------------------

Some of them have the same form in the singular and plural.

<i>a sheep</i>	<i>ten sheep</i>
<i>a deer</i>	<i>seven deer</i>

A few change a vowel to form the plural.

<i>man</i>	<i>men</i>
<i>woman</i>	<i>women</i>
<i>foot</i>	<i>feet</i>
<i>tooth</i>	<i>teeth</i>
<i>goose</i>	<i>geese</i>
<i>mouse</i>	<i>mice</i>
<i>louse</i>	<i>lice</i>

Some nouns form the plural with **-en**.

<i>child</i>	<i>children</i>
<i>ox</i>	<i>oxen</i>

Since it is not possible to give more than a selection of the irregular forms, you should check in a dictionary if you are in doubt. If the dictionary does not show the plural form, then you can assume that it is regular.

Compound nouns normally form the plural by adding -s to the last word of the compound.

<i>a bookcase</i>	<i>two bookcases</i>
<i>an Indian take-away</i>	<i>two Indian take-aways</i>

There are a few exceptions: A compound noun formed from a noun and an adverb makes the first word plural.

<i>a passer-by</i>	<i>several passers-by</i>
--------------------	---------------------------

Compound nouns with *woman* as the first word make both words plural.

<i>a woman doctor</i>	<i>several women doctors</i>
<i>a woman driver</i>	<i>most women drivers</i>

Pluralia Tantum and Singularia Tantum

Some nouns ***only have a plural form***. They cannot be used with numbers. They include the names of certain tools, instruments and articles of clothing which have two parts.

They are called '***plurale tantum***,' (pluralia tantum), Latin for 'plural only' and used for 'a noun which is used only in plural form, or which is used only in plural form in a particular sense or senses.' These nouns are always treated grammatically as plurals.

Tools and instruments: *Binoculars, headphones, sunglasses, glasses, scissors, tweezers, pliers, forceps, shears, tweezers, and tongs.*

Clothing: *jeans, pyjamas, tights, knickers, shorts, trousers, pants, and clothes.*

A pair of: We can use 'pair of' to refer to one example of these nouns:

*I bought a new **pair of binoculars** last week.*

*That old **pair of trousers** will be useful for doing jobs in the garden.*

Other nouns which are always in plural form are the following ones:

Belongings, outskirts, clothes, premises (buildings), congratulations, savings (money), earnings, stairs, goods, surroundings, likes/dislikes, thanks, cattle .

Some nouns are used ***only in the singular***, even though they end in -s. These include:

-the names of academic subjects: *classics, economics, mathematics/maths, physics;*

-the physical activities: *gymnastics and aerobics;*

-the diseases: *measles and mumps;*

-the word *news.*

Such nouns are called **singulare tantum** (or singularia tantum). It refers to nouns (in any specific sense) that has no plural form and is only used with singular verbs. It is frequently for **mass nouns** i.e. noun that normally cannot be counted like *advice, bread, knowledge, luck, work, money* etc.

Plurals of English nouns taken from Latin or Greek

English has borrowed many common words from Latin and Greek. In their original language the plurals of such words followed that language's rules:

datum – data

bacterium – bacteria

medium – media

analysis – analyses

nucleus – nuclei

phenomenon – phenomena

PRACTISE YOUR GRAMMAR: THE NOUNS AND ITS NUMBER

Task 1. Choose the correct answer

1. The plural of “nucleus” is...

- | | |
|--------------------|-----------------------------------|
| A nucleuses | C nucleum |
| B nuclei | D It doesn't have a plural |

2. The plural of “experiment” is...

- | | |
|-----------------------|-----------------------------------|
| A experiments | C experiment's |
| B experimentes | D It doesn't have a plural |

3. The plural of “box” is...

- | | |
|----------------|-----------------------------------|
| A boxs | C boxes |
| B boxen | D It doesn't have a plural |

4. The plural of “tomato” is...

- | | |
|-------------------|-------------------|
| A tomatos | C tomato's |
| B tomatoes | D tomato's |

5. The plural of “body” is...

- | | |
|-----------------|-----------------|
| A body's | C bodys |
| B bodies | D bodyes |

6. The plural of “information” is...

- | | |
|------------------------|-----------------------------------|
| A information | C informations |
| B informationes | D It doesn't have a plural |

7. The plural of “gold” is...

- | | |
|----------------|-----------------------------------|
| A gold | C goldes |
| B golds | D It doesn't have a plural |

8. The plural of “sheep” is...

- | | |
|-----------------|-----------------------------------|
| A sheep | C sheep's |
| B sheeps | D It doesn't have a plural |

9. The plural of “mouse” is...

- | | |
|-----------------|-----------------------------------|
| A mouses | C mousis |
| B mice | D It doesn't have a plural |

10. The plural of “ox” is...

A oxes

C oxen

B oxs

D It doesn't have a plural

11. The plural of “day” is...

A daes

C days

B dais

D day's

Task 2. Choose the correct form of the verb

1. His hair _____ (is\are) beautiful. 2. Genetics _____ (is\are) the science of the 21st century. 3. Such shorts _____ (is\are) in fashion now. 4. The analysis _____ (is\are) very important. 5. The trousers you bought yesterday _____ (is\are) too expensive. 6. New analytical scales _____ (is\are) installed in our laboratory. 7. Their money _____ (is\are) in the bank. 8. Mice _____ (is\are) used in the experiment. 9. No news _____ (is\are) good news. 10. Her teeth _____ (is\are) healthy. 11. The data _____ (is\are) important.

Task 3. Make plurals.

- pill- _____
- textbook- _____
- fish - _____
- information- _____
- test-tube - _____
- watch - _____
- dish - _____
- lung - _____
- shelf - _____
- kidney - _____
- foot - _____
- wolf - _____

- person - _____
- analysis - _____
- yourself - _____
- goose - _____
- tomato - _____
- tissue - _____
- fox - _____
- thief - _____
- wife - _____
- bridge - _____
- day - _____
- hero - _____
- shop - _____
- nose - _____
- baby - _____
- deer - _____
- tree - _____
- man - _____
- flask - _____
- box - _____
- knife - _____
- child - _____
- family - _____
- manager - _____
- medication - _____
- prescription department - _____

UNIT 4

<i>VOCABULARY AND READING</i>	Text 1. Prescriptions Text 2. The English Prescription
<i>GRAMMAR: THEORY AND PRACTICE</i>	Adjectives. Degrees of Comparison
<i>SPEAKING</i>	Prescriptions. The English Prescription

PRESCRIPTIONS

TEXT 1

Vocabulary

abbreviations	абревіатура
frequency	частота
to alleviate	полегшувати
to prescribe	прописувати
treatment	лікування

Read and translate the text.

A prescription is written by a doctor to give patients medicine needed to alleviate symptoms or stabilize a medical condition that might be chronic in nature. The prescription is written by a physician in order to tell the pharmacist which medication is required. These often include a number of prescription abbreviations.

Prescriptions are used for medications that a doctor feels is necessary for treatment. These are legal documents that are required in order to receive medicine which is prepared by the pharmacist in a pharmacy. Recommendations, on the other hand, are courses of action that a doctor feels will be helpful for the patient. These could include simple daily tasks such as taking a walk or eating more fruits and vegetables.

Prescriptions include:

Patient identifier: First and last name of the patient, as well as the date of birth (DOB).

Medication (also named "drug"): The medicine that is prescribed.

Strength: How strong the medication prescribed is (50 mg, 100 mg, etc.).

Amount: How often the patient should take the medicine.

How much: Number of pills, tablets, etc. provided.

Frequency: How often the patient should take the medicine.

Route: How the patient should take the medicine (by mouth, topical, sublingual, etc.).

Refills: How often the prescription should be renewed.

Signature: Signature of the physician writing the prescription.

Date: The day on which the prescription was written.

Task 1. Answer the questions.

1. What is a prescription?
2. Why does a physician write a prescription?
3. What is the difference between a prescription and recommendations?
4. What information does a prescription include?

Task 2. Match the words from column A with synonyms from column B.

Column A	Column B
1) amount	a) medicine
2) chronic	b) illness, sickness, disease
3) drug	c) information that identifies a patient
4) easier said than done	d) how often something is done
5) frequency	e) how much

6) medical condition	f) person who has a license to prepare medications for patients
7) medication	g) recurring, happening again and again
8) patient identifier	h) doctor
9) pharmacist	i) idiomatic term used to refer to medicine
10) pharmacy	j) not easy to do
11) physician	k) to sleep enough to feel rested
12) prescription	l) licensed store which sells medicine that requires a prescription
13) to refill	m) to be relaxed
14) route	n) placed on the skin
15) strength	o) to take medicine by mouth
16) sublingual	p) to provide medicine again based on a prescription
17) to alleviate	q) order from a doctor for medicine
18) to get a good night's sleep	r) how medicine should be taken
19) topical	s) how strong the medicine is
20) to stabilize	t) under the tongue
21) to stay calm	u) to make easier, to relieve
22) to take a pill	v) to make regular

Task 3. Read and translate the dialogue. Dramatize it.

Dialogue: Giving a Prescription

Patient: ... what about the problems I've been having sleeping?

Doctor: I'm going to give you a prescription for some medicine to help you get a better night's sleep.

Patient: Thank you, doctor.

Doctor: Here, you can get this prescription at any pharmacy.

Patient: How often should I take the medicine?

Doctor: Just take one pill about 30 minutes before you go to bed.

Patient: How long should I take them?

Doctor: The prescription is for thirty days. If you're not sleeping well after thirty days, I'd like you to come back in.

Patient: Is there anything else I can do to help me sleep at night?

Doctor: Don't worry so much about things at work. I know, I know... easier said than done.

Patient: Should I stay home from work?

Doctor: No, I don't think that's necessary. Just remember to stay calm.

THE ENGLISH PRESCRIPTION

TEXT 2

Vocabulary

compound	сполука
curative	цілющий
dispense	готувати, розфасовувати (ліки)
generic name	офіційна (фармакопейна) назва
identify	встановлювати, розпізнавати, ідентифікувати

trade name

торгова назва

unique

унікальний

Read and translate the text.

The language of prescription was unique in Great Britain some half a century ago when all the names of drugs were Latinized. It was possible because the physician used only dosed drugs. Today all prescriptions are written in English. The only Latin which is used is few traditional abbreviations in the direction to the pharmacist and on the label.



A more serious problem is the naming of drugs. In the old days, drugs had only one official name and drug companies did not have many trade names. At present, each drug has at least three names. They are the chemical name, the so-called generic name, and trade name. The chemical name is difficult to use and remember except for the simplest drugs because of its length and complexity.

The trade or brand name is the private property of the drug company. Most drugs have several trade names because each company producing the drug gives it a different name. It is common practice to capitalize the first letter of a trade name.

The generic or official name is shorter than the chemical name. It is public property and any drug manufacturer may use it. There is only one generic name for each drug. The majority of physicians use trade names in prescriptions. Generic name should be used as the language of prescription. It is known to the specialists of medicine and pharmacy and it is not known to general public. For example, ampicillin is the generic name of a well-known antibiotic; alpha-aminobenzyl P- its chemical name; Omnipen, Penbritin, Polycillin, etc. are its trade names.

Dosage. It goes without saying that a prescription cannot be written without a very good knowledge of the dose effects of drugs. Each drug has its own dose specification dependent on pharmacological properties, metabolism of the drug. It should have the following information:

1. Name and address of the physician and his telephone number. The title M.D. (Medical Doctor) should follow the physician's name to indicate that he or she is a physician.
2. Usually at the top - patient's name, address, age and the date.
3. Symbol Rx. This is about the same as "Dear Sir" on top of a letter. It comes from Latin and means a command for a patient "you take".
4. The body of the prescription contains the name of the drug and the dose.
5. Under the body of the prescription should be written the directions to the pharmacist. It is called subscription. In modern prescriptions it consists only of the form of the medicine (powder, tablet, capsules, etc.) and the number of units.
6. The directions to the patient as to how he should take the medicine. It is called the label or "signature".

Task 1. Answer the questions.

1. When was the language of prescription unique in Great Britain?
2. Where is Latin used in prescriptions today?
3. What names does each drug have at present?
4. What is a brand name?
5. What is a generic name?
6. What is the structure of the English prescription?

Task 2. Complete the sentences with the necessary words from the text.

1. The trade name is usually known to the specialists of medicine and isn't known to _____
2. Generic names are known to the specialists of _____ and _____ .
3. The body of the prescription contains _____.
4. _____ drugs had only one official name.
5. Chemical names are difficult _____, hard _____, and difficult _____.
6. A prescription cannot be written without a very _____ knowledge of the dose effect of the drug.

Task 3. Read the Latin codes and their equivalents used in English prescriptions. Translate them into Ukrainian.

a.c. - before meals

h - hour

i - one or one time

ne.rep. (n.r.) - means to the pharmacist that the prescription is not to be repeated

p.r.n. - as needed

Sig. - signature

i.i.stat. - two tablets at once

i.q. 4h. - one capsule every 4 hours

in - mix

tabs - tablets

t.i.d. - three times a day

i.d. - once a day

Task 4. *Read the examples of the following English prescriptions, translate the codes.*

Prescription I

Tel. ER5- 600 Reg. No. 198

Rupert Black, M.D. 230 Broad Street Philadelphia 1, Philadelphia1 Name: Mrs. Anna White, age 45 Address: 619 Locust Street, Philadelphia, Philadelphia Tabs, Thyroid USP 30 ng2 Dispense: 60 Sig. Tabs.i.t. i.d.a.c.

Rupert Black, M.D.

ne.rep.

Prescription II

Tel. ER5- 600

Rupert Black, M.D. 230 Broad Street Philadelphia 1, Philadelphia Name: Mrs. John

W. Keyes, age 30 Address: 525 East, 68th St., New York, New York 10021 Rx

Theophylline 3 gm

Ephedrine Sulfate 0.6 gm

Phenobarbital 0.6 gm M. Divide into 30 capsules

Sig. Cap. i. of 4 h. p.r.n.

Rupert Black, M.D.

ne.rep.



You can't freeze helium simply by cooling it to absolute zero. It will freeze if you apply extremely intense pressure.



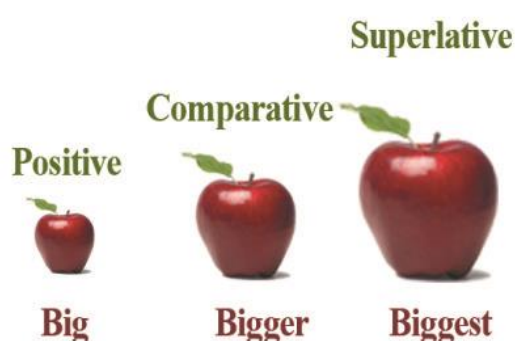
Prepare a speech about «The English prescription», using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	My topic is / will be very important for you because ... First of all, I want to tell you about I would like to tell you about Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	First of all, I want to tell you about Secondly, I have to say that Also, you have to know that I think, To my mind, ... In my opinion, ... I believe, it is important to know that
SUMMARY <i>Sum it up</i>	Finally, ... I'd like to finish/end by saying... To conclude... Before I finish I'd finally like to say...

GRAMMAR: ADJECTIVES AND THEIR DEGREES OF COMPARISON

You might know that **adjectives** are words that modify a noun or a pronoun; therefore adjectives are called modifiers in English. Sometimes modifiers are used to compare two or more people, things, actions, or qualities. This is called three degrees of adjectives.

Three Degrees of Comparison



1. The Positive Degree

The positive degree of an adjective makes no comparison.

- A **tall** building.
- She runs **fast**.
- This is a **beautiful** car.

2. The Comparative Degree

The comparative degree compares two people, things, activities or qualities.

- A **taller** building than this one.
- She runs **faster** than I do.
- This car is **more beautiful** than yours.

3. The Superlative Degree

The superlative degree compares a person, thing, activity or quality with the group.

- The **tallest** building in the town.
- She is the **fastest** runner among the students.
- This is the **most beautiful** car I have ever seen.

Rules for making comparatives and superlatives

One syllable adjectives.

1. Form the comparative and superlative forms of a one-syllable adjective by adding **–er** for the comparative form and **–est** for the superlative.

One Syllable Adjectives

Positive	Comparative	Superlative
tall	taller	tallest
old	older	oldest
short	shorter	shortest

2. If the one-syllable adjective ends with an **–e**, just add **–r** for the comparative form and **–st** for the superlative form.

One Syllable Adjectives With an -e

Positive	Comparative	Superlative
large	larger	largest
wise	wiser	wisest
wide	wider	widest

3. If the one-syllable adjective ends with a single consonant with a vowel before it, double the consonant and add **–er** for the comparative form and double the consonant and add **–est** for the superlative form.

One Syllable Adjectives With Single Consonant and a Vowel Before it

Positive	Comparative	Superlative
----------	-------------	-------------

thin	thinner	thinnest
big	bigger	biggest
sad	sadder	sadest

Two-syllable adjectives

1. With most two-syllable adjectives, you form the comparative with **more** and the superlative with **most**.

Two Syllable Adjectives

Positive	Comparative	Superlative
peaceful	more peaceful	most peaceful
careless	more careless	most careless
famous	more famous	most famous

2. If the two-syllable adjectives ends with **-y**, change the **y** to “**i**” and add **-er** for the comparative form, and for the superlative form change the “**y**” to “**i**” and add **-est**.

Two Syllable Adjectives Ends with -y

Positive	Comparative	Superlative
pretty	prettier	prettiest
happy	happier	happiest
angry	angrier	angriest

3. Two-syllable adjectives ending in **-er**, **-le**, or **-ow** take **-er** for comparative form and **-est** to for the superlative form.

Two Syllable Adjectives Ending in -er, -le or -ow

Positive	Comparative	Superlative
clever	cleverer	cleverest

narrow	narrower	narrowest
gentle	gentler	gentlest

Adjectives with three or more syllables.

For adjectives with three syllables or more, you form the comparative with more and the superlative with most.

Three Syllable Adjectives

Positive	Comparative	Superlative
beautiful	more beautiful	most beautiful
convenient	more convenient	most convenient
comfortable	more comfortable	most comfortable

Exceptions:

Some adjectives have irregular comparative and superlative forms.

Irregular Comparative and Superlative Forms

Positive	Comparative	Superlative
good	better	best
bad	worse	worst
many	more	most
much	more	most
well	better	best
far	farther	farthest/furthest
little	less	least

Note: Two-syllable adjectives that follow two rules. These adjectives can be used with **-er** and **-est** and with more and most.

Two Syllable Adjectives Follow Two Rules

Positive	Comparative	Superlative
simple	simpler/more simple	simplest/most simple
clever	cleverer/more clever	cleverest/most clever
gentle	gentler/more gentle	gentlest/most gentle
quiet	quieter/more quiet	quietest/most quiet

PRACTISE YOUR GRAMMAR: ADJECTIVES AND THEIR DEGREES OF COMPARISON

Task 1. Make the comparative and superlative degrees.

1. Small_____
2. Nice_____
3. Short_____
4. High_____
5. Large_____
6. Clever_____
7. Heavy_____
8. Interesting_____
9. Difficult_____
10. Attentive_____
11. Bad_____
12. Little_____

Task 2. Make the positive degree.

1. Earliest_____
2. Worse_____
3. Most_____
4. Best_____

5. Largest _____
6. Shorter _____
7. Busier _____
8. Less _____
9. Better _____
10. Least _____
11. Nicer _____
12. Longest _____

Task 3. Put the adjectives in the correct form.

1. Petrenko is the _____ (good) student in the group.
2. The _____ (long) examination session is in the summer.
3. Our University is situated in the _____ (beautiful) street.
4. My friend got a _____ (high) mark at the exam in chemistry than I.
5. Our first-year students study _____ (bad) than the senior students.
6. Pharmacognosy is as _____ (difficult) as botany.
7. Pharmacology isn't so _____ (easy) as you say.

Task 4. Choose the best answer.

1. He is a _____ man.
A handsome
B more handsome
C the most handsome
2. He was _____ than the day before.
A good
B better
C the best
3. The way was _____ now than last time.
A long
B longer

C the longest

4. We were _____ to the yard than to the house.

A close

B closer

C the closest

5. My heart was _____.

A heavy

B heavier

C the heaviest

6. He is very loud, he should behave _____.

A more quietly

B quieter

C more quiet

7. His English is _____ than mine.

A worst

B more worse

C worse

8. I speak French _____ than Tom.

A fluentlier

B fluently

C more fluently

9. Tom usually answers _____ than his brother.

A more honest

B honestlier

C more honestly

10. You must get up _____ to do your morning exercises.

A more early

B more earlier

C earlier

Task 5. Fill in the correct form of the words in brackets (comparative or superlative).

1. My house is (big) _____ than yours.
2. This is the (interesting) _____ lecture I have ever heard.
3. Non-smokers usually live (long) _____ than smokers.
4. Which is the (dangerous) _____ substance in the lab?
5. A holiday by the sea is (good) _____ than a holiday in the mountains.
6. It is strange but often a coke is (expensive) _____ than a beer.
7. Who is the (rich) _____ woman on earth?
8. The weather this summer is even (bad) _____ than last summer.
9. He was the (clever) _____ student of all.
10. This is the (difficult) _____ experiment I have ever carried out.

Task 6. Complete the following sentences using the appropriate form of the adjective.

1. I visit my parents (more often/the most often) than my brothers do.
2. He thinks he always knows (better/best).
3. Out of all my siblings, I visit my parents (more often/the most often).
4. David did (worse/the worst) than he thought he would do on his test.
5. I did (worse/the worst) out of all the students on my test.
6. Out of all the students, Frank studied (less/the least), but got the best grade.
7. We argued (longer/the longest) than I thought we would.
8. My sisters laughed (louder/the loudest) out of the whole audience.
9. The two guys who enjoyed the game (more/most) were Tom and Robert.
10. George drives (more recklessly/the most recklessly) than his brother.

UNIT 5

<i>VOCABULARY AND READING</i>	Text 1. Coldrex Tablets Text 2. Paracetamol
<i>GRAMMAR: THEORY AND PRACTICE</i>	Present Simple Tense
<i>SPEAKING</i>	Drug Annotation

COLDREX TABLETS

TEXT 1

Vocabulary

administration	застосування
stuffy nose	закладений ніс
medical advice	медичні консультації
persist	повторюватися
storage	зберігання
reach	досягати
exceed	перевищувати
flu	грип
essential	суттєвий
description	опис
precaution	заход безпеки

Description

“Coldrex Tablets” are particularly effective against the symptoms of colds and flu because they are made to the special Coldrex formula. They contain the full-recommended dose of paracetamol to ease aches and pains and to lower your temperature. There’s phenylephrine to clear a stuffy nose. We’ve also added

caffeine, mild stimulant to keep you going through your cold, and vitamin C - an essential vitamin your body often lacks during colds and flu.

Indications

“Coldrex Tablets” are indicated for the relief of the symptoms of cold and flu.

Administration

At the first sign of cold or flu, take “Coldrex Tablets” with water or a warm drink.

To obtain maximum relief take “Coldrex” for the full course of your cold.

Dosage

ADULT: take 2 tablets up to 4 times a day.

CHILDREN 6-12 years: Take 1 tablet up to 4 times a day. Not suitable for children under 6 years of age.

Precautions

Not to be given to children under 6 years of age except on medical advice.

Do not take with other products containing paracetamol

Contraindications

An allergic reaction to “Coldrex” is encountered very rarely.

Do not exceed the stated dose!

Some medicines do not combine. If you are receiving medicine from your doctor, ask his advice before taking “Coldrex”. If symptoms persist, consult your doctor.

Storage

Store in dry place.

Keep out of the reach of children.

Task 1. Fill the gaps using the words from the box.

<i>particularly</i>	<i>temperature</i>	<i>added</i>
<i>contain</i>	<i>keep</i>	<i>lacks</i>

“Coldrex Tablets” are_____effective against the symptoms of colds and flu because they are made to the special Coldrex formula. They _____ the full-recommended dose of paracetamol to ease aches and pains and to lower your_____. There’s phenylephrine to clear a stuffy nose. We’ve also

_____caffeine, mild stimulant to _____you going through your cold, and vitamin C - an essential vitamin your body often _____ during colds and flu. Contains paracetamol.

PARACETAMOL

TEXT 2

Vocabulary

contraindication	протипоказання
decade	десятиліття
frequent	частий
measuring spoonful	мірна ложка
measuring capful	мірний ковпачок
respectively	відповідно
renal insufficiency	ниркова недостатність

General

The most frequent and thus most important analgesics applied by the doctor daily have been in use for decades. One of them is Paracetamol. It is distinguished by good analgesic and antipyretic properties and is well tolerated.

Composition

One tablet contains Paracetamol BP 500 mg;

One suppository contains Paracetamol BP 250 mg;

One measuring spoonful/measuring capful mixture (5ml) contains 120 mg and 200 mg respectively.

Indications

Any attacks of pain, such as headache, toothache, earache, -muscular pain, arthritis pain, traumatic pain, and post-operative pain, feverish conditions with grippal infections and other infectious diseases.

Contraindications

Severe renal insufficiency; caution with damaged liver.

Side Effects

Side effects are not to be expected when Paracetamol is administered in therapeutic doses. Avoid overdosage and long-term treatment.

Administration and Dosage

Tablets: children (above 6 years) $\frac{1}{2}$ -1 tablet; adults 1-2 tablets.

Suppositories: infants 1-6 years one suppository.

Mixture: babies (2nd-12 month) $\frac{1}{2}$ -1 measuring spoonful/measuring capful.

The analgesic and antipyretic effect sets in after 30 min and will last for 3 to 4 hours.

Storage

Tablets: No special requirements.

Suppositories: Storing temperature is not above 25 C.

Mixture: Protected from light.

Task 1. Make sentences with the following words.

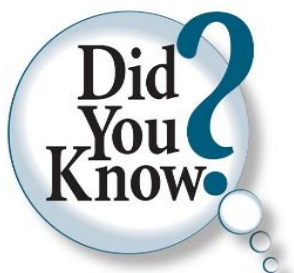
overdosage_____

therapeutic doses_____

requirement_____

damaged liver_____

infectious diseases _____



Unlike many substances, water expands as it freezes. An ice cube takes up about 9% more volume than the water used to make it.



Prepare a drug annotation of a drug, using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic.

THE STRUCTURE OF YOUR SPEECH.

USEFUL LANGUAGE.

The name of this drug is....

It is produced in the form of... (tablets, drops, suppositories, etc.).

The composition of this drug is....

It is indicated for....

One should take this drug....

The dosage for adults is ... and for children is...

The drug is contraindicated for the patients with ... / In general there are contraindications, but it is better to consult your doctor before taking this drug.

The stated dose is not to be exceeded.

The side - effects of this drug are ... / There are no side - effects.

This drug should be stored ... (in a dry, cool, dark place).

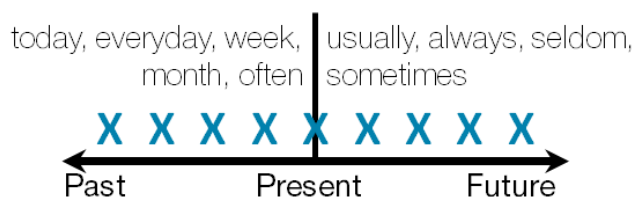
It should be kept out of the reach of children.

The shelf - life of this drug is....

One package contains....

GRAMMAR: PRESENT SIMPLE TENSE

Present Simple Tense



Verb or Verb + s/-es in 3 p.

The present simple tense is one of several forms of present tense in English. It is used to describe **habits, unchanging situations, general truths, and fixed arrangements.**

The present simple tense is used:

- To express habits, general truths, repeated actions or unchanging situations, emotions and wishes:
I like chemistry (habit); I work in Kiev (unchanging situation); Water boils at 100 degrees of Celsius (general truth)
- To give instructions or directions:
You walk for two hundred meters, then you turn left.
- To express fixed arrangements, present or future:
Your exam starts at 09.00
- To express future time, after some conjunctions: **after, when, before, as soon as, until:**
He'll give it to you when you come next Saturday.
- With verbs of the senses and mental processes:

I understand you now. He thinks that he wants to become a pharmacist.

PRACTISE YOUR GRAMMAR: PRESENT SIMPLE TENSE

Task 1. Write negative and interrogative sentences.

1. I study at the National University of Pharmacy.

- _____
? _____

2. I always do my English homework.

- _____
? _____

3. He studies at the pharmaceutical department.

- _____
? _____

4. They like organic chemistry very much.

- _____
? _____

5. My best friend lives in a hostel.

- _____
? _____

Task 2. Open the brackets and write the correct forms of the verbs.

1. Anne _____ (like) studying biology.

2. We _____ (not\ watch) TV every day.

3. Students _____ (carry out) experiments very often.

4. They _____ (have) breakfast before 7 a.m.

5. _____ you _____ (study) at the National University of Pharmacy?

6. Masha _____ (not\ play) computer games.

7. She _____ (have) shower in the mornings.

8. My friend _____ (speak) French.

9. My sister and I _____ (go) to the university by subway.

10. _____ your best friend _____ (live) in a hostel?

Task 3. Write questions in the Present Simple Tense.

1. _____ you _____ analytical chemistry? (to study)
2. _____ your teacher _____ the homework? (to check)
3. _____ you _____ photos when you are on holiday? (to take)
4. _____ she _____ to English lessons regularly? (to go)
5. _____ they _____ good marks? (to get)

Task 4. Write do\ does\ am\ is\ are in the gaps.

1. _____ you tired?
2. _____ you study chemistry?
3. _____ you a student?
4. _____ you have a brother?
5. _____ she a student?
6. _____ she study chemistry?
7. _____ you have lessons every day?
8. _____ they at home?
9. _____ he at work?
10. _____ she speak English?
11. _____ you speak English?
12. _____ he an English teacher?
13. _____ it cold outside?
14. _____ you study biology?
15. _____ you understand me?

Task 5. Write the correct form of the verbs.

Chemistry _____ (to be) a branch of physical science that _____ (to study) the composition, structure, properties and change of matter. Chemistry

_____ (to include) topics such as the properties of individual atoms, how atoms _____ (to form) chemical bonds to create chemical compounds and the interactions between substances through chemical reactions to form different substances.

Chemistry _____ (to be) sometimes called the central science because it _____ (to bridge) other natural sciences, including physics, geology and biology.

Task 6. Find and correct the mistakes in these sentences.

1. The Browns goes to the seaside every summer.

2. I doesn't understand the word "test-tube". What do this word mean?

3. British people drinks a lot of tea.

4. Do she studies at the National University of Pharmacy?

5. My train leave at 09.30, so I need to be at the station by 9.

6. Does your groupmates arrives on Monday?

7. What time do the first double-period begins?

8. Do it take you 10 minutes to get to the University? – Yes, you are right.

9. We usually plays football but sometimes we plays volleyball or tennis.

10. Water freeze at 0°C (32°F).

UNIT 6

<i>VOCABULARY AND READING</i>	Text 1. The Chemical Laboratory Text 2. Laboratory Safety
<i>GRAMMAR: THEORY AND PRACTICE</i>	There is\ there are
<i>SPEAKING</i>	Chemistry Laboratory

THE CHEMICAL LABORATORY

TEXT 1

Vocabulary

a burette	бюретка
a burner	пальник
a flask	колба
a funnel	воронка
a test-tube	пробірка
a vessel	посудина
an acid	кислота
an alkali	луг
analytical balance	аналітичний баланс
glassware	скляний посуд
impurities	домішки
to boil	кип'ятити
to increase	збільшувати
to melt	танути

to occupy	займати
to point out	вказати на те
to record all the findings	записати всі висновки
to write down carefully	записати уважно
to carry out various experiments	проводити різні експерименти
glassware for measuring	посуд для вимірювання
vapour pressure	тиск пари
melting point	температуру плавлення

Read and translate the text.

The course of training at any pharmaceutical institute is impossible without practical classes in chemistry. They are held in the chemical laboratories. Students of our National University of Pharmacy carry out various experiments with different chemical substances there.

All members of my group prefer to attend practical classes. That's why we work in the chemical laboratory with great pleasure. We try to improve our knowledge in practice. Our chemical laboratory occupies a large and light room. It is well-ventilated because chemists often work with substances having strong and unpleasant odour. During our practical classes in chemistry we study chemical and physical properties of inorganic substances. Our students carry out different experiments and carefully record all the findings. Usually they point out the title of the experiment and the date, the substances, describe reagents and the results.

The laboratory has its own equipment. It is equipped with special laboratory tables besides the demonstration table which stands between the two rows of tables and in front of them. In our experiments we use laboratory vessels and glassware of different kinds. There are three groups of them in the laboratory: glassware for general use, glassware for special use and glassware for measuring. Students carry

out experiments using test-tubes, funnels, flasks, retorts, burettes, graduated cylinders, measuring glasses and pipettes. They also have microscopes, analytical balances, distillators, burners to heat solutions and thermometers at hand. The most widely available reagents at our laboratory are acids (nitric, sulphuric), alkalis (potassium solution, sodium solution), oxides, organic salts, indicators (phenolphthalein, methylene orange). Among the subjects students study in the laboratory are density, viscosity, vapour pressure and others.

There are a lot of laboratories in our academy. The laboratory of inorganic chemistry is for identifying the properties of elements and inorganic substances. The first-year students have their practical classes there. The qualitative and quantitative analysis of organic and inorganic substances can be obtained in the laboratory of analytical chemistry. The laboratory assistant carries out experiments in the laboratory of organic chemistry. Here we can study the properties of organic substances and ways of their synthesis. There are two more laboratories in our academy: the laboratory of quality control and the laboratory of juridical chemistry. In the latter one students can obtain the toxicological analysis.

The work in the chemical laboratory is of great importance. The findings obtained help people to keep their health and to increase their knowledge. It's well-known that the running water contains various impurities. We learn how to obtain distilled water with distillators. Our students also like to work with special vessels for the determination of molecular weights and for the determination of melting and boiling points.

To sum up, practical classes in chemistry are usually held in the chemical laboratories where students carry out various experiments using different chemical substances. Moreover, the work in the chemical laboratory is of great importance because it helps students to increase their knowledge and to get more practical training.

Task 1. Answer the questions.

1. Where are the practical classes in chemistry held?
2. What do students do in the chemical laboratories?
3. What kind of room does our laboratory occupy?
4. What do students study during our practical classes in chemistry?
5. What is the chemical laboratory equipped with?
6. What groups of vessels and glassware do you know?
7. What do students use when they carry out experiments?

Task 2. Combine the words of two columns.

- | | |
|---------------|---------------|
| 1) blank | a) cylinder |
| 2) graduated | b) point |
| 3) measuring | c) volumetric |
| 4) analytical | d) glass |
| 5) drying | e) weight |
| 6) molecular | d) cabinet |
| 7) boiling | e) balance |

Task 3. Fill the gaps.

<i>equipped</i>	<i>includes</i>	<i>flasks</i>	<i>cleanliness</i>
<i>supplied</i>	<i>measuring</i>	<i>distilled</i>	

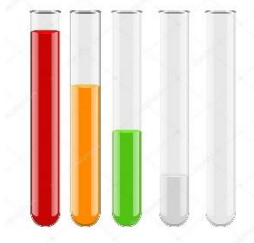
1. Every chemistry laboratory is _____ gas and water.
2. The laboratory is _____ benches, shelves, racks, etc.
3. Here you can see glassware for _____ use: test-tubes, flasks, beakers, etc.
4. The glassware for _____: is burettes, pipettes, measuring glasses, etc.

5. Volumetric _____ are used to measure specific volumes.
6. _____ water is contained in large bottles.
7. The work in the chemistry laboratory requires _____.

Task 4. Name the basic lab equipment in the pictures below.



1. _____



2. _____



3. _____



4. _____

Task 5. Choose a suitable word given in the brackets to fill in each gap.

The laboratory (have\has) its own equipment. It (are\is) equipped with special laboratory tables besides the demonstration table which stands between the two rows of tables and in front of (they\them).

In our experiments (us\we) use laboratory vessels and glassware of different kinds. There (is\are) three groups of them in the laboratory: glassware for general use, glassware for special use and glassware for measuring. Students (carry out\carry) experiments using test-tubes, funnels, flasks, retorts, burettes, graduated cylinders, measuring glasses and pipettes. They also (have\has) microscopes, analytical balances, distillators, burners to heat solutions and thermometers at hand.

The most widely available reagents at our laboratory (are\is) acids, alkalis, oxides, organic salts, indicators.

Task 6. Look at the picture and write 5-7 sentences, describing what you can see in the picture.



LABORATORY SAFETY

TEXT 2

Vocabulary

a science room

науковий зал

apparatus

апарат

beverage

напій

disposal

утилізація

equipment	обладнання
exceptions	винятки
goggles	окуляри
hazard	небезпека
immediately	негайно
lab coat	лабораторний халат
responsible	відповідальний
rule	правило
to avoid	уникати
to blow up	підірвати
to enter	заходити
to follow	слідувати
to fool around	бешкетувати
to notify	повідомити
to observe	спостерігати
to poison	отруїти
to remove	видалити
unsafe	небезпечно
well-ventilated area	добре провітрюване місце

Read and translate the text.

When you study chemistry, you would probably have to do experiments. It is important to know what you're doing as to avoid doing something silly like poisoning yourself or blowing up the lab! Therefore, you should first read and understand the below rules about working and behaving in the laboratory before doing any experiments.

1. Conduct yourself in a responsible manner at all times in the laboratory.

2. Follow all written and verbal instructions carefully. If you do not understand a direction or part of a procedure, ask your teacher before proceeding with the activity.
3. Never work alone in the laboratory. No student may work in the science classroom without the presence of the teacher.
4. When first entering a science room, do not touch any equipment, chemicals, or other materials in the laboratory area until you are instructed to do so.
5. Perform only those experiments authorized by your teacher. Carefully follow all instructions, both written and oral. Unauthorized experiments are not allowed.
6. Do not eat food, drink beverages, or chew gum in the laboratory. Do not use laboratory glassware as containers for food or beverages.
7. Be prepared for your work in the laboratory. Read all procedures thoroughly before entering the laboratory. Never fool around in the laboratory. Horseplay, practical jokes, and pranks are dangerous and prohibited.
8. Always work in a well-ventilated area.
9. Observe good housekeeping practices. Work areas should be kept clean and tidy at all times.
10. Be alert and proceed with caution at all times in the laboratory. Notify the teacher immediately of any unsafe conditions you observe.
11. Dispose of all chemical waste properly. Never mix chemicals in sink drains. Sinks are to be used only for water. Check with your teacher for disposal of chemicals and solutions.
12. Labels and equipment instructions must be read carefully before use. Set up and use the equipment as directed by your teacher.



13. Keep hands away from face, eyes, mouth, and body while using chemicals or lab equipment. Wash your hands with soap and water after performing all experiments.
14. Any time chemicals, heat, or glassware are used, students will wear safety goggles. No exceptions to this rule!
15. Contact lenses may not be worn in the laboratory.
16. Dress properly during a laboratory activity. Long hair, dangling jewelry, and loose or baggy clothing are hazard in the laboratory. Long hair must be tied back, and dangling jewelry and baggy clothing must be secured. Shoes must completely cover the foot. No sandals allowed on lab days.
17. A lab coat or smock should be worn during laboratory experiments.
18. Report any accident (spill, breakage, etc.) or injury (cut, burn, etc.) to the teacher immediately, no matter how trivial it seems. Do not panic.
19. If you or your lab partner is hurt, immediately (and loudly) yell out the teacher's name to get the teacher's attention. Do not panic.
20. If a chemical should splash in your eye(s) or on your skin, immediately flush with running water for at least 20 minutes. Immediately (and loudly) yell out the teacher's name to get the teacher's attention.
21. All chemicals in the laboratory are to be considered dangerous. Avoid handling chemicals with fingers. Always use a tweezer. When making an observation, keep at least 1 foot away from the specimen. Do not taste, or smell any chemicals.
22. Check the label on all chemical bottles twice before removing any of the contents. Take only as much chemical as you need.
23. Never look into a container that is being heated.
24. Do not place hot apparatus directly on the laboratory desk. Always use an insulated pad. Allow plenty of time for hot apparatus to cool before touching it.

Task 1. Answer the questions.

1. What is laboratory safety?

2. How must students conduct themselves at all times in the laboratory?
3. Are there only written instructions of laboratory safety?
4. What must you do if you do not understand a direction or part of a procedure?
5. Can a student work alone in the laboratory?
6. Can a student touch any equipment when first entering a science room?
7. What must students wear any time chemicals, heat, or glassware are used?
8. May contact lenses be worn in the laboratory?
9. What must a student do if a chemical should splash in his/her eye(s) or skin?
10. What mustn't a student do with a container that is being heated?

Task 2. Tell about laboratory safety using the following word combinations.

To do experiments; to avoid poisoning yourself; to understand the below rules; to work alone in the laboratory; not touch any equipment; experiments authorized by your teacher; a well-ventilated area; pranks are dangerous; drink beverages; equipment instructions; chemical waste; after performing all experiments; no sandals; report any accident; to be considered dangerous; if a chemical may splash in your eye(s); check the label; use an insulated pad.



Remember that temperature affects volume; therefore avoid using liquids that will fluctuate in temperature (hot water that will cool, for example).

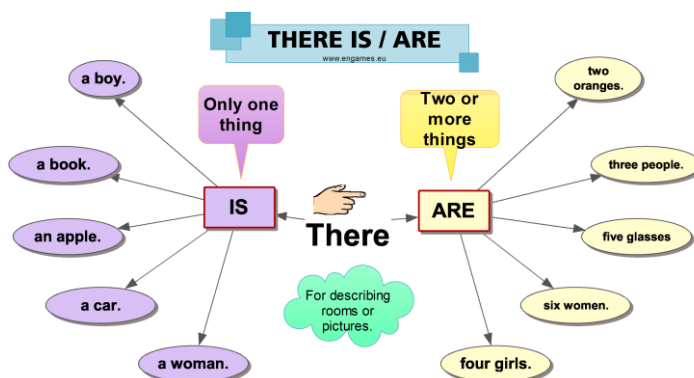


Prepare a speech about «Chemistry Laboratory», using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	To start with, I want to tell you about I would like to tell you about My topic is / will be very important for you because ... Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	First of all, I want to tell you about Secondly, I have to say that Also, you have to know that I think, To my mind, ... In my opinion, ... I believe, it is important to know that
SUMMARY <i>Sum it up</i>	Finally, ... I'd like to finish/end by saying... To conclude... Before I finish I'd finally like to say...

GRAMMAR: THERE IS\ THERE ARE

The choice between the phrases there is and there are at the beginning of a sentence is determined by the noun that follows it. Use there is when the noun is singular (“There is a cat”). Use there are when the noun is plural (“There are two cats”).



We use there is and there are when we first refer to the existence or presence of someone or something:

There is a letter on your desk. Julia brought it from the mail room.

~~Not: It's a letter on your desk.~~

There are three Japanese students in my class.

“There is” is a singular form.

There is a new cafe in the center of Kharkiv.

“There are” is the plural form of “there is”:

There are two new buildings next to the University.

PRACTISE YOUR GRAMMAR: THERE IS\ THERE ARE

Task 1. Write negative and interrogative sentences.

1 There is the National University of Pharmacy in Kharkiv.

- _____

? _____

2 There are new English textbooks.

- _____

? _____

3 There is the pharmaceutical department.

- _____

? _____

4 There are a lot of students in the classroom.

- _____

? _____

5 There is a scientific journal on the desk.

- _____

? _____

Task 2. Complete the sentences using "is" or "are".

1. There _____ thirty students in my group.

2. There _____ some books in my bag.

3. There _____ some computers in the library.

4. There _____ a blackboard in the classroom.

5. There _____ a CD player on our teacher's desk.

6. There _____ some textbooks.

7. There _____ some dictionaries in the classroom.

Task 3. Read this conversation and underline the correct phrase.

Man: Excuse me. I'm new to the neighborhood. My name's Anton.

Woman: Welcome to our neighborhood, Anton. My name's Masha.

Man: Nice to meet you. ***Is there \ Are there*** a drugstore near here?

Woman: Yes, ***there is \ there are***. In fact, ***there is \ there are*** two. One's on this street and one's on the corner of the next street.

Man: Thanks, and ***are there \ is there*** any banks?

Woman: No, ***there aren't \ there isn't***, but there ***is \ there are*** a cashpoint machine at the supermarket next to the drugstore on this street.

Man: Thanks a lot.

UNIT 7

VOCABULARY AND READING	What is Pharmacy?
GRAMMAR: THEORY AND PRACTICE	Pronouns <i>some, any, no</i>
SPEAKING	What is Pharmacy?

WHAT IS PHARMACY?

TEXT

VOCABULARY

dosage forms	дозовані форми
efficacy	ефективність
health care	охорона здоров'я
medicines, drugs, medicinal products, medications	ліки
outcome	висновок, наслідок
science	наука
scientific	науковий
substance	речовина
surgery	хірургія
to be related to	зв'язаний
to consider	розглядати, вважати
to dispense	відпускати лікарські засоби, фасувати
to divide	розділити
to include	включати, містити
to sell (sold, sold)	продавати

Read and translate the text.

Pharmacy is the science and technique of preparing as well as dispensing drugs and medicines. It is also considered as the art of preparing medicinal products, or a place where such substances are sold. The mortar and pestle are one of the internationally recognized symbols to represent the pharmacy profession. Also, the Green Cross is used in Greece, Spain, Italy, Argentina, France, Poland, the United Kingdom and other countries.

Pharmacy is the health profession that links the health sciences with the chemical sciences. The scope of pharmacy practice includes more traditional roles such as compounding and dispensing medications, and it also includes more modern services related to health care, including clinical services, reviewing medications for safety and efficacy, and providing drug information. Pharmacists, therefore, are the experts on drug therapy and are the primary health professionals who optimize medication use to provide patients with positive health outcomes.

The word *pharmacy* is derived from its root word *pharma* which was a term used since the 15th–17th centuries. However, the original Greek roots from "Pharmakos" imply sorcery or even poison. In addition to pharma responsibilities, the pharma offered general medical advice and a range of services that are now performed solely by other specialist practitioners, such as surgery and midwifery. The pharma often operated through a retail shop which, in addition to ingredients for medicines, sold tobacco and patent medicines. The pharmas also used many other herbs not listed. The Greek word *Pharmakeia* (Greek: φαρμακεία) derives from Greek: φάρμακον (pharmakon), meaning "drug" or "medicine".

In its investigation of herbal and chemical ingredients, the work of the pharma may be regarded as a precursor of the modern sciences of chemistry and pharmacology, prior to the formulation of the scientific method.

The field of pharmacy can generally be divided into three main disciplines:

Pharmaceutics that concerns on how to convert medication and drugs to suitable drug dosage forms;

Pharmaceutical Sciences including pharmaceutical and medicinal chemistry, pharmacognosy, pharmacy technology, pharmacy management and economics and pharmacology;

Pharmacy practice that concerns dispensing medication correctly. In the late 20th century, this field has developed into hospital pharmacy and clinical pharmacy. All of these fields are concentrated on optimizing patient care.

Task 1. Answer the questions.

1. What is pharmacy?
2. What are the internationally recognized symbols to represent the pharmacy profession?
3. What does the scope of pharmacy practice include?
4. What is the word *pharmacy* derived from?
5. How can the field of pharmacy be divided?
6. What is pharmaceutics?
7. What pharmaceutical sciences can you name?

Task 2. Complete the sentences with the words from the box.

<i>pharmacy</i>	<i>science</i>
<i>dosage forms</i>	<i>drug</i>

1. Pharmacy is the _____ and technique of preparing as well as dispensing drugs and medicines.
2. Pharmacists are the experts on _____ therapy.
3. The word _____ is derived from its root word *pharma*.
4. Pharmaceutics concerns on how to convert medication and drugs to suitable drug.



In 1938 Franklin D. Roosevelt signed the Federal Food Drug and Cosmetic (FD&C) Act, the law that still governs drug distribution today. That landmark legislation has been rightly hailed as important and innovative regulation of drug distribution.



Prepare a speech about «Pharmacy», using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	To begin with, I want to tell you about I would like to tell you about My topic is / will be very important for you because ... Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	Initially, I want to tell you about Secondly, I have to say that Also, you have to know that I think, To my mind, ... In my opinion, ... I believe, it is important to know that
SUMMARY <i>Sum it up</i>	Finally, ... I'd like to finish/end by saying... To conclude...

GRAMMAR: PRONOUNS SOME, ANY, NO

		
SOME	ANY	NO NOT ANY
<i>There are <u>some</u> books.</i>	<i>Are there <u>any</u> books?</i>	<i>There are <u>no</u> books.</i> <i>There are <u>not any</u> books.</i>

We use **some** and **any** with uncountable nouns and plural nouns. The general rule is that you use "**some**" in positive sentences and "**any**" in negative sentences and questions.

*I have **some** prescriptions to buy in a chemist's shop.*

*I don't have **any** textbooks in Organic chemistry.*

*Do you have **any** test-tubes to carry out an experiment?*

PAY ATTENTION! "some" is used in questions when offering or requesting something that is there.

*Would you like **some** coffee? (offer) – Could I have **some** water? (request)*

When we use **some** in a question, we show what we are offering the other person, but not asking a question.

We use "**any**" in questions and negative sentences.

*Do you have **any** questions about this topic?*

*Are there **any** drugstores in this area?*

*He hasn't got **any** questions.*

We use "**no**" in positive sentences, but with a negative meaning (without using "not").

*These students have **no** problems with this topic.*

COMPOUND USES OF SOME, NO AND ANY

SOME, ANY, NO – FORMING COMPOUNDS

	AFFIRMATIVE	INTERROGATIVE	NEGATIVE	AFFIRMATIVE SENTENCE WITH NEGATIVE MEANING
THINGS	SOMETHING	ANYTHING	ANYTHING	NOTHING
PEOPLE	SOMEONE SOMEBODY	ANYONE ANYBODY	ANYONE ANYBODY	NO-ONE NOBODY
PLACES	SOMEWHERE	ANYWHERE	ANYWHERE	NOWHERE

We can combine **some**, **no** and **any** with other words:

Something - anything

Somewhere - anywhere

Someone - anyone

Somebody – anybody

No one

Nobody

Nothing

Nowhere

PAY ATTENTION! The rules for using these compound words are the same as the rules for using some and any.

*He needs to find **somewhere** to live in Kharkiv.*

*I didn't know **anyone** at the conference.*

***No one** at the conference said a word about this invention.*

PRACTISE YOUR GRAMMAR: PRONOUNS SOME, ANY, NO

Task 1. Choose the correct option.

1. Have you got ___ English friends?

a) some

b) any

c) no

2. No, I haven't got ___ English friends.

a) no

b) some

c) any

3. As for me, I have ___ new books in biochemistry.

a) some

b) any

c) no

4. He has ___ time at all.

a) some

b) any

c) no

5. Did you pass ___ tests in analytical chemistry last week?

a) some

b) any

c) no

6. Would you like ___ orange juice?

a) some

b) any

c) no

7. Unfortunately, the professor has ___ time left to answer more questions.

a) some

b) any

c) no

8. Have you ever written _____ scientific articles?

a) some

b) any

c) no

9. Have you got ___ textbooks in microbiology?

a) some

b) any

c) no

10. Yes, I have ___ textbooks in microbiology.

a) some

b) any

c) no

11. Have you got ___ water? I am really thirsty.

a) some

b) any

c) no

12. No, I do not have ___ water.

a) some

b) any

c) no

13. I want to find ___one who wants to cooperate with me in writing a new article.

a) some

b) any

c) no

14. I will live ___where in London. It does not matter to me.

a) some

b) any

c) no

15. There is ___body in the classroom at the moment. It is empty.

a) some

b) any

c) no

16. Are you looking for ___thing in particular?

a) some

b) any

c) no

Task 2. Fill in the blanks below to complete the sentences. Use 'some' or 'any'.

1. I do not need _____ advice from you. I am old enough to use my head.
2. He does not have _____ pens, but I have _____ pens.
3. Our teacher did not give us _____ homework yesterday.
4. I am tired. Do we have _____ time to take a nap?
5. A: Do they have _____ library cards?
B: No, they don't have _____.
6. Pavel wants to buy _____ new books.
7. Excuse me, I need _____ information about the next conference.
8. I need _____ help with my homework.
9. The teacher has _____ questions that he wants to ask you.
10. Unfortunately, I do not have _____ time to discuss it.
11. I am sorry, but we have _____ time. We are in a hurry.
12. Dima read _____ interesting books last month.

Task 3. Underline the correct option.

1. There is *someone* / *anyone* in the classroom.
2. There is *anything* / *nothing* on the shelf.
3. Can I tell you *something* / *nothing*?
4. He did not tell me *anything* / *something* about this accident.
5. *No one* / *Anyone* came to visit her in a hospital.
6. *Anybody* / *Somebody* called her yesterday.
7. Did you go *anywhere* / *nowhere* last weekend?

Task 4. Choose and write “something”, “anything” or “nothing” in the following sentences.

1. He's hungry, but there's _____ to eat in the fridge!
2. I don't want to talk about _____.
3. I can see _____ on the desk. What is it?
4. "Pardon? What did you say?" – "_____".
5. Is there _____ interesting to watch on TV tonight?
6. _____ important happened yesterday.

Task 5. Correct the mistakes if there are any.

1. I am sure, Mr. Petrenko did not tell you nothing about the conference.
2. The doctors have never done something to hurt him.
3. Let me explain something to you.
4. Have your read some articles by this outstanding professor?
5. Who told you that he did not write some books?
6. I need something to talk to.
7. I cannot confirm nothing now.
8. Do you have some questions?
9. Would you like any coffee?
10. I did not have nothing to do at the weekends so I was bored.

UNIT 8

VOCABULARY AND READING	History of Pharmacy
GRAMMAR: THEORY AND PRACTICE	Past Simple Tense
SPEAKING	History of Pharmacy

HISTORY OF PHARMACY

TEXT

Vocabulary

AD (Anno Domini)	наша ера
ancient	стародавній
BC (Before Christ)	до Різдва Христового
chemical compound	хімічна сполука
compilation	зібрання чогось; збірник
drugstore	аптека
eventually	врешті-решт
for instance	наприклад
key discovery	ключове відкриття
medicinal substance	лікарська речовина
mode of action	режим дії, спосіб дії
origin	походження
papyrus (pl. papyri)	папірус
pharmaceutical company	фармацевтична компанія
pharmacy	аптека
preparation	препарат; підготовка
prescription book	книга рецептів
property	властивість

representative	представник
substantially	істотно
to appear	з'явитися
to distribute	поширювати
to issue a decree	видати указ
to set up	засновувати, встановлювати
treatise	трактат
valuable	цінний
various	різноманітній

Read and translate the text.

The history of pharmacy as an independent science is relatively young. The origins of pharmacy dates back to the first third of the nineteenth century. The earliest known compilation of medicinal substances was an Indian Ayurvedic treatise (6th century BC). However, the earliest text as preserved dates to the 3rd or 4th century AD. India has a great history of medicine and patient care.

Ancient Egyptian pharmacological knowledge was recorded in various papyri such as the Ebers Papyrus of 1550 BC, and the Edwin Smith Papyrus of the 16th century BC. In Ancient Greece there was a group of experts in medicinal plants. Probably the most important representative was Diocles of Carystus (4th century BC). He is considered to be the source for all Greek pharmacotherapeutic treatises between the time of Theophrastus and Dioscorides. The Latin translation De Materia Medica (Concerning medical substances) was used as a basis for many medieval texts, and was built upon by many middle eastern scientists during the Islamic Golden Age.

The advances made in the Middle East in botany and chemistry led medicine in medieval Islam substantially to develop pharmacology. Muhammad ibn Zakarīya Rāzi (Rhazes) (865-915), for instance, acted to promote the medical uses of chemical

compounds. Al-Biruni (973-1050) wrote one of the most valuable Islamic works on pharmacology entitled *Kitab al-Saydalah* (The Book of Drugs), where he gave detailed knowledge of the properties of drugs and wrote about the role of pharmacy and the functions and duties of the pharmacist. Ibn Sina (Avicenna), too, described no less than 700 preparations, their properties, mode of action and their indications. In Europe pharmacy-like shops began to appear during the 12th century. In 1240 emperor Frederic II issued a decree by which the physician's and the apothecary's professions were separated.

The first pharmacy in Europe (still working) was opened in 1241 in Trier, Germany. In Europe there are old pharmacies (opened in 1317) still operating in Dubrovnik, Croatia and one in the Town Hall Square of Tallinn, Estonia dating from at least 1422. The oldest is claimed to be set up in 1221 in the Church of Santa Maria Novella in Florence, Italy, which now houses a perfume museum. The medieval Esteve Pharmacy, located in Llívia, is also now a museum dating back to the 15th century, keeping old prescription books and antique drugs.

The earliest drugstores date to the Middle Ages. The first known drugstore was opened by Arabian pharmacists in Baghdad in 754, and many more soon began operating throughout the medieval Islamic world and eventually medieval Europe. By the 19th century, many of the drugstores in Europe and North America had eventually developed into larger pharmaceutical companies.

Most of today's major pharmaceutical companies were founded in the late 19th and early 20th centuries. Key discoveries of the 1920s and 1930s, such as insulin and penicillin, became mass-manufactured and distributed. Switzerland, Germany and Italy had particularly strong industries, with the UK, US, Belgium and the Netherlands.

Task 1. Answer the questions.

1. When does the origins of pharmacy date back to?
2. Where was the earliest known compilation of medicinal substances found?

3. Where was a group of experts in medicinal plants found?
4. What was Muhammad ibn Zakarīya Rāzi famous for?
5. When and where was the first pharmacy opened in Europe?
6. When were most of today's major pharmaceutical companies founded?
7. Is the history of pharmacy young or old?
8. Is pharmacy connected to the medicine?
9. What countries have a great history of medicine and patient care?
10. What country was pharmacology developed in?
11. When pharmacy-like shop began to appear?
12. When the earliest drugstores appeared?
13. When did insulin and penicillin become mass-manufactured?

Task 2. Match these words with their English equivalents from the text.

незалежна наука, медицина, лікарські рослини, хімічні сполуки, фармакотерапевтичні трактати, книга рецептів, рецепт, аптека, фармацевтичні компанії, призначення препарату, античні ліки.

Task 3. Look at these antonyms and synonyms. Give your own examples.

Adjective	Opposite (Adj.+ prefix)	Opposite (different word)
correct	incorrect	wrong
usual	unusual	strange/rare
formal	informal	casual
expensive	inexpensive	cheap
kind	unkind	cruel
intelligent	unintelligent	stupid
interesting	uninteresting	boring
fashionable	unfashionable	out of date

Task 4. Match these words and phrases with their definitions.

1) herbal medicine	A) a medicine; a medicament; the act or process of treating with medicine; administration of medicine
2) acupuncture	B) the process of accepting personal responsibility to keep ourselves healthy, and well physically, emotionally, mentally and spiritually
3) self-healing	C) restoring and maintaining health through the stimulation of specific points on the body
4) folk medicine	D) the study and use of medicinal properties of plants
5) medication	G) longstanding remedies passed on and practiced by lay people

Task 5. Write a translation of the following text.

Pharmacy (from the Greek φάρμακον = remedy) is a transitional field between the health sciences and the chemical sciences, as well as the profession charged with ensuring the safe use of medications. Traditionally, pharmacists have compounded and dispensed medications based on prescriptions from physicians. More recently, pharmacy has come to include other services related to patient care, including clinical practice, medication review, and drug information. Some of these new pharmaceutical roles are now mandated by law in various legislatures. Pharmacists, therefore, are drug therapy experts, and the primary health professionals who optimize medication management to produce positive health outcomes.



Every year on October 23 from 6:02 am to 6:02 pm, chemistry students, and chemists celebrate Mole Day in honour of Avogadro's number (6.02210^{23}), the number of carbon atoms in 12 grams of carbon.



Prepare a speech about « History of Pharmacy », using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	To start with, I want to tell you about I would like to tell you about My topic is / will be very important for you because ... Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	Firstly, I want to tell you about As well as, I have to say that Also, you have to know that In my opinion, ...
SUMMARY <i>Sum it up</i>	I'd like to finish/end by saying... To conclude... Before I finish I'd finally like to say...

GRAMMAR: PAST SIMPLE TENSE

The past simple is a verb tense that is used to talk about things that happened or existed before now. We use **the simple past** to describe an action that started in the past and ended in the past. It could be something that happened twenty years ago or something that happened two minutes ago. It started. It stopped. It's over.

*This scientist **wrote** one of the most valuable Islamic works on pharmacology.*

*The author of this book **gave** detailed knowledge of the properties of drugs and **wrote** about the role of pharmacy and the functions and duties of the pharmacist.*

For **regular verbs**, we add *-ed* to the base form of the verb (*work*–*worked*) or *-d* if the verb already ends in *e* (*move*–*moved*).

Positive sentences	<i>I, she, he, it, you, we, they</i>	<i>worked.</i>	
Negative sentences	<i>I, she, he, it, you, we, they</i>	<i>did not (didn't)</i>	<i>work.</i>
Questions	<i>Did</i>	<i>I, she, he, it, you, we, they</i>	<i>work?</i>

In **regular one-syllable verbs** with a single vowel followed by a consonant, we double the final consonant when adding *-ed* to make the past simple:

*stop: The bus **stopped** suddenly.*

*plan: Who **planned** this trip?*

PAY ATTENTION! Check these spelling rules of regular verbs.

Regular verbs

Spelling rules	Examples
base form + ed	walk → walk ed play → play ed
verbs ending in -e + d	like → lik ed move → mov ed
verbs ending in a consonant + y ↓ change y → i + ed	car y → carr ied stud y → stud ied
Some verbs ending in a single consonant + the second last letter is a vowel → double the last letter + ed	plan → plann ed stop → stop ped

Many verbs are **irregular**. Each one has to be learnt. The verb form is the same for all persons (I, you, she, he, it, we, they), and we make questions and negatives with irregular verbs in the same ways as for regular verbs.

Positive sentences	I, she, he, it, you, we, they	wrote	a prescription.
Negative sentences	I, she, he, it, you, we, they	did not (didn't)	write.
Questions	Did	I, she, he, it, you, we, they	write?

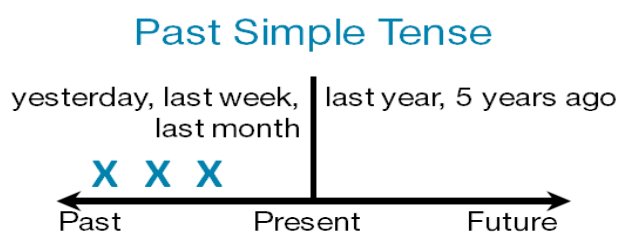
PAY ATTENTION! Check the forms of irregular verb "TO BE" in Past Simple Tense.

AFFIRMATIVE	NEGATIVE	INTERROGATIVE
I WAS YOU WERE HE } WAS SHE } IT } WE } WERE YOU } THEY }	I WASN'T YOU WEREN'T HE } WASN'T SHE } IT } WE } WEREN'T YOU } THEY }	WAS I ... ? WERE YOU ... ? WAS { HE ... ? { SHE ... ? { IT ... ? WERE { WE ... ? { YOU ... ? { THEY ... ?

The earliest drugstores **were** in the Middle Ages.

When and where **was** the first pharmacy opened in Europe?

PRACTISE YOUR GRAMMAR: PAST SIMPLE TENSE



Verb + ed or Irregular V2.

Task 1. Write negative and interrogative sentences.

1. I graduated from the National University of Pharmacy.

- _____
? _____

2. She passed her exams very well.

- _____
? _____

3. They obtained a new substance yesterday.

- _____
? _____

4. He shut the window and went out.

- _____
? _____

5. We finished medical college last year.

- _____
? _____

Task 2. Write the correct forms of the verbs in the Past Indefinite.

• To be – • To cost – • To buy – • To cut – • To fall – • To study – • To stop – • To understand – • To drink -	• To do – • To leave – • To drive – • To work – • To stay– • To make – • To forget – • To carry out – • To go –
---	---

Task 3. Open the brackets and write the correct forms of the verbs.

1. Last June Irina _____ (go) to the USA for three weeks.
2. _____ you _____ (study) English last year?
3. He _____ (stay) at the hotel last year.
4. I _____ (not have) much time for talking.
5. Last month my groupmates _____ (go) to a conference.
6. _____ they _____ (obtain) a new substance last week?
7. He _____ (not\ visit) Scotland with his friends last holiday.
8. My best friend _____ (want) to be a pharmacist when he _____ (to be) 10 years old.
9. When we _____ (to be) at college, my teacher always _____ (tell) us to eat healthy food.
10. I _____ (not\ carry out) experiment last lesson.

Task 4. Write was\were\did in the gaps.

1. Who _____ your teacher last term?
2. _____ she your student last term?
3. _____ you at work yesterday morning?
4. _____ you at the department last Friday?

5. Where ____ you work in 1999?
6. What time ____ you get up last Sunday?
7. ____ you go out last Friday?
8. ____ the head of department at work yesterday morning?
9. ____ you have many students yesterday?

Task 5. Write the correct forms of the verbs using Past Simple.

1. Marie Curie _____ (to be) born in 1867 and _____ (die) in 1934. Marie Curie _____ (receive) the Nobel Prize in Chemistry in 1911 for her discovery of radium and polonium. She _____ (to be) able to isolate and study the compounds and nature of radium.
2. Alessandro Volta _____ (to be) the first person to isolate methane gas. He _____ (discover) that methane mixed with air _____ (can) be exploded using an electric spark. He also _____ (find out) that electric potential in a capacitor is directly proportional to electric charge.
3. Louis Pasteur _____ (to be) born in 1822 and _____ (die) in 1895. In addition to developing the process of Pasteurization, Louis Pasteur _____ (discover) the asymmetrical molecular structure on certain. He _____ (make) some of the earliest vaccines for rabies and anthrax, and the reduction of a bacterial infection in what _____ (to be) known as puerperal fever.
4. Alfred Nobel (1833–1896) _____ (to be) famous for inventing the dynamite. Alfred Nobel _____ (to be) a chemist, innovator, engineer, and arms manufacturer. One of his earliest inventions _____ (include) the gas meter. At one time, he _____ (have) nearly 350 patents on various items.
5. Mario Molina (1943) _____ (discover) the ozone hole in the Antarctic. He _____ (get) the Nobel Prize in Chemistry in 1995. Molina also _____ (co-discover) the harm that chlorofluorocarbons _____ (have) on the ozone layer.

UNIT 9

VOCABULARY AND READING	On the History of Chemistry in Ukraine
GRAMMAR: THEORY AND PRACTICE	Pronouns <i>many, much, (a) few, (a) little</i>
SPEAKING	On the History of Chemistry in Ukraine

ON THE HISTORY OF CHEMISTRY IN UKRAINE

TEXT

Vocabulary

density	густина
impact	вплив
manufacture	виробництво
odour	запах
property	властивість
qualitative analysis	якісний аналіз
raw materials	сировина
substance	речовина
to deliver a lecture	читати лекцію
to determine	визначити
to influence	впливати
to research	досліджувати

Read and translate the text.

The foundation of Kharkiv University in 1805 had a great impact on the development of chemistry in Ukraine. A special course on this subject was taught at the department of physics and mathematics. Lectures were delivered in Latin.

At that time chemists were mostly interested in analytical chemistry and mineralogy. The science had an applied character and paid much attention to the manufacture of glass, dyes, sugar and to the analyses of raw materials.

The five-volume “General Chemistry for Teachers and Students” was the first textbook on chemistry published in Ukraine. The author of the book F. Gize was the head of the department and the most famous chemist in Ukraine at that time.

Professor Gize initiated delivering lectures on organic and pharmaceutical chemistry in Kharkov University.

In 1856, N. Beketov was appointed the head of the department of chemistry. He was an outstanding scientist and a talented lecturer. Professor Beketov’s works greatly influenced the development of chemistry in Ukraine. The sphere of his scientific interests included general regularities of chemical processes and metallic properties of hydrogen. He was the first to state that a lighter body displaced a heavier one in the reaction and that the specific gravity was the main factor for the direction of any reaction. In 1865 professor Beketov established the series of metal reactivity later proved by G. Lewis and M. Rendal. N. Beketov’s important discovery was aluminothermia, i.e. metal reduction of aluminum. This method was later used in metallurgy.

The development of analytical chemistry in Ukraine is closely connected with the name of professor S. Reformatsky. S. Reformatsky worked at Kyiv University founded in 1835. In 1899 he published “Tables of Qualitative Chemical Analysis”, in which he developed a systematic approach to the analytical experiment. In 1904 professor Reformatsky defined tasks of qualitative analysis as follows: first find groups of elements, then determine the role of each element in the molecule, and finally, determine individual substances.

S. Reformatsky and Ja. Mikhailenko classified research methods into physical and chemical techniques. The physical methods are based on physical properties of samples: colour, density, odour, etc., while chemical techniques deal with chemical transformations.

Professor S. Reformatsky was an outstanding researcher. The laboratory of general chemistry at Kyiv University is named in his honour.

Task 1. Answer the questions.

1. How did the foundation of Kharkiv University influence the development of chemistry in Ukraine?
2. What were the chemists of the 19th century mostly interested in?
3. What was the first textbook on chemistry published in Ukraine?
4. What is professor Gize famous for?
5. What was the sphere of professor Beketov's scientific interests?
6. Who started the development of analytical chemistry in Ukraine?

Task 2. Complete the sentences with the words from the box.

<i>scientific</i>	<i>qualitative</i>	<i>raw materials</i>
<i>properties</i>	<i>density</i>	<i>manufacture</i>

1. At that time chemistry had an applied character and paid much attention to the _____ of glass, dyes, sugar and to the analyses of _____.
2. The sphere of professor Beketov's _____ interests included general regularities of chemical processes and metallic _____ of hydrogen.
3. In 1904 professor Reformatsky defined tasks of _____ analysis.
4. The physical methods are based on physical properties of samples: colour, _____, odour, etc.

Task 3. Prepare the report about the outstanding scientists of your faculty or University.



Today, there are approximately 20,731 pharmacies in the Ukraine alone. Still, openings of new pharmacies mean the numbers are constantly changing. The number of pharmacies available per capita is rather high (1.8–2.0).



Prepare a speech about « An outstanding pharmacist of Unkraine », using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	To begin with, I want to tell you about First of all, I want to tell you about I would like to tell you about My topic is / will be very important for you because ... Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	Initially, I want to tell you about Secondly, I have to say that Also, you have to know that I think, To my mind, ... I believe, it is important to know that
SUMMARY <i>Sum it up</i>	Finally, ... I'd like to finish/end by saying... To conclude... Before I finish I'd finally like to say...

GRAMMAR: PRONOUNS *MANY, MUCH, (A) LITTLE, (A) FEW*

1. When do we use *much* and when *many*?

- **much**: uncountable nouns (*milk, marmalade, money, time etc.*)
- **many**: countable nouns (*bottles of milk, jars of marmalade, dollars, minutes etc.*)

Examples:

- How **much** money have you got?
- How **many** dollars have you got?

In informal English these questions are often answered with **a lot of, lots of**. There is no much difference between the two phrases.

2. When do we use *a little/little* and when *a few/few*?

- **a little**: non countable nouns (*milk, marmalade, money, time etc.*)
- **a few**: countable nouns (*bottles of milk, jars of marmalade, dollars, minutes etc.*)

Examples:

- He has **a little** money left.
- He has **a few** dollars left.

We use *few* and *little* **without the article a** to point out a more negative meaning.

Examples:

- **A few** students of our school know this. (*There are some student who know it.*)
- **Few** students know this. (*It is almost unknown.*)

PRACTISE YOUR GRAMMAR: PRONOUNS MANY, MUCH, (A) LITTLE, (A) FEW

Task 1. *Choose the correct answer “a few” or “a little”.*

1. _____electricity
2. _____suitcases
3. _____rice
4. _____water
5. _____bottles of water
6. _____coal
7. _____scarves
8. _____gold
9. _____dollars
10. _____sand

Task 2. *Choose the correct answer “few” or “little”.*

1. This president had _____ power.
2. She spoke _____ English. It was nearly impossible to understand her.
3. They got _____ complaints.
4. I'm sorry, but I have _____ time to waste.
5. He is lucky. He has _____ problems.
6. They have _____ interest in politics.
7. There's very _____ communication between them.
8. _____ children understood the difference.
9. We had _____ hope that his sister would survive.
10. Very _____ students studied Latin last year.

Task 3. Choose the correct answer “much” or “many”. Mind countable and uncountable nouns.

1. How _____ students are there in your group?
2. How _____ pocket money do you get per week?
3. How _____ time is left?
4. How _____ sisters does Ella have?
5. How _____ coins did you find yesterday?
6. How _____ water is in this bottle?
7. How _____ crosswords did she solve correctly?
8. How _____ milk do they have for breakfast?
9. How _____ experiments were carried out last week?
10. How _____ coffee do your parents drink per day?

Task 4. Insert “much” or “many”.

1. You can see _____ test-tubes near the laboratory.
2. You mustn't eat so _____ bananas.
3. You mustn't drink so _____ coffee.
4. He bought _____ furniture for his new flat.
5. This work won't take _____ time.
6. Have we got _____ apples for the children?
7. I don't like _____ salt in the salad.
8. My little sister speaks _____ that's why we call her «a chatter box».

Task 5. Put in the correct pronouns (much, many, little, few).

1. He isn't very popular. He has _____ friends.
2. Ann is very busy these days. She has _____ free time.
3. Did you take _____ photographs when you were on holidays?
4. I'm not very busy today. I haven't got _____ to do.

5. The museum was very crowded. There were too _____ people.
6. Most of the town is modern. There are _____ old buildings.
7. The weather has been very dry recently. We've had _____ rain.

UNIT 10

<i>VOCABULARY AND READING</i>	The Future of Pharmacy
<i>GRAMMAR: THEORY AND PRACTICE</i>	Future Simple Tense
<i>SPEAKING</i>	The Future of Pharmacy

THE FUTURE OF PHARMACY

TEXT

Vocabulary

care-giver	доглядач
challenge	виклик
collaboration	співпраця
compassion	співчуття
consistency	послідовність
consistent use	послідовне використання
evidence	доказ, свідчення
health profession	професія охорони здоров'я
integral	невід'ємний
long-term conditions	довгострокові умови
particular	конкретний
partnership	партнерство
profound	глибокий
requirement	вимога
shift	зміна
to assume	припустити

to improve	покращувати
to shape	формувати
to supply	постачати

Read and translate the text.

Pharmacy, as the third largest health profession, has a central role in assuring the safe and consistent use of medicines and as a provider of wider care. Pharmacists are working in collaboration with many other healthcare organizations to shape the future of pharmacy. In the coming decades, they are expected to become more integral within the health care system. Pharmacists are currently playing a much bigger part in helping patients get the best from their use of medicines. A broader role for pharmacists as care-givers will be central to securing the future of pharmacy.

The role of pharmacy is changing, with a particular focus on the shift from dispensing and supply towards services that help people to get the most from their medicines and stay well. Future models of care delivered through pharmacy depend fundamentally on what is happening, and likely to happen, in the wider national health system. The system faces profound challenges, related to the economic context, and the requirement is to improve the quality of care for patients, and in particular for those living with long-term conditions. Pharmacists are to assume the role of supporting patients with effective medicines use and by serving as care-givers in the health system, working in close partnership with other health and social care professionals as well as with patients. There is a stronger focus on assuring and improving the quality of care – all health care providers must get better at finding out what patients want and need, and delivering this with safety, consistency and compassion. Pharmacy will have to make its case for delivering new models of care, based on evidence of cost and clinical effectiveness.

Task 1. Answer the questions.

1. Who do pharmacists work in collaboration with?
2. Where are pharmacists playing a bigger part now?
3. When are they expected to become more integral within the health care system?
4. What is the role of pharmacy?
5. What profound challenges does the system face?
6. What can happen in pharmacy in the future?

Task 2. Translate each of the words into Ukrainian.

Practitioner, diagnosis, physiology, research, science, development, determine, therapy, terminology, feeling, efficiency, problem, experience, patient, residency.

Task 3. Translate each of the words into English.

Система охорони здоров'я, клінічна фармація, покращувати, навички догляду за пацієнтами, лікування пацієнта, постачати, узгодження лікування.

Task 4. Read and translate the following information.

In most jurisdictions (such as the United States), pharmacists are regulated separately from physicians. These jurisdictions also usually specify that only pharmacists may supply scheduled pharmaceuticals to the public, and that pharmacists cannot form business partnerships with physicians or give them "kickback" payments. However, the American Medical Association (AMA) Code of Ethics provides that physicians may dispense drugs within their office practices as long as there is no patient exploitation and patients have the right to a written prescription that can be filled elsewhere. 7 to 10 percent of American physicians' practices reportedly dispense drugs on their own.



The future of pharmacy has been an ongoing discussion for some years, which is connected with artificial intelligence. Artificial intelligence (AI) makes it possible for machines to learn from experience, adjust to new inputs and perform human-like tasks.



Prepare a speech about «The Future of Pharmacy», using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	I would like to tell you about My topic is / will be very important for you because ... Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	Initially, I want to tell you about Secondly, I have to say that Also, you have to know that I think, To my mind, ... I believe, it is important to know that
SUMMARY <i>Sum it up</i>	Finally, ... I'd like to finish/end by saying... To conclude... Before I finish I'd finally like to say...

GRAMMAR: FUTURE SIMPLE TENSE

The future simple refers to a time later than now, and expresses facts or certainty. In this case there is no 'attitude'.

The future simple is used:

- To predict a future event:
*It **will rain** tomorrow.*
- With I or We, to express a spontaneous decision:
*I'll **pay** for the tickets by credit card.*
- To express willingness:
*I'll **do** the washing-up.*
*He'll **carry** your bag for you.*
- In the negative form, to express unwillingness:
*The baby **won't eat** his soup.*
*I **won't leave** until I've seen the manager!*
- With I in the interrogative form using "**shall**", to make an offer:
***Shall I open** the window?*
- With we in the interrogative form using "**shall**", to make a suggestion:
***Shall we go** to the cinema tonight?*
- With I in the interrogative form using "**shall**", to ask for advice or instructions:
*What **shall I tell** the boss about this money?*
- With you, to give orders:
*You **will do** exactly as I say.*
- With you in the interrogative form, to give an invitation:
***Will you come** to the dance with me?*
***Will you marry** me?*

Note: In modern English **will** is preferred to **shall**. **Shall** is mainly used with **I** and **we** to make an offer or suggestion, or to ask for advice (see examples above). With the other persons (**you, he, she, they**) **shall** is only used in literary or poetic

situations, e.g. "With rings on her fingers and bells on her toes, She **shall have** music wherever she goes."

Forming the future simple

The future simple tense is composed of two parts: **will / shall + the infinitive** without *to*

	Affirmative	Negative	Interrogative	Interrogative Negative
I	will see	I won't see	Will I see?	Won't I see?
*I	shall see		*Shall I see?	
You	will see	You won't see	Will you see?	Won't you see?
He	will see	He won't see	Will he see?	Won't he see?
We	will see	We won't see	Will we see?	Won't we see?
*We	shall see		*Shall we see?	
They	will see	They won't see	Will they see?	Won't they see?

****Shall** is dated, but it is still commonly used instead of "will" with the affirmative or interrogative forms of I and we in certain cases (see above).*

PRACTISE YOUR GRAMMAR: FUTURE SIMPLE TENSE

Task 1. Write negative and interrogative sentences

1. I shall graduate from the National University of Pharmacy next year.

- _____

? _____

2. My groupmate will pass the final exams next Monday.

- _____

? _____

3. They will go to the dean's office tomorrow.

- _____
 ? _____
4. He will talk to the dean very soon.
- _____
 ? _____
5. We shall finish medical college in a year.
- _____
 ? _____

Task 2. Open the brackets and write the correct forms of the verbs.

1. I think we _____ two return tickets tomorrow. (to buy)
2. The test _____ at ten tomorrow. (not\ to be)
3. My groupmate _____ to Canada next summer. (to go)
4. _____ we _____ the test next Monday? (to have)
5. I _____ you in the evening. (to phone)
6. I'm sure our 3-day tour _____ more than 5000 grivnas. (to cost)
7. Our English teacher says that we _____ the test tomorrow. (not\ have)
8. _____ your groupmate _____ you with your homework? (to help)
9. We _____ an experiment tomorrow at the lesson. (to carry out)
10. _____ you _____ analytical chemistry next Friday? (to have)
11. My working day _____ at six o'clock. (to begin)
12. I _____ breakfast at seven o'clock. (to have)
13. I _____ home at half past seven and _____ to university. (to leave\ to go)
14. I _____ a bus to the University. (not \ to take)
15. Classes _____ at eight. (to begin)
16. We _____ four classes tomorrow. (to have)

17. Our group _____ Latin Language next Tuesday. (to have)

Task 3. Complete the sentences. Write 'll or won't.

1. We have organic chemistry today and we _____ have it tomorrow too.
2. Ann's brother is thirteen. He _____ be fourteen on his next birthday.
3. I bought a lottery ticket, but I _____ win.
4. My dad is thirty-nine. He _____ be forty on his next birthday.
5. My sister Mary is fifteen. She _____ be sixteen until next year.
6. My groupmate Igor is clever. He _____ pass all his exams.
7. It's raining now. But it _____ be sunny later.
8. Masha and Tanya are always late for classes. They _____ arrive until nine o'clock.

Task 4. Write the correct forms of the verbs.

Future of science

Among the technologies some scientists _____ (believe), we _____ (change) our lives in the coming decades. These days there _____ (to be) cars that drive themselves, lab-grown human organs, 3D television and robots that can perform household tasks.

“In the nearest future we _____ (have) the power to animate the inanimate, the power to create life itself,” says Prof. Kaku. “We _____ (have) the power of gods very soon. But _____ we also _____ (have) the wisdom of Solomon by this time?”

MODULE II

DRUGS: TECHNOLOGY, NAMES, CLASSES, ADMINISTRATION

UNIT 11

VOCABULARY AND READING	Medicinal and Pharmaceutical Chemistry
GRAMMAR: THEORY AND PRACTICE	Modal verbs
SPEAKING	Medicinal and Pharmaceutical Chemistry

MEDICINAL AND PHARMACEUTICAL CHEMISTRY

TEXT

Vocabulary

cholesterol-reducing agents	холестерол-редуючі агенти
compound	з'єднання
computational aspect	обчислювальний аспект
computational chemistry	обчислювальна хімія
core	ядро
defense mechanism	механізм захисту
development	розвиток
discipline	дисципліна
discovery	відкриття
drug efficacy	ефективність препарату
drug safety	безпека ліків
enzymology	ензимологія
identification	ідентифікація
interaction	взаємодія
interdisciplinary sciences	міждисциплінарні науки
medical condition	стан здоров'я
pharmaceutical agent	фармацевтичний агент
synthetic alteration	синтетичні зміни

therapeutic compounds	терапевтичні сполуки
therapeutic use	терапевтичне застосування
to encompass	включити
toxicity	токсичність
various	різноманітні

Read and translate the text.

Medicinal chemistry and pharmaceutical chemistry are disciplines at the intersection of chemistry, pharmacology and various other biological specialities, where they are involved for market of pharmaceutical agents, or bioactive molecules (drugs).

Compounds used as medicines are most often organic compounds, which are often divided into the broad classes of small organic molecules and "biologics". The latter are most often medicinal preparations of proteins. Inorganic and organometallic compounds are also useful as drugs.

In particular, medicinal chemistry encompasses synthetic organic chemistry and aspects of natural products and computational chemistry in close combination with chemical biology, enzymology and structural biology. All of them are aiming at the discovery and development of new therapeutic agents. Practically speaking, it involves chemical aspects of identification, and then systematic, synthetic alteration of new chemical entities to make them suitable for therapeutic use. It includes synthetic and computational aspects of the study of existing drugs and agents in development.

At the biological interface, medicinal chemistry combines to form a set of highly interdisciplinary sciences, setting its organic, physical, and computational emphases alongside biological areas such as biochemistry, molecular biology,

Pharmaceutical chemistry is the chemistry of drugs and pharmaceutical products: the synthesis, development, and study of molecules used in medicine and their interactions with biological agents.

Pharmaceutical chemists are involved in the development and assessment of therapeutic compounds. Pharmaceutical chemistry encompasses drug design, drug synthesis, and the evaluation of drug efficacy (how effective it is in treating a condition) and drug safety.

Drug discovery is the core of pharmaceutical chemistry. The drug discovery process includes all the stages of drug development, from targeting a disease or medical condition to toxicity studies in animals, or even, by some definitions, testing the drug on human subjects. Typically, conditions that affect a larger percentage of the population receive more attention and more research funding. Antiulcer drugs and cholesterol-reducing agents are currently the therapeutic areas of greatest emphasis. To develop a drug to target a specific disease, researchers try to understand the biological mechanism responsible for that condition. If the biochemical pathways leading up to the disease are understood, scientists attempt to design drugs that will block one or several of the steps of the disease's progress. Alternatively, drugs that boost the body's own defense mechanism may be appropriate.

Task 1. Answer the questions.

1. What are medicinal chemistry and pharmaceutical chemistry?
2. What compounds are most often used as medicines?
3. Are inorganic compounds also useful as drugs?
4. Where are pharmaceutical chemists involved?
5. What is the evaluation of drug efficacy?
6. What does the drug discovery process include?

Task 2. Read and translate the following word combinations.

Please – pleasure – pleasant, measure – measurable, sure – surely, assure – assurance, press – pressure, treat – treatment, compare – comparison - comparative.

Task 3. Match these words with their definitions.

1) phytotherapy	a) a drug is a substance which may have medicinal, intoxicating, performance enhancing or other effects when taken or put into a human body
2) bacteria	b) a biological preparation that improves immunity to a particular disease
3) illness	c) the study of the use of extracts from natural origin as medicines or health-promoting agents
4) drug	d) a large domain of prokaryotic microorganisms
5) vaccine	e) a state of poor health

Task 4. Speak on the following topics: “Chemistry”. “My favourite subject is Chemistry”. “The role of Chemistry in modern life”.

Task 5. Write a translation of the following sentences.

The field of pharmaceutical chemistry is diverse and involves many areas of expertise. Natural-product and analytical chemists isolate and identify active components from plant and other natural sources. Theoretical chemists construct molecular models of existing drugs to evaluate their properties. These computational studies help medicinal chemists and bioengineers design and synthesize compounds with enhanced biological activity. Pharmaceutical chemists evaluate the bioactivity of drugs and drug metabolites. Toxicologists assess drug safety and potential adverse effects of drug therapy. When a drug has been approved for human studies, clinicians and physicians monitor patients' response to treatment with the new drug. The

impact of pharmaceutical chemistry on the normal human life span and on the quality of life enjoyed by most people is hard to overestimate.

Task 6. Give the definitions of medicinal and pharmaceutical chemistry. Discuss the difference between them.



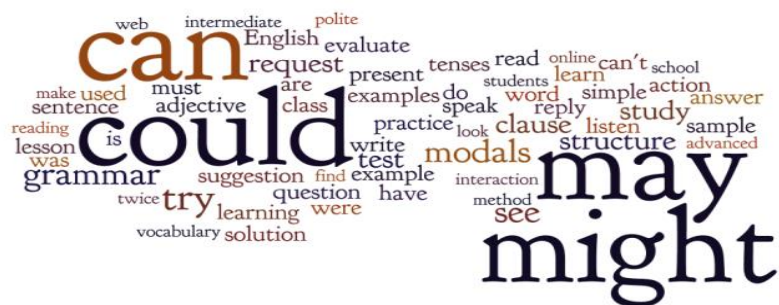
The global pharmaceuticals market is worth 300\$ billion a year, a figure expected to rise to 400\$ billion within three years. The 10 largest drugs companies control over one-third of this market.



Prepare a speech about « Medicinal and Pharmaceutical Chemistry», using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	To begin with, I want to tell you about I would like to tell you about My topic is / will be very important for you because ... Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	Initially, I want to tell you about Secondly, I have to say that Also, you have to know that I think, I believe, it is important to know that
SUMMARY <i>Sum it up</i>	Finally, ... I'd like to finish/end by saying... To conclude... Before I finish I'd finally like to say...

GRAMMAR: MODAL VERBS



Modal verbs are verbs that show the attitude of a speaker to the action. The following words are modal verbs: Can, Could, May, Might, Must, Shall, Should, Will, Would.

They are verbs that provide additional information about the action verb that follows it. **Modal verbs** are used to express ability, obligation, permission, probability and possibility, requests and offers, and advice. Each modal verb can have more than one meaning which depends on the context of that sentence (or question).

Rules for using modal verb tenses:

- "not" after the verb is used to make a verb negative
- the modal verb comes before the subject in questions
- Modal Verbs do not change their form according to the tense; there is no "s" added to the verb
- infinitives (verb without "to") are used right after the modal verb

English Modal Verbs Table

Modal verb	Usage	Example
can	ability	<i>I can do several things at the same time.</i>
	permission	<i>Miracles can happen.</i>

	informal requests	<i>You can go now.</i>
could	permission	<i>You could go now.</i>
	informal requests	<i>Can you come for a minute?</i>
	past form of "can"	<i>She said she could pay for us as well.</i>
may	possibility	<i>It may rain tomorrow.</i>
	ask or give permission (formal)	<i>May I speak?</i>
might	past form of "may"	<i>He said he might change his mind.</i>
	possibility	<i>This might fail.</i>
must	you have to do it	<i>You must obey the law.</i>
	it's very logical or very likely to happen	<i>They left so early, they must be home by now.</i>
must not/ mustn't	you are not allowed to do it	<i>You mustn't smoke in here.</i>
shall	future for "I" and "we"	<i>I shall see him tomorrow.</i>
	questions and suggestions for "I" and "we"	<i>Let's continue, shall we?</i>
should	advice	<i>You should smoke less.</i>
would	for polite requests, offers and invitations	<i>- Would you please sit down?</i> <i>- Would you like some tea?</i>
ought to	the right thing to do	<i>You ought to apologize.</i>

have to	external obligation (you do not want, but you have no choice)	You have to get up early to get to work because you live far away from your workplace.
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PRACTISE YOUR GRAMMAR: MODAL VERBS

Task 1. Write negative and interrogative sentences.

1. All pharmacists must be familiar with the action of drugs on the body.

- _____

? _____

2. Carbon dioxide gas may be liquefied or solidified.

- _____

? _____

3. Many of these drugs are toxic and should be given with care.

- _____

? _____

4. A new medicine must undergo extensive testing in the laboratory.

- _____

? _____

5. All vessels, bottles, glass tubes, etc. must be clean and ready for use.

- _____

? _____

Task 2. Read each sentence as it stands then put it in the negative form.

1. She must get to the University before five.

2. You will have to come to this lesson tomorrow.

3. They must leave before dinner.
4. She must wash up all the test tubes.
5. We had to change our goals.
6. You will have to pay him in advance.
7. He had to give it back.
8. You must do the whole exercise again.
9. We shall have to tell them the truth.
10. You must rewrite the test in organic chemistry again.
11. I had to show my passport.
12. You will have to write the test in analytical chemistry.
13. She must wear a raincoat.
14. I had to read it aloud.
15. They must learn the whole text by heart.

Task 3. Choose the correct modal verb.

1. She _____(can/should) carry out a simple experiment with chemical substances.
2. They _____ (must be/may be) a good specialist for pharmacy.
3. _____ (Can/May) I use your bike for today?
4. Our employees _____(can/must) sign this agreement.
5. He _____(can/may) translate English texts.

Task 4. Choose the correct answer.

1. The exam is next week. So you _____study hard.
a) can b) may c) must

2. He needs more exercise, he_____ go to a gym.

a) should b) must c) can

3. Your hair looks awful. You _____get it cut.

a) can b) must c) should

4. Visitors of our hotel _____use the car park.

a) may b) can c) must

5._____ I use your mobile phone?

a) Must b) May c) Should

Task 4. Translate the following sentences into English using appropriate modal verbs.

1. Коли я зможу забрати свої ліки?

2. Більше в роботі фармацевта мені подобається те, що я можу допомагати людям зберегти або відновити здоров'я.

3. Щоб стати фармацевтом в США необхідно закінчити акредитований фармацевтичний коледж чи університет, а потім отримати ліцензію.

4. Які предмети слід вивчати студенту фармацевту?

5. Не могли б Ви порадити що-небудь від болю в животі?

6. Ви можете замовити ліки від артриту он-лайн або по телефону.

7. Фармацевт повинен володіти хорошими навичками мовлення.

8. Чи можу я купити ці ліки без рецепта?

UNIT 12

<i>VOCABULARY AND READING</i>	Pharmaceutical Technology, Industry and Manufacturing
<i>GRAMMAR: THEORY AND PRACTICE</i>	Present Continuous Tense
<i>SPEAKING</i>	Pharmaceutical Technology, Industry and Manufacturing

PHARMACEUTICAL TECHNOLOGY, INDUSTRY AND MANUFACTURING

TEXT

Vocabulary

accurate	точний
apothecary	аптекарь
collaboration	співпраця
combinatorial chemistry	комбінаторна хімія
cost-effective	економічно ефективний
cutting edge knowledge	передові знання
delivery system	система доставки
disease	хвороба
DNA	ДНК
drug powder	порошковий препарат
efficient	ефективний
genetically tailored treatment	генетично підібране лікування
health-related product	пов'язаний із здоров'ям продукт
highly trained scientist	висококваліфікований вчений
individualized therapy	індивідуалізована терапія

industrial-scale synthesis	промисловий масштабний синтез
large-scale manufacturing technique	великомасштабна технологія виготовлення
manufacture	виробництво
mechanical device	механічне пристрій
occurrence	виникнення
ointment	мазь
patient-friendly	для пацієнта
pharmaceutical care	фармацевтична допомога
pharmacy technician	фармацевт-технік
physician	лікар-терапевт
productivity	продуктивність
quinine	хінін
relevant	релевантний, доречний
severity	суворість
technology	технологія
the health care system	система охорони здоров'я
to dissolve	розчинити
to employ	наймати на роботу
to improve	покращити
to increase	збільшувати
to permit	дозволити
to purify	очистити
to reduce	зменшити
to rely on	покладатися на, залежати від
tool	інструмент
typhoid fever	черевний тиф

Read and translate the text.

Pharmacy technology is an important part of the health care system. It is the application of scientific knowledge, techniques and methods to the practice of pharmacy or pharmacology. Pharmaceutical technology focusses on improving the safety, quality and efficiency of pharmaceutical manufacturing through the application of relevant technology.

New technologies have the potential to make pharmacy practice and pharmaceutical care more efficient, more cost-effective and more patient-friendly. Robots, networked computers and other tools are making pharmacists and pharmacy technicians more productive and accurate. Automating the pick, pour, count, fill and label steps of the prescription order filling process can increase pharmacy productivity.

Pharmacy technology involves the compounding of medications such as creams and ointments using not only compounding machines but manual tools as well.

The pharmaceutical industry develops, produces, and markets drugs or pharmaceuticals licensed for use as medications. The pharmaceutical industry includes public and private organizations involved in the discovery, development, and manufacture of drugs and medications. Historically, medicines were prepared by physicians and later by apothecaries. Today, drug development relies on the collaboration and effort of highly trained scientists at universities and private companies. The modern era of drug discovery and development originated in the 19th century when scientists learned how to isolate and purify medicinal compounds and developed large-scale manufacturing techniques. As understanding of biology and chemistry improved in the 20th century, the occurrence and severity of such diseases as typhoid fever, poliomyelitis, and syphilis were greatly reduced. While many drugs, such as quinine and morphine, are extracted from plant substances, others are discovered and synthesized by techniques including combinatorial chemistry and recombinant DNA technology. The pharmaceutical industry has

greatly aided medical progress, and many new drugs have been discovered and produced in industrial laboratories.

Drug manufacturing is the process of industrial-scale synthesis of pharmaceutical drugs by pharmaceutical companies. The drug manufacturing industry has produced a variety of medicinal and other health-related products undreamed of by even the most imaginative apothecaries of the past. These drugs have saved the lives of millions of people from various diseases, and they permit many ill people to lead reasonably normal lives.

The process of drug manufacturing can be broken down into a series of unit operations, such as milling, granulation, coating, tablet pressing, and others.

During the drug manufacturing process, milling is often required in order to reduce the average particle size in a drug powder. Granulation can be thought of as the opposite of milling; it is the process by which small particles are bound together to form larger particles, called granules. An enteric coating is a polymer barrier applied on oral medication. This helps by protecting drugs from the pH (i.e. acidity) of the stomach. Drugs that have an irritant effect on the stomach, such as aspirin, can be coated with a substance that will dissolve only in the small intestine. A tablet press is a mechanical device that compresses powder into tablets of uniform size and weight. A press can be used to manufacture tablets of a wide variety of materials, including pharmaceuticals, cleaning products, and cosmetics.

In the future, pharmaceutical manufacturing will need to employ innovation, cutting edge scientific and engineering knowledge, and the best principles of quality management to respond to the challenges of new discoveries (e.g. complex drug delivery systems and nanotechnology) and ways of doing business such as individualized therapies or genetically tailored treatments.

Task 1. Answer the questions.

1. What is pharmacy technology?

2. What does pharmacy technology involve?
3. What is the aim of pharmaceutical industry?
4. What does pharmaceutical industry include?
5. What is drug manufacturing?
6. What can the process of drug manufacturing be broken down into?
7. What is the future of pharmaceutical manufacturing?

Task 2. Write a translation of the short text about the UK pharmaceutical industry.

Medicines contribute enormously to the health of the nation. The discovery, development and effective use of drugs have improved many people's quality of life, reduced the need for surgical intervention and the length of time spent in hospital and saved many lives. The industry which has produced these drugs has understandably been described as "world class and a jewel in the crown of the UK economy". It is the third most profitable economic activity after tourism and finance and a centre of world class science, accounting for 10% of global pharmaceutical expenditure. However, there are disadvantages in the increasing use of and reliance on medicines. The inappropriate or excessive use of medicines can cause distress, ill-health, hospitalization and even death. Adverse drug reactions are responsible for about 5 % of all admissions to hospitals in the UK. The interests of pharmaceutical companies and those of the public, patients and the NHS often overlap but they are not identical.

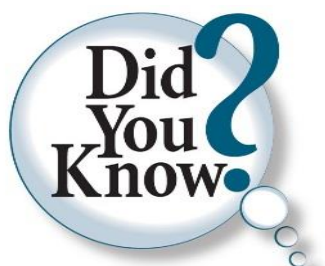
Task 3. Match these words with their definitions.

1) pharmacy	A) the treatment of disease through the administration of drugs
2) pharmaceuticals	B) the science of dosage form design

3) pharmacology	C) science of drugs including their origin, composition, therapeutic use, and toxicology
4) pharmacotherapy	D) the study of medicines derived from natural sources
5) pharmacognosy	E) the art of preparing and dispensing drugs

Task 4. Discuss the topic “Pharmacy technology is an important part of the health care system”. Write the translation of the following short text.

Most of today's major pharmaceutical companies were founded in the late 19th and early 20th centuries. Key discoveries of the 1920s and 1930s, such as insulin and penicillin, became mass-manufactured and distributed. Switzerland, Germany and Italy had particularly strong industries, with the United Kingdom, the United States, Belgium and the Netherlands following suit. Numerous new drugs were developed during the 1950s and mass-produced and marketed through the 1960s. Drug development progressed from a hit-and-miss approach to rational drug discovery in both laboratory design and natural-product surveys. Demand for nutritional supplements and so-called alternative medicines created new opportunities and increased competition in the industry.



Pharmacy Technician as a profession got recognition in the 1970s. The ASHP created the first training guidelines for a pharmacy tech program in 1975.

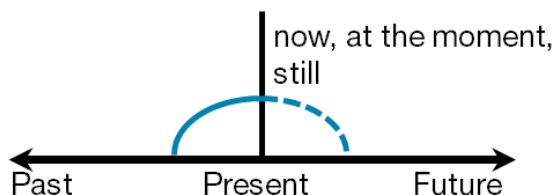


Prepare a speech about «Pharmaceutical Technology, Industry and Manufacturing», using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	I would like to tell you about My topic is / will be very important for you because ... Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	Initially, I want to tell you about Secondly, I have to say that Also, you have to know that I think, To my mind, ... In my opinion, ... I believe, it is important to know that
SUMMARY <i>Sum it up</i>	Finally, ... I'd like to finish/end by saying... To conclude... Before I finish I'd finally like to say...

GRAMMAR: PRESENT CONTINUOUS TENSE

Present Continuous Tense



(am/is/are) + V-ing

The present continuous is made from the present tense of the verb be and the –ing form of a verb:

I am working

You are working

He is working

She is working

It is working

We are working

You are working

They are working

We use **the present continuous** to talk about:

- **activities at the moment of speaking:**

I'm just leaving work. I'll be home in an hour.

Please be quiet. The students are studying.

- **to describe an action that is going on during this period of time or a trend:**

Are you still working for the same pharmaceutical company?

More and more people are becoming vegetarian.

- **future plans or arrangements:**

Mary is going to the University next term.

What are you doing next week?

Present continuous spelling		
Infinitive	-ing form	spelling
work study	work ing study ing	general rule add -ing
live make	liv ing mak ing	consonant + -e delete -e and add -ing
run swim	run ning swim ming	consonant + vowel + consonant (stressed) double consonant + -ing

PRACTISE YOUR GRAMMAR: PRESENT CONTINUOUS TENSE

Task 1. Write negative and interrogative sentences.

1. I am studying English language now.

- _____
? _____

2. My best friend is reading a medical book at the moment.

- _____
? _____

3. She is reading about the National University of Pharmacy now.

- _____
? _____

4. They are studying organic chemistry at the moment.

- _____
? _____

5. My best friend is living in a hostel this week.

- _____
? _____

Task 2. Add the -ing to the verbs.

1. study _____
2. swim _____
3. travel _____
4. walk _____
5. make _____
6. write _____
7. cook _____
8. shop _____
9. cut _____
10. carry out _____
11. live _____
12. play _____
13. dance _____
14. study _____
15. put _____

Task 3. Complete the sentences with the correct verb forms of Present

Continuous.

1. His sister and brother _____(study) chemistry now.
2. We _____ (not carry out) experiments this week.
3. I _____ (read) an interesting medical book at the moment.

4. She _____ (not watch) TV now, because she _____ (study).
5. He _____ (leave) his home for the University in 5 minutes.
6. Sasha _____ (stay) at home today.
7. What _____ you _____ (do) right now?
8. _____ your groupmate _____ (talk) to the dean at the moment?
9. _____ you _____ (speak) to the dean now?
10. When _____ you _____ (arrive) to the conference next Wednesday?

Task 4. Write the correct form of the verb using Present Indefinite or Present Continuous.

1. He _____ (read) a scientific report in the library now.
2. I _____ (wear) my sunglasses today because the sun is very strong.
3. Where _____ your groupmate _____ (come) from?
4. I can't have the biology book now because my groupmate _____ (read) it.
5. _____ you _____ (like) reading books?
6. Excuse me. I _____ (look) for a phone.
7. How _____ you _____ (get) to the University as a rule?
8. I'm sorry, but I _____ (not understand) you at all.
9. _____ you _____ (talk) to the group monitor at the moment?
10. Why _____ she _____ (speak) so loud?

Task 5. Complete the sentences with the correct form of the verb in brackets.

Choose either Present Simple or Present Continuous.

1. At the moment I _____ (work) as a shop assistant but I will stop when I go back to university in October.

2. I _____ (study) now, but I think I'll go to the library later.
3. My friends and I often _____ (have) organic chemistry on Mondays.
4. I _____ (not understand) what you are saying.
5. We _____ (have) a very interesting conversation right now.
6. I'd love to know what _____ you _____ (learn) at the lessons of biochemistry the moment?
7. I _____ (live) in Canada at the moment and _____ (study) at the pharmacy school.
8. Are you _____ (do) anything tomorrow?
9. Please be quiet! The doctor _____ (examine) the patient.
10. He _____ (get) all the information about this topic in analytical chemistry on the Internet.
11. My brother usually _____ (wear) jeans and a sweater but he _____ a suit today.
12. We _____ (think) of moving from this area.
13. What are you _____ (do) next evening? – I _____ (go) to the conference of microbiology.
14. Where do _____ your friends usually _____ (stay) when they are abroad?
15. “_____ your friends (talk) about the inorganic chemistry?” “No, they aren't.”

UNIT 13

<i>VOCABULARY AND READING</i>	Pharmacy Management and Economics
<i>GRAMMAR: THEORY AND PRACTICE</i>	Past Continuous Tense
<i>SPEAKING</i>	Pharmacy Management and Economics

PHARMACY MANAGEMENT AND ECONOMICS

TEXT

Vocabulary

customer services	обслуговування клієнтів
drug therapy	лікарська терапія
economic analysis	економічний аналіз
economic evaluation	економічна оцінка
enhanced quality	покращена якість
evaluation	оцінка
goal	мета
high quality	висока якість
human resources	людські ресурси
marketplace	ринок
monetary value	грошова вартість
pharmaceutical care	фармацевтична допомога
pharmaceutical marketing	фармацевтичний маркетинг
pharmacy management	управління аптекою
pharmacy owner	власник аптеки
pharmacy staff	персонал аптеки

policy	політика
practical skills	практичні навички
product development	розробка продукту
quality control	контроль якості
retail sales	роздрібні продажі
sub-discipline	субдисципліна
technical skills	технічні навички
to apply	застосовувати
to gain knowledge	отримати знання
to supervise	наглядати
value	вартість

Read and translate the text.

Pharmacy management and economics is an applied discipline focusing on specialized courses in pharmaceutical management, pharmaceutical marketing and product development, quality control, research and technology, economic evaluation of pharmaceutical products.

The goal of pharmacy management is getting information and gaining knowledge as well as practical skills in the field of organization, planning, control, analysis and other activities concerned with providing high quality pharmaceutical care. Keeping up with innovations in customer services, retail sales and human resources policies is essential for any pharmacy owner or pharmacist responsible for training and supervising pharmacy staff. Getting insights from other industries and learning from profiles of pharmacists in a range of pharmacy practice settings is also important.

Pharmacoeconomics refers to the scientific discipline that compares the value of one pharmaceutical drug or drug therapy to another. It is a sub-discipline of health economics. Economic analysis is becoming more and more critical. With growing

economic challenges facing the pharmaceutical industry, more efforts are being placed on the ways that new drugs can be commercialized in the marketplace. Thus, the technical skills of an economist are needed more than ever to address the growing challenges faced by individual companies and the industry. A pharmacoeconomic study evaluates the cost (expressed in monetary terms) and effects (expressed in terms of monetary value, efficacy or enhanced quality of life) of a pharmaceutical product.

Task 1. Answer the questions.

1. What is pharmacy management and economics?
2. What is the aim of pharmacy management?
3. What is essential for any pharmacy owner or pharmacist responsible for training pharmacy staff?
4. What does pharmacoeconomics include?
5. What is a sub-discipline of health economics?
6. What does the pharmacoeconomic study evaluate?

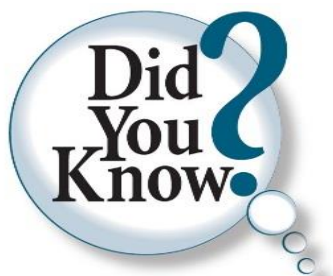
Task 2. Translate the following words and word combinations.

Discipline, retail sales, efforts, practical skills, health economics, customer services, quality control.

Task 3. Write a translation of the following text.

The art of preparing medications dates back to the origins of pharmacy. At pharmacies, they still practice the time proven art of compounding using modern variations of the “mortar and pestle” to prepare unique and individualized medications. Working with doctors, compounding allows pharmacists to

customize the strength and dosage form of a medication according to individual needs. This may include making lozenges or preparing a drug that is no longer commercially available or it may involve changing a medication from a pill form into a penetrating skin cream, or adding flavors, or preparing a dye-free or preservative-free medication. The possibilities are endless. Pharmacists can formulate and prepare just about any kind of medicine specifically designed just for you. Compounding services can enhance virtually any area of medicine including natural hormone replacement therapy, children's dosage forms and flavors, capsule and suppository preparations, etc.



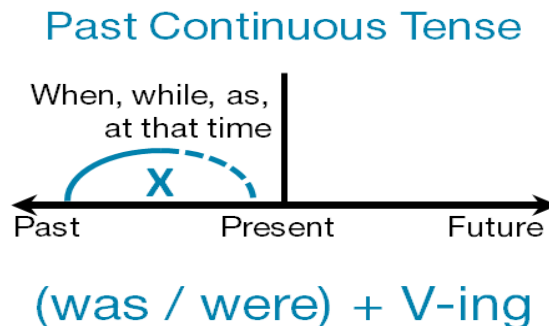
In 1993, Australia became the first nation to use pharmacoeconomic analysis as part of the process for deciding whether the Federal Government should subsidize new drugs.



Prepare a speech about « Pharmacy Management and Economics », using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	To begin with, I want to tell you about I would like to tell you about My topic is / will be very important for you because ...
MAIN BODY <i>Tell the main information</i>	Initially, I want to tell you about Secondly, I have to say that Also, you have to know that I think, To my mind, ... In my opinion, ...
SUMMARY <i>Sum it up</i>	Finally, ... I'd like to finish/end by saying... To conclude...

GRAMMAR: PAST CONTINUOUS TENSE



The past continuous (also called past progressive) is a verb tense, which is used to show that a past action was happening at a specific time or the moment of interruption in the past, or that two past actions were happening at the same time.

Examples:

*I **was doing** my English homework, when she called.*

*When the phone rang, she **was writing** her task in organic chemistry.*

*While the teacher **was delivering** the lecture in analytical chemistry, the dean came to check the attendance.*

*While Ivan **was reading** the book, his friend **was doing** his English homework.*

The past continuous is formed using **was/were + V-ing**. Questions are indicated by inverting the subject and was/were. Negatives are made with not.

*Statement: You **were studying** English when she called.*

*Question: **Were** you **studying** English when she called?*

*Negative: You **were not studying** English when she called.*

MARKERS OF PAST CONTINUOUS

WHEN
WHILE
AS
AT THE TIME OF

PRACTISE YOUR GRAMMAR: PAST CONTINUOUS TENSE

Task 1. Write negative and interrogative sentences.

1. I was studying Latin language.

- _____

? _____

2. My groupmate was reading a medical book.

- _____

? _____

3. She is reading about the National University of Pharmacy now.

- _____

? _____

4. They were studying organic chemistry all evening yesterday.

- _____

? _____

5. My best friend was living in a hostel last year.

- _____

? _____

Task 2. Fill in the blanks with appropriate Past Continuous form of the verb given in the brackets.

1. I _____ TV at eight o'clock yesterday evening.
a) was watching b) watched c) am watching
2. I _____ a medical book all day yesterday.
a) read b) was reading c) had read
3. At the time when it happened, I _____ to the University.
a) was going b) went c) am going
4. As I _____ down the road, I saw my English teacher.
a) were walking b) was walking c) walked
5. The phone rang while I _____ organic chemistry.
a) was studying b) study c) was studiing
6. It happened while I _____ in a hostel last year.
a) lives b) was living c) had living
7. When I entered her room, she _____ the piano.
a) was playing b) played c) were playing
8. Students _____ to the exam all week.
a) was learning b) were learning c) were lear

Task 3. Choose which verb tense (Past Indefinite or Past Continuous) fits better.

1. I _____ - I didn't hear you come in.

a) was sleeping b) slept

2. I _____ to see her twice, but she wasn't home.

a) was coming b) came

3. What _____ yesterday evening? – I was doing my English homework.

a) did you do b) were you doing

4. Last month I decided to buy a pharmaceutical encyclopedia, and yesterday I finally _____ it.

a) bought b) was buying

5. Hey, did you talk to the head of the department? – Yes, I _____ to her.

a) was talking b) talked

6. _____ the flu last year?

a) did you have b) were you having

7. We _____ breakfast when she walked into the canteen.

a) had b) were having

Task 4. Open the brackets and write the correct form of the verbs – Past Indefinite or Past Continuous.

1. A: What _____ (you, do) when you heard that noise?

B: I (make) _____ a project for my English lesson.

2. The doctor said that Brian (be) _____ too weak to go to work and that he (need) _____ to stay at home for a couple of days.

3. My groupmate (arrive) _____ at my house a little before 9:00 pm, but I (be, not) _____ there. I (study) _____ at the library for my final examination in chemistry.

Task 5. Complete the sentences with the past Simple or the past Continuous.

1. I (break) _____ my leg once while I (play) _____ football for the university team.
2. I (have) _____ a terrible headache yesterday.
3. Nobody (help) _____ him. He (do) _____ it himself.
4. At nine o'clock last night, I (make) _____ a report.
5. I (read) _____ a book while you (do) _____ the washing up.
6. Penny _____ (do) her tasks in organic chemistry all evening yesterday.
7. I _____ (work) on my report at 10.30 last night.
8. It _____ (start to rain) as we were just about to leave the house.
9. I _____ (wake up) early yesterday. It _____ (to be) a nice morning.
The sun _____ (to shine).
10. I _____ (read) the scientific journal, when the phone rang.
11. What _____ (happen) to Masha last week? Why did not she go to that scientific conference?

UNIT 14

<i>VOCABULARY AND READING</i>	What is a Drug, a Medication, a Medicine?
<i>GRAMMAR: THEORY AND PRACTICE</i>	Future Continuous Tense
<i>SPEAKING</i>	What is a Drug, a Medication, a Medicine?

WHAT IS A DRUG, A MEDICATION, A MEDICINE?

TEXT

Vocabulary

chronic disorders	хронічні розлади
endogenous	ендогенний
enhancing effect	підвищення ефекту
exclusively	виключно
expired patents	патенти, у яких закінчився строк придатності
generic drugs	загальні препарати
intoxicating effect	ефект, що викликає інтоксикацію
licensed medical professional	ліцензований медичний працівник
limited duration	обмежена тривалість
loosely	вільно
mental well-being	психічне самопочуття
over-the-counter medications	безрецептурні ліки
patent holder	власник патенту
pre-existing disease	попередня хвороба
prevention	профілактика

prevention	профілактика
recreational drug	рекреаційний препарат
restrictions	обмеження
substance	речовина
to ameliorate	пом'якшити
to consider	вважати
to cure	вилікувати
to dispense	роздати, розподіляти
to ingest	проковтнути
to patent	патентувати
to refer	посилатися
treatment	лікування

Read and translate the text.

A drug is a substance which may have medicinal, intoxicating, performance enhancing or other effects when taken or put into a human body and is not considered a food or exclusively a food.

What is considered a drug rather than a food varies between cultures. In pharmacology, a drug is "a chemical substance used in the treatment, cure, prevention, or diagnosis of disease or used to otherwise enhance physical or mental well-being." Drugs may be prescribed for a limited duration, or on a regular basis for chronic disorders.

Drugs are usually distinguished from endogenous biochemicals by being introduced from outside the organism. For example, insulin is a hormone that is synthesized in the body; it is called a hormone when it is synthesized by the pancreas inside the body, but if it is introduced into the body from outside, it is called a drug. Many natural substances, such as beers, wines, and psychoactive mushrooms, blur the line between food and recreational drugs, as when ingested they affect the functioning of both mind and body.

A pharmaceutical drug, also referred to as a medicine or medication, can be loosely defined as any chemical substance - or product comprising such - intended for use in the medical diagnosis, cure, treatment, or prevention of disease.

A medication or medicine is a drug taken to cure and/or ameliorate any symptoms of an illness or medical condition, or may be used as preventive medicine that has future benefits but does not treat any existing or pre-existing diseases or symptoms.

Dispensing of medication is often regulated by governments into three categories—over-the-counter (OTC) medications (Synonym: nonprescription medication), which are available in pharmacies and supermarkets without special restrictions; behind-the-counter (BTC), which are dispensed by a pharmacist without needing a doctor's prescription, and prescription only medicines (POM), which must be prescribed by a licensed medical professional, usually a physician.

In the United Kingdom, BTC medicines are called pharmacy medicines which can only be sold in registered pharmacies, by or under the supervision of a pharmacist. These medications are designated by the letter P on the label. The range of medicines available without a prescription varies from country to country.

Medications are typically produced by pharmaceutical companies and are often patented to give the developer exclusive rights to produce them. Those that are not patented (or with expired patents) are called generic drugs since they can be produced by other companies without restrictions or licenses from the patent holder.

Task 1. Answer the questions.

1. What is a drug?
2. What is a pharmaceutical drug?
3. What is an insulin?
4. What natural substances when ingested can affect the functioning of both mind and body?
5. What is a medication?
6. What is OTC?

7. What is BTC?
8. What is POM?

Task 2. Look at the phonetic transcription and write the words next to them.

/fiziʃn/ _____, /'nɒlɪdʒ/ _____, /kəm'pju:tə/ _____,
 /'sɪst(ə)m/ _____, /helθ / _____, /prɒ'sɪ:dʒə/ _____
 /'fɑ:məsɪst/ _____, /drʌg/ _____, /,medi'keɪʃn/ _____.

Task 3. Translate the words and word combinations into Ukrainian language.

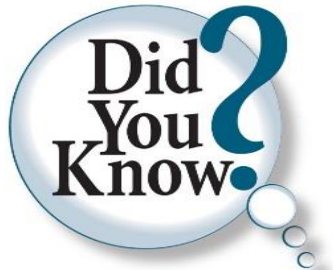
Chemical substance, over-the-counter medications, behind-the-counter medications, prescription only medicines, a pharmacy medicine, a registered pharmacy, medicines without a prescription, off-label use.

Task 4. Write a translation of the following definitions borrowed from different dictionaries.

A drug is a substance used in the diagnosis, treatment, or prevention of a disease or as a component of a medication. Any chemical agent that affects the function of living things. Some, including antibiotics, stimulants, tranquilizers, antidepressants, analgesics, narcotics, and hormones, have generalized effects. Others, including laxatives, heart stimulants, anticoagulants, diuretics, and antihistamines, act on specific systems. Vaccines are sometimes considered drugs. Drugs are substances that alter the body's actions and natural chemical environment. They include medications and narcotics. Drugs are substances used in medicine either externally or internally for curing, alleviating, or preventing a disease or deficiency.

A medication or medicine is a drug taken to cure and/or ameliorate any symptoms of an illness or medical condition, or may be used as preventive medicine that has future benefits but does not treat any existing or pre-existing diseases or symptoms. A pharmaceutical drug, also referred to as medicine or medication, can

be loosely defined as any chemical substance intended for use in the medical diagnosis, cure, treatment, or prevention of disease.



In 1993, Australia became the first nation to use pharmacoeconomic analysis as part of the process for deciding whether the Federal Government should subsidize new drugs.

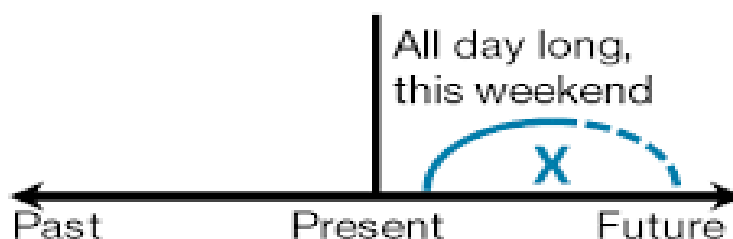


Prepare a speech about « Drugs, Medications, Medicines», using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	To start with, I want to tell you about My topic is / will be very important for you because ... Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	Firstly, I want to tell you about Secondly, I have to say that Also, you have to know that I think, To my mind, ... In my opinion, ... I believe, it is important to know that
SUMMARY <i>Sum it up</i>	At last, ... I'd like to finish/end by saying... To conclude... Before I finish I'd finally like to say...

GRAMMAR: FUTURE CONTINUOUS TENSE

Future Continuous Tense



(will) + (be) + V-ing

The future continuous tense, sometimes also referred to as the future progressive tense, is a verb tense that indicates that something will occur in the future and continue for an expected length of time. It is formed using the construction “will + be + verb -ing”.

these example sentences with the future continuous tense

subj ect	auxiliary verb		auxiliary verb	main verb	
+ I	will		be	working	at 10am.
+ You	will		be	lying	on a beach tomorrow.
- She	will	not	be	using	the car.
- We	will	not	be	having	dinner at home.
? Will	you		be	playing	football?
? Will	they		be	watching	TV?

Examples:

*This time next week I **will be studying** analytical chemistry.*

*Just think, next Monday you **will be working** in your new job.*

What **will you be doing** this time next week?

She **will not be going** to the University this time next week.

PRACTISE YOUR GRAMMAR: FUTURE CONTINUOUS TENSE

Task 1. Write negative and interrogative sentences.

1. I will be studying English language next year.

- _____

? _____

2. I will be coming back here very soon.

- _____

? _____

3. She will be studying at 10 a.m. tomorrow.

- _____

? _____

4. They will be reading organic chemistry at this time tomorrow.

- _____

? _____

5. My best friend will be living in a hostel next year.

- _____

? _____

Task 2. Open the brackets and write the correct form of the verbs –

Future Continuous.

1. This time next Monday, I _____ at the National University of Pharmacy.
(study)

2. It is mid-autumn, the leaves _____ soon . (fall)

3. Don't make noise after midnight – I _____, I hope. (sleep)

4. Irina _____ to a conference in clinical pharmacy tomorrow at this time.
(fly)
5. Kate _____ copies while Oleg _____ the report. (make/ finish)
6. I _____ in my library at 6 p.m. tomorrow. (read).
7. From 7 till 12 I _____ classes. (have)
8. What _____ you _____ tomorrow evening? (to do)
9. _____ you _____ late tomorrow night? (to work)
10. _____ you _____ your biology book this evening? (use)

Task 3. Open the brackets and write the correct form of the verbs past, present or future.

1. _____ you _____ (see) your dentist this time next Friday? Can you ask him a question?
2. They _____ (go) to the University this time tomorrow because they will have practice at the chemist's shop.
3. Last Monday our group monitor _____ (to be) ill.
4. We _____ (wait) for him next Wednesday at the usual place.
5. He _____ (read) a scientific report in the library now.
6. Can we come at seven o'clock? I _____ (teach) biology to my son this time.
7. This is my friend Victor, he _____ (to be) a pharmaceutical student.
8. _____ you _____ (study) Latin language last year.

Task 4. Open the brackets and write the correct form of the verbs – Future Continuous.

1. This time next week Helen _____ (travel) to the conference with her husband.

2. My aunt _____ (open) her new chemist's shop in Kiev.
3. They _____ (study) this topic before the end of the month.
4. _____ your friend _____ (wait) for you at the airport?
5. My grandmother _____ (have) an operation very soon.
6. Masha _____ (interview) the candidates for the position.
7. Why _____ you _____ (write) these tests in a short period of time?
8. Next Saturday night Sonia _____ (have) dinner with some colleagues from the University.

UNIT 15

VOCABULARY AND READING	Drug Names
GRAMMAR: THEORY AND PRACTICE	Present Perfect Tense
SPEAKING	Drug Names

DRUG NAMES

TEXT

Vocabulary

advertising	реклама
brand name	торговельна назва
complex	складний
generic name	офіційна (фармакопейна) назва
provide	забезпечувати
refer to	відноситись до
significance	значення

Read and translate the text.

Drug nomenclature is the act of creating names for a drug or other pharmaceutical substance. Drugs, in the majority of circumstances, have 3 names: the chemical name, the International Nonproprietary Name (INN, also known as the generic or nonproprietary name), and the brand name.

Sample of different drug names

<i>Chemical Name</i>	<i>Generic Name</i>	<i>Brand Name</i>
-----------------------------	----------------------------	--------------------------

<i>N-acetyl-p-aminophenol</i>	<i>Acetaminophen</i>	<i>Tylenol</i>
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The chemical name is the scientific name, based on the molecular structure of the drug. These names are typically very long and too complex to be commonly used in referring to a drug.

Generic names and affixes.

The generic name is constructed out of affixes that classify the drugs into different categories and also separate drugs within categories. A marketed drug might also have a company code or compound code. Internationally, generic names, known as the International Nonproprietary Name, are issued by the World Health Organization (WHO) in several languages, including English. Generic names are used for a variety of reasons. They provide a clear and unique identifier for active chemical substances, appearing on all drug labels, advertising and other information about the substance. The prefixes and infixes have no pharmacological significance and are used to separate the drug from others in the same class. Suffixes or stems may be found in the middle or more often the end of the drug name, and normally suggest the action of the drug. Generic names often have suffixes that define what class the drug is.

Brand is the "name, term, design, symbol, or any other feature that identifies one seller's product distinct from those of other sellers." In pharmacy, the brand name (trade name) is a commercial name for a drug, normally the property of the drug manufacturer.

Task 1. Answer the questions.

1. What is drug nomenclature?
2. How many different names can a drug have?
3. What is the chemical name?
4. How is the generic name constructed?
5. What is the International Nonproprietary Name?
6. What are generic names used for?
7. What is trade name?

Task 2. Learn useful information about standardized drug suffixes.

Standardized drug suffixes:

-vir	Antiviral drug	Indinavir
-cillin	Antibiotics	Penicillin and related compounds such as carbenicillin and oxacillin
-mab	Monoclonal antibodies	Trastuzumab, used in chemotherapy
-olol	Beta 1 blocker	Alprenolol
-tidine	H2 receptor antagonist	Cimetidine, Ranitidine
-pine	Ca ²⁺ channel blocker	Amlodipine, Nifedipine
-done	Opioid analgesic	Hydrocodone, Oxycodone, Methadone
-sone	corticosteroid, anti-inflammatory	Prednisolone, Prednisone
-nitrate	Vasodilator	Isosorbide mononitrate, Isosorbide dinitrate

Task 3. Fill in the gaps using the words from the box.

<i>advertising</i>	<i>advertising</i>	<i>antibiotics</i>	<i>brand</i>	<i>actions</i>	<i>generic</i>
--------------------	--------------------	--------------------	--------------	----------------	----------------

Each medicine (drug) has an approved name called the _____ name. A group of medicines that have similar _____ often have similar-sounding generic names. For example, penicillin, ampicillin, amoxicillin and flucloxacillin are in one group of _____.

Many medicines also have one or more _____ names. This is chosen by the company that makes it. Several companies may make the same generic medicine, each with their own brand name. The name is often chosen to be memorable for _____, or to be easier to say or spell than some long generic name! For example, paracetamol is a generic name. There are several companies that make this with brand names such as Panadol®, Calpol®, etc.



Chemistry is a fascinating science, full of unusual facts! For example, there is about 250 gramm of salt (NaCl) in an average adult human body.

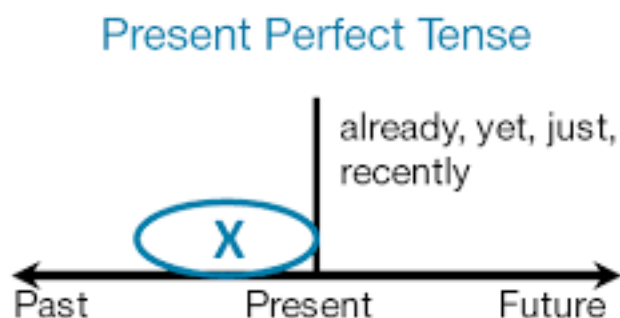


Prepare a speech about « Drug Names », using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	My topic is I would like to tell you about Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	Firstly, I want to tell you about Secondly, I have to say that Also, you have to know that I believe, it is important to know that
SUMMARY <i>Sum it up</i>	Finally, ... I'd like to finish/end by saying... To conclude... Before I finish I'd finally like to say...

GRAMMAR: THE PRESENT PERFECT TENSE

The present perfect is used to indicate a link between the present and the past. The time of the action is before now but not specified, and we are often more interested in **the result** than in the action itself.



have/has + Past Participle

The Present Perfect is used to describe:

1. Actions started in the past and continuing in the present

Examples:

- They **haven't lived** here **for years**.
 - She **has worked** in the bank **for five years**.
 - We **have had** the same car **for ten years**.
 - **Have you played** the piano **since you were a child**?
2. When the time period referred to has not finished

Examples:

- I **have worked** hard **this week**.
 - It **has rained** a lot **this year**.
 - We **haven't seen** her **today**.
3. Actions repeated in an unspecified period between the past and now.

Examples:

- They **have seen** that film **six times**
 - It **has happened** several times already.
 - She **has visited** them **frequently**.
 - We **have eaten** at that restaurant **many times**.
4. Actions completed in the very recent past (**+just**)

Examples:

- **Have you just finished** work?

- *I **have just eaten**.*
 - *We **have just seen** her.*
 - ***Has he just left**?*
5. When the precise time of the action is not important or not known

Examples:

- *Someone **has eaten** my soup!*
- ***Have you seen** 'Gone with the Wind'?*
- *She's **studied** Japanese, Russian, and English.*

Forming the Present Perfect

The present perfect of any verb is composed of two elements: the appropriate form of the auxiliary verb **to have** (present tense), plus the past participle of the main verb. The past participle of a regular verb is **base+ed**, e.g. *played, arrived, looked*. For irregular verbs, see the **Table of irregular verbs**

Affirmative	Negative	Interrogative
I have walked	I haven't walked	Have I walked?
You have walked	You haven't walked.	Have you walked?
He, she, it has walked	He, she, hasn't walked	Has he, she, it walked?
We have walked	We haven't walked	Have we walked?
You have walked	You haven't walked	Have you walked?
They have walked	They haven't walked	Have they walked?

PRACTISE YOUR GRAMMAR: THE PRESENT PERFECT TENSE

Task 1. Write negative and interrogative sentences.

1. We have learnt new words at our English lessons this week.

- _____

? _____

2. Chemistry has changed the world around us.

- _____

? _____

3. I have already passed my exams.

- _____

? _____

4. He has made two experiments today.

- _____

? _____

5. We have gathered many medicinal plants this season.

- _____

? _____

Task 2. Open the brackets and write the correct form of the verbs – Present Perfect.

1. He _____ (finish) training.

2. That's amazing! She _____ (run) fifteen kilometers this morning!

3. Oh, no! I _____ (lose) my money!

4. My mum _____ (write) shopping list. It's on the kitchen table.

5. Our son _____ (learn) how to read.

Task 3. Choose the correct answer.

1. This week we _____ one lecture in biology.

a) had had b) has had c) have had

2. We _____ already _____ our home work in English together.

a) have/ prepare b) has/ prepared c) have /prepared

3. I _____ just _____ out the experiments.

a) have/ carried b) has/ carried c) have / carry

4. Today my friend _____ the class of organic chemistry.

a) have has b) has has c) has had

5. They _____ already _____ the quality of these drugs

a) have tested b) has tested c) has test

Task 4. Put the verbs in brackets in the Past Simple or in the Present Perfect.

1. I _____ (never/ be) to the USA. I _____ (want) to go there last summer but I couldn't.

2. He _____ (live) in this street all his life.

3. His father _____ (come back) to London last Sunday.

4. Jack _____ (write) a letter to Nick two days ago.

5. He _____ (send) his letter yesterday.

6. They _____ (just/ buy) some postcards.

UNIT 16

VOCABULARY AND READING	Drug Classes
GRAMMAR: THEORY AND PRACTICE	Past Perfect Tense
SPEAKING	Drug Classes

DRUG CLASSES

TEXT

Vocabulary

condition	стан здоров'я
according to	відповідно до
to cure	зцілювати
to reflect	відображати
significantly	істотно
to enhance	покращити
abuse	зловживання

Read and translate the text.

A drug class is a group of medications that may work in the same way, have a similar chemical structure, or are used to treat the same health condition. A drug may be classified by the chemical type of the active ingredient or by the way it is used to treat a particular condition. Each drug can be classified into one or more drug classes.

Drugs are classified according to their effect on particular body systems, their therapeutic uses, and their chemical characteristics. A class of drugs is a group of drugs that have similar characteristics; they may cure the same diseases, have similar chemical structures or work in the same way. Example: morphine can be classified as a central nervous system depressant and a narcotic or opioid analgesic. The names of

therapeutic classifications usually reflect the condition for which the drugs are used (e.g., antidepressants, antihypertensives). Sometimes, the names of many drug groups reflect their chemical characteristics rather than their therapeutic uses (e.g., adrenergics, benzodiazepines). Many drugs fit into multiple groups because they have wide-ranging effects on the human body.

There are several cases where a drug can have multiple classes, either by indication, mechanism of action, or route of administration. Additionally, drugs can also be classified 3 different ways: – By body system – By the action of the agents – By the drug’s mechanism of action.

It is important to keep in mind that the effects produced by any drug can vary significantly and is largely dependent on the dose and way that it is administered. Concurrent use of other drugs can enhance or block an effect and substance abusers often take more than one drug to boost the desired effects or counter unwanted side effects. This means that the risks involved with drug abuse cannot be accurately predicted because each user has his or her-own unique sensitivity to a drug.

Task 1. Answer the questions.

1. What is a drug class?
2. How many classes of drugs are there?
3. Do all controlled substance have common traits?
4. Do controlled substances produce dependence?
5. What is drug abuse?
6. What is drug dependence?

Task 2. Fill in the gaps using the words from the box.

<i>duration</i>	<i>function</i>	<i>dependence</i>	<i>drug</i>
<i>prevent</i>	<i>symptoms</i>	<i>abuse</i>	<i>reasons</i>

Most controlled substances can produce dependence, either physically or psychologically, which increases potential for their _____. Physical _____ is what happens when changes that have occurred in the body after repeated use of a drug make it necessary to continue the use of the drug to prevent

a withdrawal syndrome. The _____ can range from mildly unpleasant to life-threatening and depend on a number of factors. The type of withdrawal experienced is related to the drug being used; the dose and way that it's administered; multiple drugs being taken at the same time; frequency and _____ of drug use; and the age, sex, health, and genetic makeup of the user. Psychological dependence refers to the "need" or "craving" for a _____. People who are psychologically dependent on a particular substance often feel like they can't _____ without continued use of that substance. While physical dependence goes away within days or weeks after drug use stops, psychological dependence can last much longer and is one of the primary _____ for relapse. Again, the best way to _____ relapse is through completing a drug treatment program.



Hydrogen is the most abundant element in the universe, while oxygen is the most abundant element in the earth's atmosphere, crust, and oceans (about 49.5%).



Prepare a speech about «Drug Classes», using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	To start with, I want to tell you about As for me, I want to tell you about Today I'd like to give you an overview of.. My topic is / will be very important for you because ...
MAIN BODY <i>Tell the main information</i>	Initially, I want to tell you about Secondly, I have to say that Also, you have to know that I think, To my mind, ... In my humble opinion, ...
SUMMARY <i>Sum it up</i>	Finally, ... I'd like to finish/end by saying... To conclude... Before I finish I'd finally like to say...

GRAMMAR: THE PAST PERFECT TENSE

Functions of the past perfect

The past perfect refers to a time **earlier than before now**. It is used to make it clear that **one event happened before another** in the past. It does not matter which event is mentioned first - the tense makes it clear which one happened first.



In these examples, Event A is the event that happened first and Event B is the second or more recent event:

Event A

John **had gone** out

Event B

when I arrived in the office.

Event A

I **had saved** my document before the computer crashed.

Event B

Event B

When they arrived

Event A

we **had already started** cooking.

Event B

He was very tired

Event A

because he **hadn't slept** well.

Forming the past perfect

The Past Perfect tense in English is composed of two parts: the past tense of the verb “to have” - **had** + **the past participle of the main verb**

Affirmative	Negative	Interrogative
I had decided	I hadn't decided	Had I decided?
You had decided	You hadn't decided	Had you decided?
She had decided	She hadn't decided	Had she decided?
We had decided	We hadn't decided	Had we decided?
They had decided	They hadn't decided	Had they decided?

Past perfect + just

'**Just**' is used with the past perfect to refer to an event that was only a short time earlier than before now, e.g.

- The train **had just left** when I arrived at the station.
- She **had just left** the room when the police arrived.
- I **had just put** the washing out when it started to rain.

PRACTISE YOUR GRAMMAR: THE PAST PERFECT TENSE

Task 1. Write negative and interrogative sentences.

1. A student had prepared the equipment before the experiment started.

- _____

? _____

2. I had synthesized a new compound by 5 o'clock yesterday.

- _____

? _____

3. Mendeleev had predicted the properties of some elements before their discovery.

- _____

? _____

4. Kristine had never been to an opera before last night.

- _____

? _____

5. We had had that car for ten years before it broke down.

- _____

? _____

Task 2. Open the brackets and write the correct form of the verbs in Past Perfect.

1. Before I came home I _____(buy) some bread.

2. When we reached the theatre the performance _____(already/start).

3. I knew I _____(see) the man somewhere.
4. She _____(write) a letter to him by that time yesterday.
5. My friend _____ (never/travel) before.

Task 3. Choose the correct answer.

1. He _____ school before he went to a camp.
a) has finished b) had finish c) had finished
2. She _____ her friend before she went to meet her.
a) had phoned b) have phoned c) has phoned
3. I read the book after I _____ the film.
a) had seen b) had seen c) has seen
4. I _____ my room before I invited my friends home.
a) had clean b) have cleaned c) had cleaned
5. He entered the university after he _____ school.
a) had b) has finished c) had finished

Task 4. Put the verbs in brackets in the Past Simple or in the Past Perfect.

1. A student _____(finish) the test before the bell _____(ring).
2. When our mother _____(come) to say good-night, we already _____ (fall asleep).
3. She already _____ (prepare) the dinner when her husband _____ (get) home from work.
4. When my parents _____(get married), they _____(know) each other for 3 years.
5. She _____ (not enjoy) the film because she _____(read) the book before.

UNIT 17

VOCABULARY AND READING	Drug Administration
GRAMMAR: THEORY AND PRACTICE	Future Perfect Tense
SPEAKING	Drug Administration

DRUG ADMINISTRATION

TEXT **Vocabulary**

drug administration	спосіб введення ліків
gut	кишка
ingestion	прийом їжі
intestine	кишечник
lungs	легені
mucous membrane	слизова оболонка
ointment	мазь
rapidity	швидкість
syringe	шприц
X-ray	рентген

Read and translate the text.

Medicines and other chemicals, for both diagnostic and therapeutic reasons, and for purposes such as immunization or anaesthesia, can be administered in a wide variety of ways. The aim of therapeutic administration is for the active components of the medicine to reach the target site where it is intended to be effective. The technique and route used, such as an injection into a muscle, application of a cream

to the skin, or ingestion of a pill, are influenced by both the formulation of the compound and the desired site and rapidity of action.

Injection and infusion

Injection is the act of introducing a substance into a body by means of some impulsive force, usually employing a syringe. The substance so injected is usually in a liquid form, and is employed to have a therapeutic effect either at the site of application or elsewhere in the body. Injected drugs usually act faster than those taken by mouth — and some substances, such as insulin, need to be injected, because they would be destroyed in the gut.

Infusion usually into a vein, but also sometimes into a body cavity, differs from injection in being a continuous, slow introduction of material, usually under pressure of gravity (as in a blood or saline infusion, or transfusion), and sometimes by a slow, mechanically-driven syringe. Materials to aid diagnosis, such as radioactive chemicals, or radioopaque dyes which show up on X-ray, are injected or infused, most commonly into veins or arteries.

Oral medication

Drugs to be given by mouth are produced in a wide array of formulations, including tablets, pills, and liquids. Aspirin, and also alcohol, are absorbed in the stomach, but most oral medications are designed to be absorbed in the small intestine, where nutrients are normally absorbed, and they are coated with a protective material so that they pass through the stomach intact.

Other routes

Some drugs are best absorbed through mucous membranes — such as the lining of the mouth, especially under the tongue — one of the best known being nitroglycerine for angina. Other sites for absorption can include the rectum, urethra, or nasal cavity. Ointments are preparations of a fatty or oily consistency, for the application of medicines to the skin or mucous membranes, and are intended either to exert a local effect — such as warming, cooling, pain relief, anti-infection; or to provide a protective barrier.

Few drugs penetrate readily through the layers of the skin. Absorption is determined by both the surface area over which an ointment is spread, and the solubility of the ointment. Some chemicals, such as toxic substances in organic solvents, can be absorbed rapidly through the skin and cause poisoning.

Some drugs can be delivered by inhalation, in the form of vapours or aerosols. They can be absorbed rapidly into the circulation through the pulmonary epithelium — the lining of the lungs. This route is used particularly for the treatment of respiratory diseases, such as asthma, and for the administration of volatile anaesthetics.

Task 1. Answer the questions.

1. What ways can medicines be administered in?
2. What is the aim of therapeutic administration?
3. What is injection?
4. How does infusion differ from injection?
5. How are oral medications designed?
6. What is ointment?
7. What chemicals can be absorbed rapidly through the skin and cause poisoning?
8. What diseases are treated by by inhalation?

Task 2. Match these words with their definitions.

1. Absorption	a) the rate at which and the extent to which the active moiety enters the general circulation, thereby permitting access to the site of action
2. Bioavailability	b) the process of movement of a drug from the site of application toward the systemic circulation
3. Distribution	c) the removal of drugs from the body

4. Elimination	d) in pharmacology is a branch of pharmacokinetics which describes the reversible transfer of drug from one location to another within the body
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Task 3. Fill in the gaps using the words from the box.

<i>eliminated</i>	<i>flow</i>	<i>fat</i>	<i>distribution</i>	<i>depends</i>
<i>water-soluble</i>	<i>tissue</i>	<i>kidney</i>	<i>remain</i>	<i>absorption</i>
<i>easily</i>				

Once a drug enters into systemic circulation by _____ or direct administration, it must be distributed into interstitial and intracellular fluids. Each organ or _____ can receive different doses of the drug and the drug can _____ in the different organs or tissues for a varying amount of time. The _____ of a drug between tissues is dependent on vascular permeability, regional blood _____, cardiac output and perfusion rate of the tissue and the ability of the drug to bind tissue and plasma proteins and its lipid solubility. pH partition plays a major role as well. The drug is _____ distributed in highly perfused organs such as the liver, heart and _____. It is distributed in small quantities through less perfused tissues like muscle, _____ and peripheral organs. All drugs are eventually _____ from the body. They may be eliminated after being chemically altered (metabolized), or they may be eliminated intact. Most drugs, particularly _____ drugs and their metabolites, are eliminated largely by the kidneys in urine. Therefore, drug dosing _____ largely on kidney function.



Hot peppers get their heat from a molecule called capsaicin. While the molecule acts as an irritant to mammals, including humans, birds lack the receptor responsible for this effect and are immune to the burning sensation from exposure.



Prepare a speech about «Drug Administration», using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	I would like to tell you about My topic is / will be very important for you because ... Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	First of all, I want to tell you about Secondly, I have to say that Also, you have to know that I think, I believe, it is important to know that
SUMMARY <i>Sum it up</i>	Finally, ... I'd like to finish/end by saying... To conclude... In conclusion,

GRAMMAR: FUTURE PERFECT TENSE

Future perfect tense definition:

The future perfect tense expresses action that will be finished at some point in the future. The future perfect tense indicates actions that are complete, or finished. These actions have not yet occurred but will occur and be finished in the future.



To form the future perfect:

Subject + **will have** + past participle of verb

Examples:

- *By the time you finish dinner, I **will have finished** dessert.*
- *Tomorrow, he **will have run** the race.*
- *When my father arrives, I **will have been ready** to leave for twenty minutes.*

How to make the Future Perfect Negative

Making a negative future perfect construction is easy! Just insert **not** between **will** and **have**.

Examples:

- *We **will not have eaten** breakfast before we get to the airport tomorrow morning.*
- *They **will not have finished** decorating the float before the parade.*

You can also use the contraction **won't** in the place of **will not**.

Example:

*They **won't have finished** decorating the float before the parade.*

How to Ask a Question

The formula for asking a question in the future perfect tense is **will + [subject] + have + [past participle]**.

Examples:

- *Will you **have eaten** lunch already when we arrive?*
- *Will they **have finished** decorating the float before the parade?*

Common Regular Verbs in the Future Perfect Tense

Infinitive	Future Perfect	Negative	Question
to ask	will have asked	will not have asked	will you have asked...?
to work	will have worked	will not have worked	will he have worked...?
to call	will have called	will not have called	will I have called...?
to use	will have used	will not have used	will they have used...?

Common Irregular Verbs in the Future Perfect Tense

Infinitive	Future Perfect	Negative	Question
to be*	will have been	will not have been	will I have been...?
to have	will have had	will not have had	will you have had...?
to do	will have done	will not have done	will she have done...?
to say	will have said	will not have said	will we have said...?
to get	will have gotten**	will not have gotten	will they have gotten...?
to make	will have made	will not have made	will you have made...?
to go	will have gone	will not have gone	will he have gone...?
to take	will have taken	will not have taken	will you have taken...?
to see	will have seen	will not have seen	will I have seen...?
to come	will have come	will not have come	will it have come...?

Prepositional Phrases that Often Go With the Future Perfect

- **By this time** next week, Linda will have left for her trip.
- Three days **from now**, we will have finished our project.
- **At** midnight, the party will have ended.
- Will you have eaten **already**?
- Chester will not have arrived **by the time** the parade is over.
- **When** I travel to France, I will have been to ten countries.
- My sister will have cleaned the bathroom **before** the party.
- **As soon as** someone buys this chair, I will have sold all the furniture I wanted to get rid of.

PRACTISE YOUR GRAMMAR: FUTURE PERFECT TENSE

Task 1. Write negative and interrogative sentences.

1. You will have heard the news about my nephew's marriage by next month.

- _____

? _____

2. He will have finished that experiment by next Saturday.

- _____

? _____

3. By Friday, we'll have done this work.

- _____

? _____

4. We'll have come back home by September.

- _____

? _____

5. I'll have finished my work by 5 o'clock.

- _____

? _____

Task 2. Open the brackets and write the correct form of the verbs.

1. I _____my chemistry homework before Jillian comes home. (finish)
2. By Tuesday Jill _____ reading these stories by O'Henry. (finish)
3. Next year is Fred and Kate's 10th wedding anniversary. They _____ happily married for ten years. (be)
4. Molly thinks the film _____ by the time she gets to Fred's. (to start)
5. They _____ the plans by then. (to finish)

Task 3. Choose the correct answer.

1. Michael _____ this report by tomorrow.
a) will have finished b) will has finished c) shall have finished
2. The students_____ the work by 3p.m.
a) will have finished b) will has finished c) will have finish
3. By June, we_____ passed our exams.
a) 'll has passed b) 'll passed c) 'll have passed
4. The builders_____ a school by September.
a) will have built b) will built c) have built
5. I_____ an application by the time the secretary comes.
a) have written b) will have written c) will have write

UNIT 18

VOCABULARY AND READING	Drug Interactions
GRAMMAR: THEORY AND PRACTICE	Passive Voice in Simple Tenses
SPEAKING	Drug Interactions

DRUG INTERACTIONS

TEXT

Vocabulary

alteration	зміна
interaction	взаємодія
misuse	неправильне вживання
overdose	передозування
saline solution	сольовий (фізіологічний) розчин
to affect	впливати
to cease	припинятися, переставати
to decrease	зменшувати
to increase	збільшувати

Read and translate the text.

A drug interaction is a situation in which a substance (usually another drug) affects the activity of a drug when both are administered together. This action can be synergistic (when the drug's effect is increased) or antagonistic (when the drug's effect is decreased) or a new effect can be produced that neither produces on its own. Typically, interactions between drugs come to mind (drug-drug interaction). However, interactions may also exist between drugs and foods (drug-food interactions), as well as drugs and medicinal plants or herbs (drug-plant interactions). People taking antidepressant drugs such as monoamine oxidase inhibitors should not take food containing tyramine as hypertensive crisis may occur

(an example of a drug-food interaction). These interactions may occur out of accidental misuse or due to lack of knowledge about the active ingredients involved in the relevant substances.

It is therefore easy to see the importance of these pharmacological interactions in the practice of medicine. If a patient is taking two drugs and one of them increases the effect of the other it is possible that an overdose may occur. The interaction of the two drugs may also increase the risk that side effects will occur. On the other hand, if the action of a drug is reduced it may cease to have any therapeutic use because of under dosage.



The pharmaceutical interactions that are of special interest to the practice of medicine are primarily those that have negative effects for an organism. The risk that a pharmacological interaction will appear increases as a function of the number of drugs administered to a patient at the same time.

It is also possible for interactions to occur outside an organism before administration of the drugs has taken place. This can occur when two drugs are mixed, for example, in a saline solution prior to intravenous injection.

Drug interactions may be the result of various processes. These processes may include alterations in the pharmacokinetics of the drug, such as alterations in the absorption, distribution, metabolism, and excretion (ADME) of a drug. Alternatively, drug interactions may be the result of the pharmacodynamic properties of the drug, e.g. the co-administration of a receptor antagonist and an agonist for the same receptor.

Task 1. Answer the questions.

1. What is a drug interaction?
2. What action is called synergistic?

3. What is a drug-food interaction?
4. What is a drug-plant interaction?
5. What is antagonistic action?
6. What may occur if a patient is taking two drugs and one of them increases the effect of the other?
7. What interactions are of special interest to the practice of medicine?
8. Is it possible for interactions to occur outside an organism?

Task 2. Fill in the gaps using the words from the box.

<i>allergic</i>	<i>drug</i>	<i>toxic</i>	
<i>drowsiness</i>	<i>weight</i>	<i>occurs</i>	<i>side-effects</i>

Therapeutic benefits of a _____ on the market far outweighs its risks. All drugs are likely to have some _____ – unwanted action of a drug, e.g. _____ from an antihistamine given to relieve _____ symptoms, or acceleration of the heart by a drug given for asthma. The term is not usually applied to the _____ effects of an overdose, but to an effect of a standard therapeutic dose.

A side effect is usually regarded as an undesirable secondary effect which _____ in addition to the desired therapeutic effect of a drug or medication. Side effects may vary for each individual depending on the person's disease state, age, _____, gender, ethnicity and general health.

Task 3. Write a synopsis of the following.

Pharmaceutical products save lives every day. Manufacturers of these important drugs spend many millions of dollars over many years to bring a product to the market. At the beginning of the process that ends with a new pharmaceutical product is the research into a specific ailment. The researchers investigate the specific disorder to understand all aspects and perform experiments to investigate possible

methods of controlling it. Depending on the results of laboratory experiments, some of these will be taken into the development stage. After the laboratory experiments produced favorable results, the product is then moved to the development stage. The product will undergo a four phase clinic trial, where each stage of the trial is designed to answer a separate research question. To get approval to manufacture and sell a new pharmaceutical product to the public, a company must provide the FDA (Food and Drug Administration) with proof of the quality, efficacy, and safety of the product. In the European Union, each member country has its own regulatory agency.



It is interesting to know that although oxygen gas is colourless, the liquid and solid forms of oxygen are blue.



Prepare a speech about «Drug Interactions», using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	My topic is / will be very important for you because ... I would like to tell you about Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	Firstly, I want to tell you about Secondly, I have to say that As I see it ... As I was saying ... I forgot to mention ... I'm of the opinion that ...
SUMMARY <i>Sum it up</i>	Taking everything into account ... I'd like to finish/end by saying... To conclude... Before I finish I'd finally like to say...

GRAMMAR: PASSIVE VOICE IN SIMPLE TENSES

Passive Voice: Definition

In the **active voice**, the subject of the sentence **DOES the action**:

- *John painted the house last week.*

Subject / verb / object

In the **passive voice**, the subject of the sentence **RECEIVES the action**.

- *The house was painted last week.*

Subject / verb

Notice that the **object** of the active sentence (house) became the **subject** of the passive sentence.

Passive Voice: Use

The passive voice is used when:

1. We do not know who did the action

Example:

*The documents **were stolen**.*

(we don't know who stole the documents)

2. The receiver of the action is more important

Example:

*The pyramids **were built** nearly 5,000 years ago by the ancient Egyptians.*

(we want to emphasize “pyramids” more than “ancient Egyptians”)

Passive Voice: Form

To change an active voice sentence to a passive voice sentence:

1. Make the object of the active sentence into the subject of the passive sentence.
2. Use the verb “to be” in the same tense as the main verb of the active sentence.

3. Use the past participle of the main verb of the active sentence.

Here are some active and passive voice **examples** to help!

- **Active:** People **drink** champagne on New Year's Eve.
Passive: Champagne **is drunk** on New Year's Eve.
- **Active:** Chefs **use** these machines to mix the ingredients.
Passive: These machines **are used** to mix the ingredients.
- **Active:** They **renovated** the restaurant in 2004.
Passive: The restaurant **was renovated** in 2004.
- **Active:** The teachers **informed** the students that the class had been cancelled.
Passive: The students **were informed** that the class had been cancelled.

THE GENERAL FORMULA

to BE + V₃

Present Simple: to be = am / is / are

I **am** always **asked** to look after his dog.

Past Simple: to be = was / were

I **was** **asked** to look after his dog yesterday.

Future Simple: to be = shall / will be

I **shall be** **asked** at the next lesson.

 MyShared

Passive Voice: Present Simple

In the present, the passive voice uses the verbs **is** and **are** + **past participle of the main verb**.

The passive voice present is often used to describe:

1. Processes

Example:

*First the apples **are picked**, then they **are cleaned**, and finally they're **packed** and **shipped** to the market.*

2. General thoughts, opinions, and beliefs**Examples:**

*New York **is considered** the most diverse city in the U.S.*

***It is believed** that Amelia Earhart's plane crashed in Pacific Ocean.*

*Hungarian **is seen** as one of the world's most difficult languages to learn.*

*Skin cancers **are thought** to be caused by excessive exposure to the sun.*

Passive Voice: Past Simple

In the past, the passive voice uses the verbs **was** and **were** + **past participle of the main verb**.

The passive voice past is often used to describe:

1. Events in history**Example:**

*George Washington **was elected** president in 1788.*

2. Crimes / Accidents**Examples:**

*Two people **were killed** in a drive-by shooting on Friday night.*

*Ten children **were injured** when part of the school roof collapsed.*

...as well as in many other situations when the person who did the action is unknown or unimportant.

How To Ask A Question And To Make Negative

Affirmative	Negative	Interrogative	Negative Interrogative
The house was built in 1899.	The house wasn't built in 1899.	Was the house built in 1899?	Wasn't the house built in 1899?
These houses were built in 1899.	These houses weren't built in 1899.	Were these houses built in 1899?	Weren't these houses built in 1899?

Passive Voice: Future Simple

Active: Subject + will/shall + first form of the verb + object

Passive: Object of the active sentence + will/shall + be + past participle form of the verb + by + subject of the active sentence

Active: I **will write** a letter.

Passive: A letter **will be written** by me.

Active: She **will help** me.

Passive: I **will be helped** by her.

Active: John **will learn** the lesson.

Passive: The lesson **will be learnt** by John.

Changing a negative sentence into the passive

Active: She **will not help** us.

Passive: We **will not be helped** by her.

Active: We **will not visit** the hill station this year.

Passive: The hill station **will not be visited** by us this year.

Active: We **shall not betray** our country.

Passive: Our country **shall not be betrayed** by us.

Changing an Interrogative sentence into the passive

Active: Will you **help** him?

Passive: Will he **be helped** by you?

Active: Will you **not help** me?

Passive: Shall I **not be helped** by you?

Active: Will they **accept** our invitation?

Passive: Will our invitation **be accepted** by them?

PRACTISE YOUR GRAMMAR: PASSIVE VOICE IN SIMPLE TENSES

Task 1. Write negative and interrogative sentences (Present Simple Passive).

1. English is spoken in many different countries.

- _____

? _____

2. The patients are seen by the doctor.

- _____

? _____

3. Green tea-leaves are used as anti-inflammatory remedy.

- _____

? _____

4. The information is sent to the main computer.

- _____

? _____

5. His articles are published in our medical journal.

- _____

? _____

Task 2. Open the brackets and write the correct form of the verbs.

1. They _____ (to teach) to carry out experiments carefully.
2. A chemistry laboratory _____ (to ventilate) quite well.
3. The goods _____ (to make) with strong metal.
4. Many books _____ (not to translate) from ancient English into Ukrainian.
5. The dictionary _____ (to use) while translating an original text.

Task 3. Complete the following sentences with the right verb in the Present Indefinite Passive or Active.

1. _____ with great attention.
A. Everybody are listened to the lecturer
B. Everybody listens to the lecturer
C. Everybody is listens to the lecturer
2. _____ at home by my relatives.
A. I am always praised
B. I always praise
C. I am always praises
3. _____ in chemist's shops.
A. The pharmacy students have practice
B. The pharmacy students is had practice
C. The pharmacy students are have practice
4. _____ to us by our leader every day?
A. Are anything interesting told
B. Does anything interesting tell
C. Is anything interesting told
5. A very good mark _____.
A. is given to me by the teacher
B. gives to me by the teacher
C. is gived to me by the teacher

Task 4. Write negative and interrogative sentences (Past Simple Passive).

1. The scientific journals were delivered to our office yesterday.

- _____

? _____

2. My question was answered last Monday.

- _____

? _____

3. We were invited to take part in the conference last week.

- _____

? _____

4. The prescription was given to me by our home doctor.

- _____

? _____

5. Very interesting experiments were carried out in our laboratory last years.

- _____

? _____

Task 5. Open the brackets and write the correct form of the verbs.

1. This work _____ (to do) very carefully by the investigators.

2. Yesterday he _____ (to tell) to prepare a speech.

3. The famous scientists _____

(to introduce) to our students a couple of hours ago?

4. The article _____ (not to publish) last week, if I am not mistaken.

5. Classical and modern methods of chemical analysis _____ (to use) in the examination of drugs.

6. These pharmacists _____ (not to train) at Britain colleges.

Task 6. Complete the following sentences with the correct form of the verb in the Past Indefinite Passive or Active.

1. The rule explained by the teacher last Monday _____.
A. was understood by all the students
B. understood by all the students
C. was understand by all the students
2. _____ his students additional literature.
A. The senior lecturer was recommended
B. The senior lecturer recommended
C. The senior lecturer were recommended
3. _____ during the lecture.
A. The professor answered all the questions
B. The professor were answered all the questions
C. The professor was answered all the questions
4. According to our information _____.
A. the letter didn't posted 3 hours ago.
B. the letter wasn't posted 3 hours ago.
C. the letter weren't posted 3 hours ago.
5. _____ early morning yesterday?
A. Did he come to the University
B. Was he come to the University
C. Was he came to the University

Task 7. Supply the correct form of the verb in the Past Indefinite Passive or Present Indefinite Passive in the following sentences.

1. Alkalies ... to neutralize acid secretion.
A. was used B. is used C. were used
2. Mineral acids ... after meal as a rule.
A. are given B. was given C. is given

3. The action of the drugs on the body ... into consideration.

A. wasn't taken B. weren't taken C. aren't taken

4. ... the tablets ... after meals yesterday?

A. was given B. are given C. were given

5. ... vitamins ... with the body when you take them?

A. are synthesized B. were synthesized C. is synthesized

Task 8. Write negative and interrogative sentences (Future Simple Passive).

1. This report will be represented next week.

- _____

? _____

2. The patient will be prescribed new medicines by the doctor.

- _____

? _____

3. The work will be done in time.

- _____

? _____

4. The famous lecturer will be greeted warmly.

- _____

? _____

Task 9. Open the brackets and write the correct form of the verbs.

1. This article _____ (to translate) from Ukrainian into English next week.

2. The scientific reports _____ (to make) tomorrow. 3. Many interesting

facts _____ (to find out) about the action of this drug. 4. The molecules of

these gases _____ (to see) through the microscope? 5. This subject _____

(not to study) by the students next year.

Task 10. Supply the correct verb form in the Future Indefinite Passive or Active.

1. The doctor ... me a complete examination tomorrow.

A. will not give B. will not be given C. will not given

2. The dictionary ... when translating Latin words.
A. will used B. will be used C. will use
3. You ... without eating much fruit.
A. won't healthy B. won't be healthy C. won't been healthy
4. The student ... at the blackboard till the professor says to go back.
A. will stand B. will standed C. will be standed
5. What ... if you don't finish your homework tonight?
A. will you do B. will you be done C. will you done
6. As soon as he returns from the University, he ... you up.
A. will be rung B. will ring C. will be ring

Task 11. Complete the following sentences with the correct form of the verb in the Future Indefinite Passive or Present Indefinite Passive.

1. _____ in this experiment?
A. Is the drug examined regularly
B. Will the drug examined regularly
C. Are the drug examined regularly
2. _____ by this substance next time.
A. Red colour will not be given
B. Red colour are not be given
C. Red colour isn't be given
3. _____ by the students every day next month?
A. Are practical classes in chemistry attended
B. Will practical classes in chemistry attended
C. Will practical classes in chemistry be attended
4. Drug constituents _____ soon.
A. will be discovered automatically
B. will discovered automatically
C. are discovered automatically

5. Her knowledge _____.

- A. is used in her future work
- B. are used in her future work
- C. will be used in her future work

6. By what means _____?

- A. will headache treated
- B. are headache treated
- C. is headache treated

UNIT 19

VOCABULARY AND READING	Drug Toxicity
GRAMMAR: THEORY AND PRACTICE	Passive Voice in Perfect Tenses
SPEAKING	Drug Toxicity

DRUG TOXICITY

TEXT

Vocabulary

adverse	несприятливий
beneficial	корисний, цілющий
bloodstream	кровообіг
erroneous	помилковий
homicide	вбивство
intended	навмисний, передбачуваний
pronounced	очевидний, виразний, явний
severe	важкий, тяжкий
severity	суворість
suicide	самогубство
to accumulate	накопичувати, збирати
to vary	змінюватися

Read and translate the text.

In the context of pharmacology, toxicity occurs when a person has accumulated too much of a drug in his bloodstream, leading to adverse effects within the body. Drug toxicity is the critical or lethal reaction to an erroneous dosage of a medication. It may occur due to human error or intentional overdose

in the case of suicide or homicide. The effects of the medication are more pronounced at toxic levels, and side effects may be severe. The reasons for toxicity vary depending on the mixture of drugs. Toxicity may result when the dose is too high, or it may result when the liver or kidneys are unable to remove the drug from the bloodstream. Many commonly prescribed medications can accumulate in the bloodstream and result in toxicity. Symptoms of drug toxicity depends on the drug taken. Treatment for drug toxicity also depends on the drug taken and the blood level of the drug.

All drugs have both primary intended effects and secondary unintended effects, the latter known as side effects or adverse effects. Although side effects can be neutral or even beneficial, side effects are typically undesirable. Adverse effects can range in severity from nuisance to life threatening. These effects make many patients unwilling to take drugs on a regular basis, and this lack of compliance represents a major practical limitation of pharmacotherapy.

Drug toxicity, also called adverse drug reaction (ADR) or adverse drug event (ADE), is defined as the "manifestations of the adverse effects of drugs administered therapeutically or in the course of diagnostic techniques. It does not include accidental or intentional poisoning..." The meaning of this expression differs from the meaning of "side effect", as this last expression might also imply that the effects can be beneficial.

Task 1. Answer the questions.

1. When does toxicity occur in the context of pharmacology?
2. What is drug toxicity?
3. Where can many commonly prescribed medications accumulate?
4. What does symptoms of drug toxicity depend on?
5. How can adverse effects range?

Task 2. Match words from column A with their antonyms from column B.

<i>Column A</i>	<i>Column B</i>
1) minority	a) unimportant
2) accidental	b) unpredictable
3) outpatients	c) malignant
4) important	d) unexpected
5) predictable	e) inpatients
6) hyposensitivity	f) intentional
7) benign	g) hypersensitivity
8) expected	h) majority

Task 3. Fill in the gaps using the words from the box.

<i>clinical</i>	<i>volunteers</i>	<i>review</i>
<i>additional</i>	<i>investigations</i>	<i>years</i>

After laboratory screening, firms conduct clinical _____, or "trials," of the drug on human patients. Human _____ trials normally take place in three phases. First, medical scientists administer the drug to a small group of healthy _____ in order to determine and adjust dosage levels, and monitor for side effects. If a drug appears useful and safe, _____ tests are conducted in two more phases, each phase using a successively larger group of volunteers or carefully selected patients. Once a drug has successfully passed animal and clinical tests, the Food and Drug Administration (FDA) must _____ the drug's performance on human patients, the results of which have been carefully documented, before approving the substance for commercial use. The entire process, from the first discovery of a promising new compound to FDA approval, can take up to 15 _____, but scientific and information

technology advances will shorten that process considerably for many drugs. After FDA approval, problems of production methods and costs must be worked out before manufacturing begins.

Task 4. Render the main idea of the text below.

Toxicology (from the Greek words τοξικός - toxicos "poisonous" and logos) is the study of poisons, an extension of pharmacology. It is concerned with the study of the adverse effects of chemicals on living organisms. It studies symptoms, mechanisms, treatments and detection of poisoning, especially the poisoning of people. Its functions have expanded from identifying poisons and searching for treatments to include forensic toxicology (forensic medicine) and testing and detection of a fast-growing number of new potentially toxic substances used in workplaces, in agriculture (e.g., insecticides, other pesticides, fertilizers), in cosmetics, as food additives, and as drugs (see drug poisoning). Perhaps the area of largest expansion is the study of toxic waste in the air, water, and soil, including chlorofluorocarbons, acid rain, dioxin, and radioactive isotopes.



If you slowly pour a handful of salt into a completely full glass of water, it will not overflow. In fact, the water level will go down.



Prepare a speech about « Drug Toxicity», using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	I would like to tell you about My topic is / will be very important for you because ... Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	Initially, I want to tell you about Secondly, I have to say that Also, you have to know that I think, To my mind, ... In my opinion, ... I believe, it is important to know that
SUMMARY <i>Sum it up</i>	Finally, ... I'd like to finish/end by saying... To conclude... Before I finish I'd finally like to say...

GRAMMAR: PASSIVE VOICE IN PERFECT TENSES

Forming Present Perfect Passive

Affirmative Form Object + have / has + been + verb3 (past participle)

Question Form Have / has + object + been + verb3 (past participle)

Meaning

Something has been done by someone at sometime up to now.

Examples

Active : *They **have cleaned** the clinic.*

Passive: *The clinic **has been cleaned** by them.*

Active : *Thomas **has written** many books.*

Passive: *Many books **have been written** by Thomas.*

Active : ***Have** the police **caught** the man?*

Passive: ***Has** the man **been caught** by the police?*

Forming Past Perfect Passive

	Active	Passive
Past Perfect Tense (Passive Voice) Auxiliary verb in passive voice: had been	They had completed the assignment.	The assignment had been completed by them.
	They had not completed the assignment.	The assignment had not been complete by them.
	Had they completed the assignment?	Had the assignment been completed by them?

Forming Future Perfect Passive

	Active	Passive
Future Perfect Tense (passive Voice) Auxiliary verb in passive voice: will have been	You will have started the job.	The job will have been started by you.
	You will have not started the job.	The job will not have been started by you.
	Will you have started the job?	Will the job have been started by you?

PRACTISE YOUR GRAMMAR: PASSIVE VOICE IN PERFECT TENSES

Task 1. Write negative and interrogative sentences (Present Perfect Passive).

1. A solution has just been given to him.

- _____

? _____

2. Look! Wrong telephone numbers have been written down.

- _____

? _____

3. The mail has been sent in time today.

- _____

? _____

4. A lot of time has been spent by this student in the laboratory this week.

- _____

? _____

5. My tests have already been checked by the teacher.

- _____

? _____

Task 2. Open the brackets and write the correct form of the verbs.

1. The experiment _____ (to finish) already by me.
2. The prescription _____ (to give) just by the pharmacist.
3. The medicinal plants _____ (to collect) by my groupmates this week.
4. That movie _____ (not to see) by my friends yet.
5. Another test-tube _____ (to break) just by Peter.

Task 3. Choose the correct form of the verbs.

1. Oh no! My key _____ stolen.
a) has be b) have been c) has been
2. The compounds _____ already _____ dissolved.
a) has been b) have be c) have been
3. A great research _____ done by this scientist.
a) have had b) has been c) have be
4. He _____ cured by this medicine.
a) has been b) have be c) have been
5. A new substance _____ tested for antimicrobial activity this month.
a) has be b) has been c) have been

Task 4. Use Present Perfect Active or Passive of the verbs in brackets to complete the sentences.

1. Taras _____ (to break) the window today.
2. The exercise _____ already (to write) by these students.
3. The text _____ (not to translate) by me yet.
4. The teacher just _____ (to explain) the new rule.
5. We _____ already (to learn) the Passive Voice.

Task 5. Write negative and interrogative sentences (Past Perfect Passive).

1. A letter had been posted by me by that time yesterday.
 - _____
 ? _____
2. Seven matches had been won by our university team by the end of last year.
 - _____
 ? _____
3. The epidemic of flu had been stopped by March.
 - _____
 ? _____
4. Many articles had been written by these students by the end of last term.
 - _____
 ? _____
5. That drug had been bought by him before he fell ill.
 - _____
 ? _____

Task 6. Open the brackets and write the correct form of the verbs.

1. My eyes _____ (to examine) by an oculist before she gave me glasses .
2. Many medicines _____ (to take) by him before he recovered .
3. My homework _____ (not to finish) by that time yesterday.
4. _____ a report _____ (write) by her by last Friday?
5. How many lectures _____ (to deliver) by him by the end of the year?

Task 7. Choose the correct option.

1. He _____ the intravenous injection before the ambulance came.
 a) had been given b) has been given c) had given
2. The symptoms _____ by the doctors before they told him a diagnosis.
 a) had discussed b) has been discussed c) had been discussed
3. _____ the problems _____ by his parents before he came?

- a) Had /been solved b) Had / solved c) Had /been solve
4. Five chemist's shops _____ in our district by 2014.
- a) had been open b) had been opened c) had be opened
5. That text _____ by those students by two o'clock yesterday.
- a) had be read b) had read c) had been read

Task 8. Write negative and interrogative sentences (Future Perfect Passive).

1. The topic will have been learnt by them by next Tuesday.
- _____
- ? _____
2. That house will have been sold by next month.
- _____
- ? _____
3. The article will have been written by 7 o'clock.
- _____
- ? _____
4. The analysis will have been known by the end of next week.
- _____
- ? _____
5. This experiment will have been finished by that time tomorrow.
- _____
- ? _____

Task 9. Open the brackets and write the correct form of the verbs.

1. New medicinal equipment _____ (to show) to the specialists by the end of the Congress.
2. This book _____ (to read) by him by next week .
3. The test _____ (to do) by her by Thursday.

4. The experiment_____ (to finish) by January.
5. The classroom _____ (to clean) by 2 o'clock.

Task 10. Choose the correct option.

1. It _____ by Sunday.
- a) will have been read b) will read c) will have been readed
2. The work _____ by the time they return from Paris.
- a) will have been finished b) will have been finish c) will have finished
3. This question _____ for the third time by the time he answers it.
- a) will have repeated b) have been repeated c) will have been repeated
4. We _____ there by New Year.
- a) will have gone b) will have been gone c) will been went
5. Students _____ their exams by next term.
- a) will have been passed b) will have passed c) will passed

MODULE III

FOREIGN EDUCATIONAL ENVIRONMENT

UNIT 20

<i>VOCABULARY AND READING</i>	Text 1. Great Britain Text 2. London Text 3. British Royal Family
<i>GRAMMAR: THEORY AND PRACTICE</i>	Articles. General Use
<i>SPEAKING</i>	Great Britain

GREAT BRITAIN

TEXT

Vocabulary

climate	клімат
coast	узбережжя
comparatively	порівняно
current	течія, потік
decade	десятиліття
House of Commons	Палата Громад
House of Lords	Палата Лордів
industrialized country	промислова країна
island	острів
legislation	законодавство
national policy	національна політика
parliamentary monarchy	парламентська монархія
plenty of	багато
principal river	головна річка
scenery	пейзаж
scrutiny	перевірка
shallow sea	неглибоке море
suitable	придатний

surface	поверхня
the British Isles	Британські острови
to consist of	складатися з
to develop	розвивати
to divide	ділити
to influence	впливати
to occupy	зайняти
to separate	відділяти
to vote	голосувати
variety	різноманітність

Read and translate the text.



The United Kingdom of Great Britain and Northern Ireland consists of the Island of Great Britain and the northern part of the Island of Ireland (the southern part of which is the Republic of Eire) and a number of small islands especially to the west of Scotland. The country is usually called Great Britain.

The Island of Great Britain is divided into three parts – England, Wales and Scotland. England and Wales form the southern part of the island and Scotland occupies its northern part.

From the west, Great Britain is washed by the Atlantic Ocean, from the east by the stormy North Sea and the southern coast is washed by the English Channel (which separates Great Britain from the continent), the narrower part of which is called the Strait of Dover. It is quite close to the continent, being only 22 miles wide.

Being comparatively small, Britain is known for a variety of scenery found on such a small area. One can find here both hilly areas and flat fields as well as lofty mountains. The surface of Eastern England is flat. Scotland and Wales are hilly and mountainous.

In the west we can see the Cambrian Mountains occupying the greater part of Wales; in the north – the Cheviot Hills separating England from Scotland. The mountains are not really high in Great Britain. There are sixteen lakes here. This part of the country, called the Lake District, is the most beautiful and the wettest part of Great Britain.

There are many rivers in Britain, but none of them being very long as compared with the greatest rivers of the world. The principal rivers are the Severn, the Thames and the Trent. The Severn is the longest river in Britain but the Thames is the most important one. The Thames is rather wide and deep. Its current being slow, it is quite suitable for navigation. The seas surrounding the British Isles are shallow – usually less than 300 feet deep. It is the home of plenty of fish, a million tons of which are caught every year.

The warm currents of the Atlantic Ocean influence the climate of Great Britain. Winters are not severely cold and summers are rarely hot. The best time of the year in GB is spring (of course, it rains in spring too). The two worst months in Britain are January and February. They are cold, damp and unpleasant. The best place in the world then is at home by the big fireplace. Summer months are rather cold and there can be a lot of rainy days. So most people who look forward to summer holidays, plan to go abroad for the summer.

The most unpleasant aspect of English weather is fog and smog. This is extremely bad in big cities especially in London. The fog spreads everywhere so cars move along slowly and people can't see each other. They try not to be run over by a car but still accidents are frequent in the fog. The population of the United Kingdom is over 58 million people. The main nationalities are: English, Welsh, Scottish and

Irish. In Great Britain there are a lot of immigrants from former British Asian and African colonies. Great Britain is a highly industrialized country. New industries have been developed in the last three decades. The main industrial centers are London, Birmingham, Manchester, Leeds, Liverpool, Glasgow and Bristol. The capital of the country is London.

The United Kingdom is a parliamentary monarchy. Britain does not have a written constitution. Parliament is the most important authority in Britain. The monarch serves formally as the head of the state. The House of Commons consists of Parliament Members. General elections are held every five years. All citizens aged 18 have the right to vote. There are few political parties in Britain. The main ones are: the Conservative Party and the Labour Party. The party, which wins the most seats in Parliament, forms the Government; its leader becomes the Prime Minister. The functions of the House of Commons are legislation and scrutiny of government activities. The House of Lords is presided by the Lord Chancellor. The House of Lords has no real power. It's in the House of Commons that new bills are introduced and debated. Parliament is responsible for British national policy. Local governments are responsible for organizing of education, police and many others.

Geographical and Proper Names connected with Great Britain

Great Britain— Великобританія

the British Isles - Британські острови

Europe— Європа

The Thames— Темза (ріка)

the Atlantic Ocean - Атлантичний океан

the North Sea - Північне море

Ireland - Ірландія

The United Kingdom - Сполучене Королівство

Wales - Уельс

Scotland - Шотландія

The English Channel – пролив Ла-Манш

The Irish Sea – Ірландське море

The Strait of Dover - Дуврська протока, Па-де-Кале

The Severn - р. Северн

The Cambrian mountains - Кембрійські гори

The Cheviot Hills - Чевіот-Хілз

The Cumbrian - Камберлендські гори

St. Paul's Cathedral – собор св. Павла

Westminster Abbey – Вестмінстерське абатство

Buckingham Palace – Букінгемський палац

The Nelson Column – колона Нельсона

Task 1. Answer the questions.

1. What parts does the Island of Great Britain consist of?
2. What are the names of the waters washing the coasts of Great Britain?
3. What are the most important rivers in Great Britain?
4. What is the longest river in Great Britain and what is the most important one?
5. Are the mountains of the British Isles high?
6. Are the rivers in Great Britain connected by means of canals?
7. Is the Thames located in Scotland?
8. Are the seas surrounding Great Britain shallow or deep?
9. Are winters cold in Great Britain?
10. What is the capital city of Great Britain?
11. What kind of monarchy is the United Kingdom?
12. What are the main political parties in Britain?

13. At what age can people vote in Great Britain?
14. What are the functions of the House of Commons?
15. What is the Parliament in Britain responsible for?
16. What party forms the Government?

Task 2. Read and fill in one appropriate word in each gap.

1. The largest cities of GB besides London _____ Birmingham, Glasgow, Liverpool, Manchester, Sheffield, Bristol, Leeds, Edinburgh.
2. The surface of the British _____ varies very much. The north of Scotland _____ mountainous and is called the Highlands, while the south, which has beautiful valleys and plains, is called the Lowlands.
3. The weather _____ the favorite conversational topic in Great _____. After they greet each other, they start talking _____ the weather.
4. The British Isles _____ separated from European continent by the North Sea and the English Channel. The western coast of Great _____ is washed by the Atlantic Ocean and the Irish Sea.
5. The UK is made up of _____ countries: England, Wales, Scotland and Northern Ireland. Great _____ consists of England, Scotland and Wales and doesn't include Northern Ireland. The capital of the UK is _____.
6. There _____ a lot of rivers in Great _____, but they are not very long. The Severn is the longest river, while the Thames _____ the deepest and the most important one.
7. There _____ two versions of the origin of the name of the tower. The first version says that Big Ben _____ named after Sir Benjamin Hall, who ran the casting of the bell. Another says that the bell got _____ name after Benjamin County, _____ very famous boxer in the heavyweight division at the time.

Task 3. Look at the pictures and discuss them. Work in pairs and prepare a short speech about each one.



LONDON

TEXT 2

Vocabulary

arts	мистецтво
castle	замок
commerce	комерція
definitely	безумовно
development	розвиток
diverse	різноманітний
education	освіта
entertainment	розваги
healthcare	охорона здоров'я
importance	важливість
landmarks	орієнтири
leading global city	провідне глобальне місто
to be located	розташована
media	ЗМІ
multicultural	мультикультурний
passenger	пасажирський
professional service	професійний сервіс
to contribute	робити внесок
underground railway network	мережа підземних залізниць
world's leading financial centre	провідний світовий фінансовий центр

Read and translate the text.

London is the capital city of England and one of the biggest cities in the world. It is located on the River Thames. London's history goes back to its founding by the Romans, who named it Londinium.

London is a leading global city, with strengths in the arts, commerce, education, entertainment, fashion, finance, healthcare, media, professional services, research and development, tourism and transport all contributing to its importance.



It is the world's leading financial centre alongside New York City. London Heathrow is the world's busiest airport by the number of international passengers. London has 43 universities. In 2012 London will become the first city to have hosted the modern Summer Olympic Games three times.

London has diverse cultures, and more than 300 languages are spoken within the city. So, London is definitely a multicultural city!

It is an interesting city with hundreds of castles, museums, gardens, theatres and cinemas. Some famous landmarks that tourists can visit are the London Eye, St Paul's Cathedral, Wembley Stadium and of course Big Ben. London is home to numerous museums, galleries, libraries, sporting events and other cultural institutions, including the British Museum, Tate Modern, and 40 theatres. The London Underground is the oldest underground railway network in the world.

Tourists also go to London to do their shopping. Oxford Street is the busiest shopping street in London.

Task 1. Answer the questions.

1. Which city is the capital of England?
2. Name three facts about London.

3. What can a tourist do in London?
4. Where else can someone go sightseeing in London?
5. What do you know about London's buses and taxis?
6. Which is London's busiest shopping street?

Task 2. Read and fill in one appropriate word in each gap.

London _____ the capital of Great Britain, its political, economic and cultural center. London is _____ ancient city. It _____ more than twenty centuries old. The population _____ London, including its suburbs is more than ten million people.

London is one of the biggest cities _____ the world and the largest city in Europe. It is situated on the banks of the _____ Thames.

One of _____ greatest English churches – St. Paul's Cathedral – is here. It was designed and built by an outstanding English architect Christopher Wren _____ 1710.

Not far away is Westminster – the administrative center _____ London. The Houses of Parliament _____ situated here. It _____ the seat of the British Government. The building is very beautiful with its two towers and a big clock called Big _____.

Westminster Abbey, _____ kings and queens are crowned, is opposite the Houses _____ Parliament. Many famous _____ are buried here, among them Newton, Darwin, Dickens and Kipling.

BRITISH ROYAL FAMILY

TEXT 3

Vocabulary

charity	благодійність
commonwealth	співдружність
devotion	відданість
enormous	величезний
formal definition	формальне визначення

overseas visits	зарубіжні візити
royal family	королівська сім'я
the globe	глобус
to comprise	включає в себе
to include	включити
to reign	царювати
to rule the country	правити країною
to support	підтримувати

Read and translate the text.

The British royal family comprises the monarch of the United Kingdom and her close relations. There is no strict legal or formal definition of who is or is not a member of the British royal family, and apart from Queen Elizabeth II herself, different lists will include different people.

The Queen has ruled for longer than any other Monarch in British history, becoming a much loved and respected figure across the globe. Her extraordinary reign has seen her travel more widely than any



other monarch, undertaking many historic overseas visits. Known for her sense of duty and her devotion to a life of service, she has been an important figurehead for the UK and the Commonwealth during times of enormous social change. Her Majesty continues to carry out a full programme of engagements, from visits to charities and schools, to hosting visiting Heads of State, to leading the nation in Remembrance and celebratory events - all supported by other members of the Royal Family.

Task 1. Answer the questions.

1. What is the name of the Queen of great Britan?
2. Who does the British royal family comprise?
3. Is there a formal definition of who is or is not a member of the British royal family?
4. What is The Queen known for?
5. Who is called “Her Majesty” in the royal family?
6. What kind of social events does the Queen carry out?

Task 2. Look at the picture and discuss the people. Work in pairs and prepare a short speech about each one.



The Queen of Great Britain, Elisabeth II, has two birthdays. That is because the monarch has a private and an official birthday. The Queen, who was born on April 21, 1926, celebrates the first birthday with the members of the royal family. It's also customary to celebrate the second official birthday publicly on a day during the summer, when the weather is nicer (yes, really).



Prepare a speech about «Great Britain», using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	My topic is / will be very important for you because ... I would like to tell you about Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	Initially, I want to tell you about Secondly, I have to say that Also, you have to know that To my mknowledge, ... In my humble opinion, ...
SUMMARY <i>Sum it up</i>	I'd like to finish/end by saying... To conclude... Before I finish I'd finally like to say...

GRAMMAR: ARTICLES

An article is a word that is used with a noun to specify grammatical definiteness of the noun. Articles are usually categorized as either **definite (the)** or **indefinite (a /an)**.

ARTICLES

a, THE, an, ZERO

There are lots of rules about the use of articles.

Here we'll concentrate on 3 golden rules. Most mistakes with articles are made through breaking one of these rules.

1. When we say what people's jobs are, we use **a/an**

- *She's **an** architect.*
- *He's **a** pharmacist.*
- *My grandfather was **a** teacher.*

2. Singular, countable nouns always have an article – **a/an** or **the** – or another determiner (my, your, this, that etc.)

Remember that we use the indefinite article - **a/an** - when we talk about something that is not definite.

- *I saw **a** good film yesterday. (The listener doesn't know which film.)*
- *There's **a** man at the door. (We don't know who the man is.)*
- *Do you want **a** drink?(It's not a particular drink.)*

... and we use the definite article - **the** – when we talk about something more certain.

- *I'm going to take **the** dog for a walk. (The dog is a pet – it's not just any dog.)*

- Have you seen **the** car key? (*Speaker and listener know which car. It's not just any car.*)
- They live in **the** house opposite ours. (*There's only one house opposite. It's not any house.*)

3. When we talk about things in general we usually use a plural noun or an uncountable noun with **no article**.

- Birds eat worms. ~~NOT The birds eat the worms.~~
- Water flows downhill.
- Kangaroos live in Australia.

BUT We went to **the** zoo and saw the kangaroos. (*These are particular kangaroos – not kangaroos in general.*)

PRACTISE YOUR GRAMMAR: ARTICLES

Task 1. Insert the definite or indefinite articles.

1. Did you see _____ man that I told you about?
2. Did you get _____ birthday card that I sent you?
3. He is _____ very good friend.
4. We ate _____ wonderful meal yesterday.
5. _____ meal that we ate yesterday was wonderful.
6. I have _____ test tomorrow morning.
7. Which shirt do you like? _____ blue one?
8. I have three shirts - a yellow one, an orange one, and _____ black one.
9. You must always tell _____ truth!

Task 2. Insert articles where necessary.

1. Can I have _____ coffee, please?

2. Las Vegas is ... place where you can spend _____ lot of money.
3. Travelling to _____ Egypt is not expensive.
4. She was in _____ Britain for two weeks.
5. Sheila was offered _____ job in _____ pharmacy.
6. Can you bring me _____ glass of _____ water, please?
7. I'll see you in _____ morning.
8. "Could you pass me _____ oranges?" – "Here you are".
9. "Would you like _____ cold drink?" "I'd love one. I'm very thirsty".
10. _____ apple _____ day keeps _____ doctor away.
11. I'll be back _____ next week.
12. What _____ lovely day!
13. "What's your job?" " I'm _____ pharmacist".
14. Can you tell me _____ time, please?
15. _____ Italians are famous for their pizza.
16. _____ Amazon is the largest river in _____ world, although it is not _____ longest.
17. _____ friend of mine is studying pharmacy at _____ University.
18. _____ lunch will be served at one o'clock, so don't be late.
19. It's very important that _____ young eat _____ balanced diet while they are growing.
20. _____ English talk _____ lot about _____ weather.
21. When I finish my studies, I'm going to _____ United States for _____ year.
22. Brussels is _____ capital of Belgium.
23. Texas is famous for _____ oil and cowboys.

UNIT 21

VOCABULARY AND READING	English Universities and Colleges
GRAMMAR: THEORY AND PRACTICE	Articles in Geographical Names
SPEAKING	English Universities and Colleges

ENGLISH UNIVERSITIES AND COLLEGES

TEXT

Vocabulary

Bachelor of Arts	бакалавр гуманітарних наук
Bachelor of Science	бакалавр природничих наук
both... and	як...так і
curriculum	курс навчання, учбовий план
theology	теологія
to admit	допускати, приймати
to consist of	складатися з
to last	тривати

Read and translate the text.

The oldest universities in Great Britain are Oxford and Cambridge. Many universities are fairly new. Modern English universities are in large cities, such as London, Leeds, Manchester, Birmingham and others. London University is the biggest of the modern English universities. In many ways the London University has

departed from the traditions of Oxford and Cambridge. It consists of various colleges and other institutions. It has medical schools too.

A university usually has both faculties and departments. The most common faculties are medicine, law, arts, science and theology. There are various departments, such as engineering, economics, commerce, agriculture, music, etc.

The course of studies at a university lasts six years. The curriculum is wide. All universities admit men and women but the share of men is 75 per cent.

Each faculty is headed by one or more professors. A staff of lecturers and tutors (teachers) help them. Professors and lecturers give lectures to large numbers of students, and tutors teach smaller groups.

Colleges provide specialized training. There are medical, teachers', technical and other colleges at a university. The course of studies at a college is only three years. At medical colleges students study various subjects, learn to treat patients and have practical work at hospitals. After graduating from a college they are given a certificate.

Students pay for taking exams, for attending lectures, for taking books from the library.

A student being a great success in study may take a degree of Bachelor of Arts or of Science.

Task 1. Answer the questions

1. What universities are the oldest ones in Great Britain?
2. What cities are modern English universities located in?
3. What university is the biggest of the modern universities?
4. What colleges does London University consist of?
5. What faculties are the most common ones?
6. What departments are there at a university?
7. How long does the course of studies last?
8. Whom is each faculty headed by?
9. What kind of training do colleges provide?

10. What colleges are there at a university?
11. What do students study and learn at medical colleges?
12. What do students pay for?
13. What degree may a student being a great success in study take?

Task 2. Translate the following sentences

1. Лондонський університет - найбільший із сучасних університетів Великобританії. 2. У нього входить кілька медичних шкіл і коледжів. 3. Він складається з різних коледжів і навчальних установ. 4. Він не має давніх традицій.

Task 3. Tell about education in Great Britain using the following word combinations.

The oldest English universities; modern universities; London University; its colleges and medical schools; the course of studies; the most common departments; university staff; colleges and their specialized training; medical colleges; pay for study; taking a degree of Bachelor of Science.



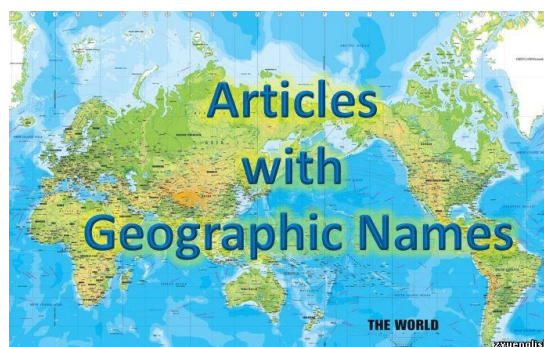
Individuals associated with Cambridge University have won 89 Nobel Prizes in all six disciplines covering physics, chemistry, peace, literature, physiology, and medicine.



Prepare a speech about «English Universities and Colleges», using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	I would like to tell you about My topic is / will be very important for you because ... Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	At first, I want to tell you about Secondly, I have to say that Speaking for myself... In my view... For me... As I see it... As far as I'm concerned...
SUMMARY <i>Sum it up</i>	So, that's a bit about my ... Anyway, that's my ... So, to cut a long story short, ...

GRAMMAR: ARTICLES IN GEOGRAPHICAL NAMES



We generally use either '**the**' or '**no article**' with geographical names in English. There isn't a lot of logic! We just need to learn if we need '**the**' or '**no article**' for each kind of place.

We use '**no article**' with:

- Lakes: *We visited Lake Geneva.*
- Mountains: *I saw Mount Fuji from the aeroplane.*
- Continents: *She loves living in Asia.*
- Most countries: *She travelled to Chile last year. (But: **The USA / the United States, the Netherlands, the Philippines, the United Kingdom / the UK.**)*
- Counties, states, provinces, regions: *They live in California.*
- Cities, towns, villages: *He stayed in Paris for a week last year.*
- Islands: *Bali is popular with Australian tourists.*

We use '**the**' with:

- Rivers: ***The** River Nile flows through Egypt.*
- Mountain ranges: *We ski in **the** Alps every year.*
- Deserts: *She travelled across **the** Sahara.*
- Oceans and seas: *We sailed around **the** Mediterranean.*
- Groups of islands: *They went to **the** Canary Islands.*

PRACTISE YOUR GRAMMAR: ARTICLES IN GEOGRAPHICAL NAMES

Task 1. Insert the definite or indefinite articles

10. Did you see _____ man that I told you about?
11. Did you get _____ birthday card that I sent you?
12. He is _____ very good friend.
13. We ate _____ wonderful meal yesterday.
14. _____ meal that we ate yesterday was wonderful.
15. I have _____ test tomorrow morning.
16. Which shirt do you like? _____ blue one?
17. I have three shirts - a yellow one, an orange one, and _____ black one.
18. You must always tell _____ truth!

Task 2. Insert the definite article where appropriate.

- a) _____ United Kingdom
- b) _____ Germany
- c) _____ Kalahari Desert
- d) _____ Carpathian Mountains
- e) _____ Mount Everest
- f) _____ European Union
- g) _____ Thames
- h) _____ Holland
- i) _____ Dnipro
- j) _____ USA
- k) _____ Isle of Man
- l) _____ Northern Africa
- m) _____ Indian Ocean
- n) _____ Baltic Sea
- o) _____ Middle East

- p)_____ Western Hemisphere
- q)_____ Sahara
- r) _____ Iberian Peninsula
- s)_____ Great Britain
- t)_____ English Channel
- u)_____ Niagara Falls
- v) _____ Mount Fuji
- w) _____ Himalayas
- x)_____ Oklahoma City
- y)_____ Philippines
- z)_____ Asia

Task 3. Insert the definite article where appropriate.

1. Several rivers run into _____ sea at _____ New York. _____ most important is _____ Hudson River which empties to _____ Atlantic Ocean. Besides _____ Hudson there are _____ two other rivers: _____ East River and _____ Harlem River.
2. _____ Chicago is on _____ Lake Michigan.
3. _____ France is to _____ north of _____ Italy.
4. _____ Red Sea is between _____ Africa and _____ Asia.
5. _____ Philippines are situated to _____ southeast of _____ Asia.
6. Is _____ Canada _____ largest country in _____ America?
7. _____ Kazbek is _____ highest peak of _____ Caucasus.
8. _____ Europe and _____ America are separated by _____ Atlantic Ocean.
9. _____ Nile flows across _____ northeastern part of _____ Africa to _____ Mediterranean Sea.
10. _____ Pacific Ocean is very deep.
11. _____ United Kingdom consists of _____ Great Britain and _____ Northern Ireland.
12. There is a splendid view of _____ Lake Geneva from this hotel.

UNIT 22

VOCABULARY AND READING	University of Oxford
GRAMMAR: THEORY AND PRACTICE	Prepositions of Time
SPEAKING	University of Oxford

UNIVERSITY OF OXFORD



Vocabulary

alumnus (<i>pl.</i> alumni)	випускник (випускники)
ancient	стародавній
postgraduate	аспірант
research	дослідницький
to attend lectures	відвідувати лекції
to ban	заборонити
to refer to	відноситись до
tutorial	тьюторіал
undergraduate	студент

Read and translate the text.

The University of Oxford is a collegiate research university in Oxford, England. There is evidence of teaching as far back as 1096, making it the oldest

university in the English-speaking world and the world's second-oldest university in continuous operation. It grew rapidly from 1167 when Henry II banned English students from attending the University of Paris. After disputes between students and Oxford townsfolk in 1209, some academics fled north-east to Cambridge where they established what became the University of Cambridge. The two "ancient universities" are frequently jointly referred to as "Oxbridge". The history and influence of the University of Oxford has made it one of the most prestigious universities in the world.

The university is made up of 38 constituent colleges, and a range of academic departments which are organized into four divisions. All the colleges are self-governing institutions within the university, each controlling its own membership and with its own internal structure and activities. It does not have a main campus, and its buildings and facilities are scattered throughout the city center. Undergraduate teaching at Oxford is organized around weekly tutorials at the colleges and halls, supported by classes, lectures, seminars, and laboratory work provided by university faculties and departments; some postgraduate teaching includes tutorials organized by faculties and departments. It operates the world's oldest university museum, as well as the largest university press in the world and the largest academic library system nationwide. The university is consistently cited as among the world's best.

Oxford has educated many notable alumni, including 29 Nobel laureates, 27 prime ministers of the United Kingdom and many heads of state and government around the world. As of 2017, 69 Nobel Prize winners, 3 Fields Medalists, and 6 Turing Award winners have studied, worked, or held visiting fellowships at the University of Oxford. Its alumni have won 160 Olympic medals. Oxford is the home of the Rhodes Scholarship, one of the world's oldest international scholarships.

Task 1. Answer the questions.

1. When was the University of Oxford founded?
2. Why did the University of Oxford grow rapidly from 1167?

3. When was the University of Cambridge founded?
4. Why is the University of Oxford one of the most prestigious universities in the world?
5. What is Oxford made up of?
6. How is undergraduate teaching at Oxford organized?
7. Has Oxford educated many notable alumni?

Task 2. Match the words from column A with their definitions from column B.

Column A	Column B
1)alumnus	a) a student who has obtained a degree from a university, etc, and is pursuing studies for a more advanced qualification
2) undergraduate	b) a former pupil or student, especially a male one, of a particular school, college, or university
3) postgraduate	c) a method of transferring knowledge and may be used as a part of a learning process
4) tutorial	d) a university student who has not yet taken a first degree

Task 3. Correct the statements below.

1. The University of Oxford is the world's oldest university in continuous operation.
2. The University of Oxford has a main campus.
3. The University of Cambridge is older than the University of Oxford.
4. Oxford is seldom cited as among the world's best.



Water can boil and freeze at the same time. Seriously, it's called the 'triple point', and it occurs when the temperature and pressure is just right for the three phases (gas, liquid, and solid) of a substance to coexist in thermodynamic equilibrium.



Prepare a speech about « University of Oxford », using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	To begin with, I want to tell you about I would like to tell you about My topic is / will be very important for you because ... Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	Firstly, I want to tell you about Secondly, I have to say that Also, you have to know that I think, To my mind, ... In my opinion, ... I believe, it is important to know that
SUMMARY <i>Sum it up</i>	Finally, ... I'd like to finish/end by saying... To conclude... Before I finish I'd finally like to say...

GRAMMAR: PREPOSITIONS PREPOSITIONS OF TIME

We commonly use prepositions to show a relationship in space or time or a logical relationship between two or more people, places or things. A preposition is a word used to link nouns, pronouns, or phrases to other words within a sentence. Prepositions are usually short words, and they are normally placed directly in front of nouns.

*I study **at** the National University of Pharmacy.*

*I'll meet you **on** Friday evening.*

*He went **to** the University very early yesterday.*

A preposition generally, but not always, goes before its noun or pronoun. One of the undying myths of English grammar is that you may not end a sentence with a preposition. But look at the first example that follows.

*That is something I cannot agree **with**.*

*Who do you live **with**?*



A preposition of time is a preposition that allows you to discuss a specific time period such as a date on the calendar, one of the days of the week, or the actual time something takes place. Prepositions of time are the same words as prepositions of place, however they are used in a different way.

First of all, we use **AT** with specific times (hour / minutes):

- *I get up **at** 7 am.*

- *My English class starts **at** 10 am.*
- *She finishes work **at** 6.15 pm.*

Secondly, we use **AT** for a holiday period of two or more days:

- *Do you normally get together with your relatives **at** Christmas?*
- *Did you eat a lot of chocolate **at** Easter?*

Notice the use of the preposition of time **at** in the following standard expressions: *at night\ at midnight, at noon, at the weekend, at the same time, at present.*

We use **ON** for specific days, days of the week and dates:

- *I will return to Kharkiv **on** Wednesday.*
- *My friends got married **on** Friday the 13th.*
- *I was with my friends **on** New Year's Eve.*

We use **IN** for specific months, years, seasons, decades, centuries and lengths of time.

- *My birthday is **in** January. (I don't mention the date, just the month)*
- *My grandmother was born **in** 1927.*
- *The river near my house is dry **in** Summer.*
- *The company was founded **in** the 19th century.*
- *We need to have this report ready **in** 15 minutes.*

Notice the use of the prepositions of time **in** and **on** in these common expressions: *in the morning, in the afternoon, in the evening*

BUT *on Tuesday morning, on Saturday mornings, on Sunday afternoon, on Monday evening.*

PAY ATTENTION! When we say **last, next, every, this** we do not use **at, in, on**.

- I went to Kiev **last** June. (**not** in last June)
- He's coming back **next** Tuesday. (**not** on next Tuesday)
- I go home **every** Easter. (**not** at every Easter)
- We'll call you **this** evening. (**not** in this evening)

AFTER / LATER

Use **after** + **phrase**, and use **later** alone (at the end of a sentence or phrase).

- I'll _____ call _____ you **later**.
I'll call you **after I get home** from work.

You can say "**later + time period**" to refer to an unspecified time in the future, for example:

- I'll finish the project **later this week**.
- We'll go on vacation **later this year**.

AGO / BEFORE

Use **ago** to talk about past times in reference to the current moment.

Use **before** to talk about past times in reference to another moment in the past.

- I graduated from the National University of Pharmacy 3 years **ago**.
- I met my friend 2 weeks **before** I graduated.
-

BY / UNTIL

Use **by** for one specific event that will happen before a certain time in the future. Use **until** for a continuous event that will continue and then stop at a certain time in the future.

- *Please send me the information **by** Monday.*
- *He's staying in Kharkiv **until** the 30th.*

DURING / WHILE

Both **during** and **while** mean that something happens at the same time as something else.

Use **during** + **noun**.

- *She was studying **during** the summer.*

Use **while** + **subject** + **verb**, or **while** + **gerund**.

- *She was worried **while** she was passing the exam.*
- *She was worried **while** passing the exam.*

FROM... TO / TILL / UNTIL

We use **from** + **to** / **till** / **until** to define the beginning and end of a time period.

- *The museum is open **from** 8 AM **to** 4 PM.*
- *Jack will be on vacation **from** tomorrow **until** next Friday.*
- *I studied English **from** 2001 **till** 2004.*

FOR / SINCE

For is used for a period of time, and **since** is used to reference a specific point in time.

- *She's been working at the chemist's shop **for** six months.*
*She's been working there **since** she graduated from college.*

AS SOON AS / AS LONG AS

As soon as means "immediately after another event."

- *We'll call you **as soon as** we arrive.*

As long as means “for the period of time” or “on the condition that”:

- *I'll take the job **as long as** I have the freedom to work from home a few days a week.*

PRACTISE YOUR GRAMMAR: PREPOSITIONS OF TIME

TASK 1. Choose the correct option a, b or c .

1. I usually read the scientific journal ____ the morning.
a) on
b) at
c) in
2. She doesn't work ____ Sundays.
a) in
b) on
c) during
3. The lesson starts ____ 8:30 am.
a) on
b) for
c) at
4. We have lived in Kharkiv ____ 2008.
a) since
b) for
c) on
5. The colleagues sometimes meet ____ lunchtime.
a) at
b) on
c) for
6. All the family gets together ____ Christmas day.
a) in

- b) on
- c) at

Task 2. Choose and underline the correct preposition.

1. Goodbye! See you (on/at) Friday.
2. Where were you (in/on) 28 February?
3. I got up (in/at) 8 o'clock this morning.
4. I like getting up early (on/in) the morning.
5. My sister got married (on / in) May.
6. The Kharkiv Pharmaceutical Institute was founded (on / in) 1921.
7. Did you go to the library (in / on) Friday evening?
8. Did you go to the library (in / on) Friday?
9. Do you often study (in / on) the evening?
10. Let's meet (on / at) 7.30 tomorrow.
11. I'm starting my new job (at / on) 3 June.
12. All applicants for higher education have holidays (in / at) summer.

Task 3. Fill in the gaps using the correct preposition and translate the sentences.

1. The second double period starts ____ 2:30 pm.
2. We usually go out for dinner ____ the weekend.
3. I will give her flowers ____ her birthday.
4. The applicants for higher education were listening carefully ____ the lesson.
5. They have been studying ____ a long time.
6. I often go to the swimming pool ____ winter.
7. I was born ____ March 15th.
8. The computer was invented ____ the 20th century.

9. The group monitor has been feeling sick ____ Monday.
10. We all finished the exercise ____ the same time.
11. A lot of students go home ____ Christmas.
12. I have lived in Kharkiv ____ I was born.
13. We will have chemistry ____ next term.
14. I must finish this essay and hand it in ____ midday ____ Friday.
15. We had an important text in analytical chemistry ____ last Monday.
16. I saw him ____ Monday, but I've not seen him ____ then.

Task 4. Match the words from column A with ones from column B to make word combinations and make up sentences using the following phrases.

Column A	Column B
1. to study in	a. at Easter
2. to get up at	b. year
3. to go to church	c. the morning
4. to go to the University on	d. at midday
5. to finish school this	e. 7 am
6. to have lunch	f. an important exam
7. to worry before	g. Wednesday evening

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Task 5. Find and correct the mistakes in the following sentences.

1. We have long holidays at summer.
2. Do we have Biology in Friday morning?
3. The lesson is on 8.30 am.
4. Where was he in the weekend?
5. Where is he on the moment?
6. Your teacher is not here at the present.
7. Students usually go home at New Year's Eve.
8. What do you usually do at the evening?
9. Do you get any presents at Christmas Day?
10. My friend was born on 1999.
11. We have organic chemistry at Tuesday.
12. Will you be at home on this evening?
13. We had practice in the drugstore in last summer.
14. I will be back after ten minutes so wait for me.

Task 6. Make up sentences using the following phrases.

- 1 To get together at Christmas

- 2 To study hard in the evening

- 3 To get up early in the morning

- 4 To go out at the weekends

- 5 Last summer holiday

- 6 Since last year

7 To go to the library on Friday afternoon

8 To do your English homework before the lesson

UNIT 23

<i>VOCABULARY AND READING</i>	Pharmaceutical Education in Great Britain
<i>GRAMMAR: THEORY AND PRACTICE</i>	Prepositions of Place
<i>SPEAKING</i>	Pharmaceutical Education in Great Britain

PHARMACEUTICAL EDUCATION IN GREAT BRITAIN

TEXT

Vocabulary

advanced	передові
cognate sciences	споріднені науки
curriculum	курс навчання
hospital ward	лікарняна палата
interaction	взаємодія
license	давати право
Master of Science	Магістр наук
minor	другорядний
technique	метод
the apprenticeship	навчання
the pharmaceutical jurisprudence	фармацевтична юриспруденція
to appoint	призначати
to conduct	проводити
to embrace	включати, охоплювати
to encompass	охоплювати
to engage in	займатися
to expect	чекати

Read and translate the text.

The history of pharmaceutical education has closely followed that of medical education. As the training of the physician underwent changes from the apprenticeship system to formal educational courses, so did the training of the pharmacist. The first pharmaceutical colleges in Great Britain were founded at the beginning of the nineteenth century.

The course of instruction leading to a degree in pharmacy was extended from four to five years in 1960. The first and frequently the second year of training, embracing general education subjects, are often provided by a school of arts and sciences. Many institutions, in addition, offer graduate courses in pharmacy and cognate sciences leading to the degrees of Master of Science and Doctor of Philosophy in pharmacy, pharmacology, or related disciplines. These advanced courses are intended especially for those, who are preparing for careers in research, manufacturing, or teaching in the field of pharmacy.

Several schools of pharmacy have now adopted a six-year professional course leading to the degree of Doctor of Pharmacy. This professional training includes many subjects common to the medical curriculum and involves training in hospital wards. In this service a professionally trained pharmacist is expected to give advice to the physician in the techniques of administering medication and possible interaction of drugs in the patient, along with expected side effects.

Since the treatment of the sick with drugs encompasses a wide field of knowledge in the biological and physical sciences, it is obvious that understanding of these sciences is necessary for adequate pharmaceutical training. The basic five-year curriculum in British colleges of pharmacy embraces physics, chemistry, biology, bacteriology, physiology, pharmacology, and many other specialized courses such as dispensing pharmacy. As the pharmacist is engaged in business as

well, special training is provided in merchandising, accounting, computer techniques, and pharmaceutical jurisprudence. All other countries requiring licenses to practice offer the same basic curriculum with minor variations.

Before one is permitted to practice pharmacy in Great Britain as well as in other countries, in which a license is required, an applicant must be qualified by graduation from a recognized college of pharmacy, meet specific requirements for experience, and pass an examination conducted by a board of pharmacy appointed by the government. The passing of this board examination carries with it the legal right to practice pharmacy. The holder is then designated a registered or licensed pharmacist.

Task 1. Answer the following questions:

1. What changes did the training of the pharmacist undergo?
2. When were the first pharmaceutical colleges founded in Great Britain?
3. When was the course of instruction extended?
4. Which years of training are provided by a school of arts and sciences?
5. What additional graduate courses do many institutions offer?
6. What professional training includes medical subjects and training in hospital wards?
7. What is the professionally trained pharmacist expected to do?
8. What sciences does the basic five-year curriculum embrace?
9. What curriculum do other countries offer?
10. What is required to be permitted to practice pharmacy in Great Britain?

Task 2. Fill in the words from the list, then make sentences using the completed phrases.

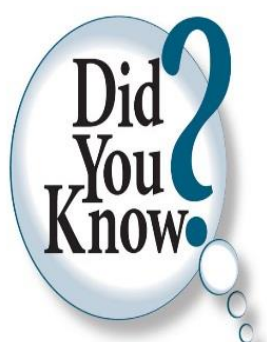
apprenticeship, advanced, cognate, hospital, related, adequate, side, pharmaceutical, legal, minor.

1. _____ system
2. _____ science
3. _____ disciplines

4. _____ courses
5. _____ wards
6. _____ training
7. _____ jurisprudence
8. _____ effects
9. _____ variations
10. _____ right

Task 3. Correct the statements below.

1. The history of pharmaceutical education is not connected with the history of medical education.
2. A four-year instruction course was adopted in 1960.
3. All pharmaceutical institutions offer courses leading to the degrees of Master of Science and Doctor of Philosophy.
4. The compulsory professional course in pharmacy is 6 years.
5. Different countries offer different curricula in pharmaceutical education.
6. Before one is permitted to practice pharmacy in Great Britain he must pass an examination conducted by a board of pharmacy appointed by his college.



The University of Oxford is the second oldest performing University in the World. The oldest one is the University of Bologna. The reason why Oxford was not bombed at all during the WWII was the reason that Hitler wanted to use the city as a capital after conquering England.

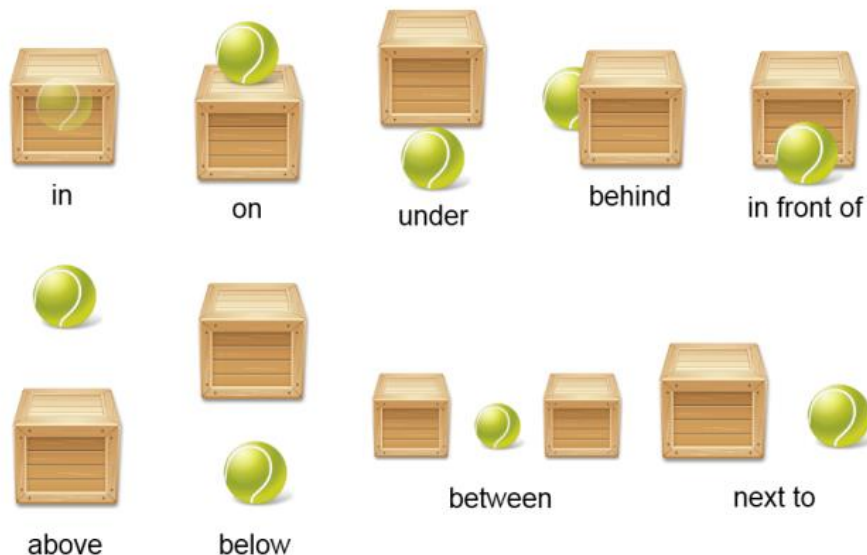


Prepare a speech about «Pharmaceutical Education in Great Britain», using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	To begin with, I want to tell you about I would like to tell you about My topic is / will be very important for you because ... Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	Initially, I want to tell you about Secondly, I have to say that Also, you have to know that I think, To my mind, ... In my opinion, ... I believe, it is important to know that
SUMMARY <i>Sum it up</i>	So all in all... To sum up... To conclude...

GRAMMAR: PREPOSITIONS OF PLACE

A preposition of place is a preposition, which is used to refer to a place where something or someone is located.



There are three frequently used prepositions of place **AT**, **ON** and **IN**; and they can be used to discuss an almost endless number of places.

The preposition **AT** is used in the following descriptions of place/position:

1. With specific places or points in space

*I had a cup of coffee **at** Helen's (house/flat).*

*There's a man **at** the door.*

*I saw her standing **at** the bus stop.*

*Write your name **at** the top of each page.*

2. With public places and shops

*I studied German **at** college/school/university.*

*Shall I meet you **at** the station?*

*We bought some bread **at** the supermarket.*

3. With exact addresses

*They live **at** 70, Sumskaya Street.*

4. With events and buildings where an event or activity takes place

*I met her **at** last year's conference.*

*She is **at** the library with her friends.*

Notice the use of the prepositions of place **at**, **in** and **on** in these *standard expressions*:

at	in	on
at home	in bed	on the floor
at work	in a taxi	on my face
at school	in a house	on the page
at university	in the picture	on the ceiling
at college	in a lift (elevator)	on the wall
at the top	in the newspaper	on the radio
at the bottom	in the sky	on television (on TV)
at the airport	in a row	on the left, on the right

The preposition **ON** is used in the following descriptions of place/position:

1. With surfaces, or things that can be thought of as surfaces

The textbook is **on** my desk.

There was a beautiful painting **on** the wall.

This department is **on** the second floor.

Write down your full names **on** a piece of paper.

2. With roads/streets, or other things that can be thought of as a line, e.g. rivers

It is the second turning **on** the left.

Ivan lives **on** Pushkinskaya Street.

The preposition **IN** is used in the following descriptions of place/position:

1. With geographical regions

Yaremche is a very small village **in** Ukraine.

2. With cities, towns and larger areas

Do you like living **in** Kharkiv?

They were having a picnic **in** the park.

3. With buildings/rooms and places that can be thought of as surrounding a person or object on all sides

Can you take a seat **in** the waiting room, please?

I have left my bag **in** the office.

4. With containers

There is fresh milk **in** the fridge.

I think I have a tissue **in** my pocket.

5. With liquids and other substances, to show what they contain

Do you take milk **in** your coffee?

There is a lot of fat **in** cheese and butter.

PRACTISE YOUR GRAMMAR: PREPOSITIONS OF PLACE

TASK 1. Choose the correct option *a, b or c*.

1. Misha is sitting _____ the desk.
a) at
b) to
c) in
2. The picture is hanging _____ the wall.
a) in
b) on
c) at
3. People watch TV _____ the living room.
a) at
b) on
c) in
4. We live _____ 51 Derevyanko Street.
a) on
b) at
c) in
5. This group is _____ the lesson of chemistry now.
a) in
b) at
c) on
6. He is _____ the hospital, having a heart operation.
a) at
b) on

c) into

7. We met each other _____ last year's conference.

a. in

b. at

c. on

8. There is no oil _____ the fridge.

a) on

b) in

c) at

9. Manchester is a city _____ Great Britain.

a) at

b) on

c) in

10. This department is _____ the first floor.

a) in

b) on

c) at

Task 2. Choose and underline the correct preposition.

1. I always keep some extra money (at\in) my bag in case of emergencies.

2. I will read this scientific journal today (at\in) home.

3. Do you live (on\in) a house or an apartment?

4. Did you learn English (at\in) the USA?

5. She grew up (at\in) Kharkiv.

6. I read about this invention (on\in) the newspaper yesterday.

7. He went for a swim (at\in) the river
8. There are a lot of chemical tables (at\on) the walls in this classroom.
9. The information is (on\at) the top of the page.
10. Were you (at\on) the conference too?

Task 3. Fill in the gaps using the correct preposition and translate the sentences.

1. Did you learn German ____ school?
2. He was not ____ college last week.
3. Bogdan studies ____ the National University of Pharmacy.
4. I live ____ 12 Darwin Street.
5. Are children still ____ bed?
6. I have found this information ____ this book.
7. Our friends met us ____ the door.
8. Are you ____ the department right now?
9. The head of the department was ____ work when I called.
10. There were no clouds ____ the sky.
11. Are you ____ the chemist's shop now?

Task 4. Match the words from column A with ones from column B to make word combinations and make up sentences with them.

Column A	Column B
1) to be at	a) at university
2) to study	b) of the page
3) at the top	c) the conference
4) to live	d) at 10, Sumskaya Street
5) on the second	e) village in Ukraine

6)a very small	f) floor
----------------	----------

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

Task 5. Find and correct the mistakes in the following sentences.

1. My apartment is at the third floor.

2. My friend lives on 27, Pushkinskaya Street.

3. This city is not at the USA.

4. The fifth door is in the left.

5. That laboratory was on the basement.

6. My family used to live at the small village.

7. Do you think it is a good idea to ban smoking on public places?

8. My house is on the end of the street.

9. I saw this interesting scientific programme in TV yesterday.

10. There are some vegetables at the fridge.

UNIT 24

<i>VOCABULARY AND READING</i>	Western Pharmacy Education
<i>GRAMMAR: THEORY AND PRACTICE</i>	Phrasal Verbs
<i>SPEAKING</i>	Western Pharmacy Education

WESTERN PHARMACY EDUCATION

TEXT

Vocabulary

Accreditation Council for Pharmacy Education	Акредитаційна Рада з фармацевтичної освіти
coursework	курслова робота
credentialing requirements	вимоги щодо верифікації\атестації
curriculum	навчальний план
Doctor of Pharmacy	Доктор фармації
essential skills	основні навички
foundational courses	основні курси
graduation	закінчення учбового закладу
medical dosages	лікарські дози
medication interactions	лікарські взаємодії
medication therapy	лікарська терапія
patient consultations	консультації пацієнта
pre-professional (undergraduate)	допрофесійний (бакалавр)
preventive health care	профілактичне медичне обслуговування
primary health care	первинна медична допомога

to achieve optimum results

для досягнення оптимальних
результатів

to obtain

отримати

university degree

університетська освіта

Read and translate the text.

Pharmacy is a key player in primary and preventive health care and is defined as the science of the composition, use and dispensing of drugs. Pharmacy practice is committed to achieving optimum results from medication therapies in the interest of building a healthier society.

Individuals who want to become pharmacists will need a Doctor of Pharmacy (Pharm.D.) degree. To be accepted into a Pharm.D. program, students must first complete a pre-professional track that is typically two years in length and includes scientific courses in biology, chemistry, physics, anatomy and physiology. Foundational courses in pharmaceutical practices may also be included. Students may consider Pharm.D. programs that are accredited by the Accreditation Council for Pharmacy Education (ACPE). Accreditation demonstrates that a program is preparing students to meet the standards of the profession. According to the ACPE, state licensing boards require applicants to have graduated from an accredited program. Pharm.D. programs are typically completed in four years and provide instruction on medical dosages, patient consultations and medication interactions. The curricula include coursework in pharmacy law, pharmacotherapy, dosage forms and health management. Students are familiarized with the equipment used on the job, including filling machines and flow cabinets.

Clinical experience is a major segment of a Pharm.D. program. In the first two years, students take Introductory Pharmacy Practice Experiences, in which students develop essential skills, such as consulting patients, delivering immunizations and performing screenings. During the final two years, students take Advanced

Pharmacy Practice Experiences (APPEs) that place them in patient care settings under the supervision of licensed pharmacists. APPEs have rotations that allow students to experience different areas of pharmacy, including inpatient, ambulatory operations and electives.

The role of pharmacy education, pharmacist licensing, and continuing education vary from country to country and between regions/localities within countries. In most countries, pharmacists must obtain a university degree at a pharmacy school or related institution, and/or satisfy other national/local credentialing requirements. In many contexts, students are required to first complete pre-professional (undergraduate) coursework followed by about four years of professional academic studies in order to obtain a degree in pharmacy (e.g. PharmD - Doctorate of Pharmacy). Pharmacists are educated in pharmacology, pharmacognosy, chemistry, organic chemistry, biochemistry, pharmaceutical chemistry, microbiology, pharmacy practice (including drug interactions, medicine monitoring, medication management), pharmaceuticals, pharmacy law, physiology, anatomy, pharmacokinetics, pharmacodynamics, drug delivery, pharmaceutical care, nephrology, hepatology, and compounding of medications. Additional curriculum may cover diagnosis with emphasis on laboratory tests, disease state management, therapeutics and prescribing (selecting the most appropriate medication for a given patient).

Upon graduation, pharmacists are licensed either nationally or by region to dispense medication of various types in the settings for which they have been trained. Some may undergo further specialized training, such as in cardiology or oncology.

Task 1. Answer the questions.

1. What kind of degree do individuals who want to become pharmacists need?
2. What is a Doctor of Pharmacy program?
3. What does a pre-professional track include?

4. What is the duration of Doctor of Pharmacy programs?
5. What do the curricula include?
6. What is the role of clinical experience?
7. What do four-year professional academic studies include?
8. What do pharmacists need upon graduation?

Task 2. Translate the words and word combinations into Ukrainian language.

A key player, a doctor of pharmacy, pharmacy education, pharmacy practice, pharmacist licensing, pharmaceutical care, specialized training, pre-professional.

Task 3. Translate the words combinations into English language.

Лікарська терапія, курс біології, ліцензійна комісія, клінічний досвід, форма дозування, органічна хімія, програма бакалаврату, відповідати професійним вимогам.

Task 4. Choose a suitable word given in the brackets to fill in each gap.

The doctor of pharmacy degree (require\requires) completion of five years at an accredited college of pharmacy and most students applying for admission into a college (off\of) pharmacy already have an undergraduate degree. However, many schools admit students after the completion of two or three years of undergraduate pharmacy prerequisites or directly from high school into (an\a) six-year accelerated program. Any person holding a bachelor's degree in pharmacy (who\which) graduated before this date (are\is) grandfathered in and can register for (an\a) license.

To practice as (an\a) pharmacist, registration with the country, state or province's regulatory agency (are\is) required. There (are\is) often a requirement for the pharmacy graduate to have completed (an\a) certain number of hours of experience in (an\a) pharmacy under the supervision of (an\a) registered pharmacist. If the regulatory body governs (an\a) entire country, they (are\will) usually administer a written and oral examination to the prospective pharmacist prior to registration.

Task 5. Translate the sentences into Ukrainian language.

1. Pharmaceutical educational grants are awarded to promising students to further research and innovation in pharmacology.
2. Pharmaceutical education began in the United States with the founding of the Philadelphia College of Pharmacy (now the University of the Sciences in Philadelphia) in 1821.
3. Today, individuals, seeking to become pharmacists, must first complete a pre-pharmacy undergraduate program.
4. Many students find completion of a four-year program (between 120-130 semester credit hours) leading to a Bachelor of Science degree in biology, chemistry, or a similar field enhances their chances of admission.
5. Aside from the Pharm.D. program, many schools and colleges of pharmacy offer graduate degree programs (i.e., Master of Science [M.S.], Doctor of Philosophy [Ph.D.]).
6. Upon completion of all professional curriculum and practice experiences, the student will graduate and be awarded the Doctor of Pharmacy degree and typically seek licensure by examination.
7. The doctor of pharmacy degree is designed to produce graduates who are “educationally prepared for practice and should satisfy educational requirements for licensure.”
8. A new pharmacy graduate may choose to complete an optional post-graduate residency (one to three years).



In France, Pharm.D studies can only be accessed through a competitive examination happening at the end of the first year of health studies. In case of failure, it is possible to retry only once.



Prepare a speech about « Western Pharmacy Education », using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	Today I'd like to give you an overview of.. To begin with, I want to tell you about I would like to tell you about My topic is / will be very important for you because ...
MAIN BODY <i>Tell the main information</i>	Initially, I want to tell you about Secondly, I have to say that Also, you have to know that I think, To my mind, ... In my opinion, ... I believe, it is important to know that
SUMMARY <i>Sum it up</i>	Finally, ... I'd like to finish/end by saying... To conclude... Before I finish I'd finally like to say...

PRACTISE YOUR GRAMMAR: PHRASAL VERBS

A **phrasal verb** is a combination of a verb and preposition, a verb and an adverb, or a verb with both an adverb and a preposition. A phrasal verb has a meaning, which is different from the original verb. That is what makes them confusing. You may need to try to guess the meaning from the context, or, failing that, look it up in a dictionary. The adverb or preposition that follows the verb are sometimes called a particle. The particle changes the meaning of the phrasal verb in idiomatic ways.



<i>PHRASAL VERBS</i>	<i>THE MEANING</i>
1. to look after	to take care of or be in charge of someone or something
2. to grow up	to become an adult
3. to look for	to try to notice\ find someone or something
4. to look forward to	to feel pleased and excited about something that is going to happen
5. to look up	to check a word\ phrase in a dictionary
6. to find out	to discover, especially where a thing or person is, either unexpectedly or by searching, or to discover where to get or how to achieve something
7. to get off a bus\ a tram	to leave a train, bus, or aircraft
8. to get on a bus\ a tram	to go onto a bus, train, aircraft, or boat

9. to speak up	to speak more loudly
10.to hold on	to wait
11.to get over something	to become better after being ill, recover from being sick
12.to pass out	to faint, lose consciousness
13.to get rid of something	to remove something that you do not want any longer
14.to figure out	to understand\ find the answer
15.to show round / show around	to take somebody on a tour of a place
16. to calm down	to relax
17.to switch on	to make a machine or equipment work
18.to switch off	to stop a machine or equipment working
19.to come across	to meet or find somebody\something by chance
20.to wake up	to stop sleeping

GRAMMAR: EXERCICES

Task 1. Fill in the missing letters and translate the words.

1. c__m__ ac__o__s _____
2. f__n__ o__t _____
3. l_ok f_r_a_d t_ _____
4. g__o__ u__ _____
5. sp__a__ __p _____
6. g__t o__e__ _____
7. c__l__ do__n _____

Task 2. Match the words from column A with ones from column B to make a word combination and translate it.

Column A	Column B
1. to look	a) out the truth
2. to look up	b) off the light
3. to find	c) up in a big city
4. to get	d) after children
5. to switch	e) an unknown word
6. to grow	f) of old copybooks
7. to get rid	g) over a serious illness

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Task 3. Fill in the gaps using the words from the box and translate the sentences.

wake up	show around	get over	get rid
get on	passed out		

1. When he can _____ the flu, he'll go back to work.
2. The room was so hot and stuffy that he _____.
3. You'll need a prescription-strength ointment to _____ of that rash.

4. My friends _____ me _____ in New York
5. I often _____ early in the morning, when I have the first double period.
6. To get to the National University of Pharmacy you should _____ the bus 263.

Task 4. Translate the following sentences into Ukrainian.

1. Why are you still worried? You need to calm down before you go to take an exam.

2. I was trying to figure out an escape from this situation all evening yesterday.

3. My friend used to wake up very early when he studied at university.

4. If you do not know this word, you must look it up in a dictionary.

5. All students always look forward to having summer holidays.

6. Her aunt was feeling unwell for a long period of time, but last week she got over the illness and now she's feeling really great.

7. Excuse me. What classroom are you looking for? Perhaps I can help you with it.

8. We attended the lecture of an outstanding scientist last week and found out a lot of new information in organic chemistry.

Task 5. Choose the correct option a, b or c.

1. I look _____ my little sister on Sundays.

a) in b) after c) back

2. While I was reading a scientific journal, I came _____ very interesting article.

a) about b) across c) up

3. Switch _____ the lamp. Electricity costs a lot.

a) out b) off c) on

4. Some girls grow _____ faster than boys.

a) up b) along c) on

5. Be sure to get _____ the right bus to get to the hospital.

a) in b) on c) to

6. I was looking _____ my keys all evening yesterday and I finally found them.

a) for b) after c) at

7. He's looking _____ his winter holidays.

a) forward to b) towards c) forward

8. I can't hear you. Can you speak _____ a bit?

a) in b) up c) on

9. I'm looking these words _____ in a dictionary. I don't know what they mean.

a) through b) up c) after

10. They got _____ the bus and walked away.

a) on b) out c) off

11. How did you find _____ about the changes in the schedule?

a) on b) out c) off

12. Can you hold _____ a minute, please?

a) on b) out c) off

UNIT 25

<i>VOCABULARY AND READING</i>	American Universities and Colleges
<i>GRAMMAR: THEORY AND PRACTICE</i>	Pharmaceutical and Medical Idioms
<i>SPEAKING</i>	American Universities and Colleges

AMERICAN UNIVERSITIES AND COLLEGES

TEXT

Vocabulary

accuracy	точність
alumni (alumnus)	випускники (випускники)
appropriateness	доцільність
campus	кампус, територія університету
competitive	конкурентоспроможний
contributing factors	сприяючі фактори
demographics	демографічні показники
dining hall	їдальня
entrepreneurial culture	підприємницька культура
eventual success	можливий успіх
financial aid	фінансова допомога
Ivy League	Ліга Плюща
postgraduate	аспірант
prestigious	престижний
prominent role	видатна роль
recognizable	впізнаваний
specific program	конкретна програма

strict requirements
to conduct
to enroll
to rank
tuition
undergraduate
usefulness
various

суворі вимоги
провести
zareestruvatysia
zaymaty pevne misce, klasifykuvaty
navchannya, plata za navchannya
studentka
korisnist
riznomannitni

Read and translate the text.

College and university rankings in the United States are rankings of US colleges and universities ordered by various combinations of various contributing factors which vary greatly depending



on the organization performing the ranking. Rankings have most often been conducted by magazines, newspapers, websites, or academics. In addition to ranking entire institutions, organizations perform rankings of specific programs, departments, and schools. Various rankings consider combinations of measures of wealth, research excellence and/or influence, selectivity, student options, eventual success, demographics, and other criteria. There is much debate about rankings' interpretation, accuracy, usefulness, and appropriateness. The expanding diversity in rating methodologies and accompanying criticisms of each indicate the lack of consensus in the field.

Stanford University is one of the most popular universities in the UA ranking. Based in Palo Alto, right beside Silicon Valley, Stanford has had a prominent role in encouraging the region's tech industry to develop. Many faculty members and students have founded successful technology companies and start-ups, including Google, Snapchat and Hewlett-Packard. The university is often referred to as "the

Farm” because the campus was built on the site of the Stanford family’s Palo Alto Stock Farm. The campus covers 8,180 acres, but more than half of the land is not yet developed. Of the 15,000 students – most of whom live on campus – 22 per cent are international.

Massachusetts Institute of Technology (MIT) also cultivates a strong entrepreneurial culture, which has seen many alumni found notable companies such as Intel and Dropbox. Unusually, the undergraduate and postgraduate programs at MIT are not wholly separate; many courses can be taken at either level. Engineering and computer science programs are the most popular among undergraduates. Thirty-three per cent of the 11,000 students are international, hailing from 154 countries.

The next university, which is really high in the ranking, is California Institute of Technology (CalTech). Relative to the tiny size of its student population, CalTech has an impressive number of successful graduates, including 72 Nobel Laureates, six Turing Award winners and four Fields Medallists. There are approximately 2,000 students at CalTech, and the primary campus in Pasadena, near Los Angeles, covers 124 acres. Almost all undergraduates live on campus. Across the six faculties there is a focus on science and engineering.

The most popular and recognizable university is Harvard University. Harvard University is probably the best-known university in the world, topping the *Times Higher Education*. Founded in 1636, it is the oldest higher education institution in the US. Approximately 20,000 students are enrolled, a quarter of whom are international. Although the cost of tuition is expensive, Harvard’s financial endowment allows for plenty of financial aid for students. The Harvard Library system is made up of 79 libraries and counts as the largest academic library in the world. Among many famous alumni, Harvard can count eight US presidents, 157 Nobel laureates, 14 Turing Award winners and 62 living billionaires.

The last but not the least most popular university in the USA is Princeton University. Like Harvard, Princeton is a prestigious Ivy League university with a history stretching back more than 200 years. Princeton’s distinctive social environment includes private “eating clubs”, which function as both social houses

and dining halls. Many of the clubs are selective and competitive, but others simply require undergraduates to sign up. Fewer than 8,000 students are enrolled at Princeton, and just over a quarter are international. Princeton's campuses, in New Jersey, are located about an hour away from both New York City and Philadelphia. Degree courses have strict requirements. All students are required to do independent research as part of their degrees, and some must take a foreign language course. The application process is highly selective.

Yale University is a private institution that was founded in 1701. It has a total undergraduate enrollment of 5,746 and the campus size is 345 acres. It uses a semester-based academic calendar. Yale University's ranking in the 2019 edition of Best Universities is 3.



Yale University, located in New Haven, Connecticut, is known for its excellent drama and music programs. The Yale students compete in the Ivy League and are well known for their rivalry with Harvard. Students are assigned to live in one of 14 residential colleges during their time at Yale. Each college has a head and dean who live in the college and eat with students in the dining halls. Yale is made up of the College, the Graduate School of Arts and Sciences and 12 professional schools.

These are the most recognizable universities in the USA. But of course there are plenty of universities that you can find there.

Task 1. Answer the questions.

1. What is ranking?
2. What is ranking most often conducted by?
3. Where is Stanford University based?
4. Why is Stanford University often referred to as “the Farm”?
5. How many students are there in Stanford University?
6. Where is Massachusetts Institute of Technology based?
7. How many students are there in Massachusetts Institute of Technology?

8. What is California Institute of Technology famous for?
9. How many students are there in California Institute of Technology?
10. What is Harvard University famous for?
11. How many students are there in Harvard University?
12. What is Princeton University famous for?
13. How many students are there in Princeton University?
14. Where is Princeton University located?
15. What do you know about Yale University?

Task 2. Read and answer the questions about the history of the USA.

1. The Declaration of Independence was signed on
 - A. July 4, 1986
 - B. July 4, 1776
 - C. July 4, 1492
2. Hawaii became the _____ state.
 - A. 49th
 - B. 50th
 - C. 51st
3. The youngest man elected president in the United States was
 - A. John F. Kennedy
 - B. Bill Clinton
 - C. Ronald Reagan
4. The American National Anthem is
 - A. Dixie
 - B. The Star Spangled Banner

C. America, the Beautiful

5. San Francisco is located in _____.

A. California

B. Texas

C. New York

6. Las Vegas is located in _____.

A. Nevada

B. California

C. Arizona

7. The capital of Florida is _____.

A. Miami

B. Tallahassee

C. Palm Beach

8. Who was the first person to walk on the moon?

A. Neil Armstrong

B. Pete Conrad

C. Buzz Aldrin

Task 3. Read and translate the text.

In the United States, the word "school" describes any place where people learn. You can call a college a "school." You can even call a university a "school." You can use the word "school" for any English language institute, undergraduate or graduate program, or secondary ("high") school.

U.S. university or college follows after high school, or secondary school. A college in the U.S.A. is not a high school or secondary school. College and university

programs begin in the thirteenth year of school, when a student is 17 or 18 years old or older. A two-year college offers an associate's degree, as well as certificates. A four-year college or university offers a bachelor's degree. Programs that offer these degrees are called "undergraduate" schools.

A "university" is a group of schools for studies after secondary school. At least one of these schools is a college where students receive a bachelor's degree. The other schools in a university are "graduate" (also known as "postgraduate") schools where students receive advanced degrees. Therefore, a university offers both the bachelor's degree and graduate degrees such as the master's (M.A.) and doctorate (Ph.D.).



The United States is ranked as the #1 host of international students followed with the United Kingdom in the second place with a rising amount of students studying in Australia, New Zealand, and Spain.



Prepare a speech about «American Universities and Colleges», using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	Well, let me see. In my case, ... I would like to tell you about My topic is / will be very important for you because ... Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	Initially, I want to tell you about Secondly, I have to say that Also, you have to know that Another thing (as well) is ... What else? Oh, I ...that What I'm trying to say is... In other words...
SUMMARY <i>Sum it up</i>	Finally, ... I'd like to finish/end by saying... To conclude... Before I finish I'd finally like to say...

GRAMMAR: IDIOMS

An **idiom** is a group of words in a fixed order that have a particular meaning that is different from the meanings of each word on its own.

English idioms, proverbs, and expressions are an important part of everyday English. They come up all the time in both written and spoken English. Because idioms don't always

make sense literally, you'll need to familiarize yourself with the meaning and usage of each idiom. That may seem like a lot of work, but learning idioms is fun, especially when you compare English idioms to the idioms in your own language.

Learning to use common idioms and expressions will make your English sound more native, so it's a good idea to master some of these expressions. The table below gives common medical, health and pharmaceutical idioms.



MEDICAL, HEALTH AND PHARMACEUTICAL IDIOMS

IDIOM	MEANING	EXAMPLE
alive and kicking	to be well and healthy	<i>My aunt is ninety years old and she is very much alive and kicking.</i>
alive and well	to be well and healthy	<i>The worker was alive and well after the accident.</i>
as fit as a fiddle	to be healthy and physically fit	<i>My grandfather is ninety years old but he is as fit as a fiddle.</i>
as pale as a ghost	extremely pale	<i>My grandfather was as pale as a ghost when he entered the hospital.</i>
as pale as death	extremely pale	<i>The woman in the hospital waiting room was as pale as death.</i>
at death's door	very near death	<i>The sales manager was at death's door after his heart attack</i>
back on one's feet	physically healthy again	<i>My mother is back on her feet after being sick for two weeks.</i>

bitter pill to swallow	an unpleasant fact that one must accept	<i>Losing the election was a bitter pill to swallow for the candidate</i>
black-and-blue	bruised, showing signs of having been physically harmed	<i>My arm was black-and-blue after falling down the stairs.</i>
black out	to lose consciousness, to faint, to pass out	<i>The football player blacked out after being hit by the other player.</i>
break down	to lose control of one's emotions, to have a nervous collapse	<i>The woman broke down while the lawyer questioned her at the trial.</i>
break out in a cold sweat	to perspire from fever or anxiety	<i>I usually break out in a cold sweat when I have to make a speech.</i>
break out in (something)	to begin showing a rash or other skin disorder	<i>I broke out in a rash after eating the shrimp at the restaurant.</i>
breathe one's last	to die	<i>The man breathed his last after a long illness.</i>
bring (someone) around	to restore someone to health or consciousness, to cure someone	<i>The medical workers were able to bring the man around after the accident.</i>
bring (someone) to	to restore someone to consciousness after anesthesia/hypnosis/fainting	<i>We tried hard to bring the woman to after the car accident.</i>
bundle of nerves	a very nervous or anxious person	<i>The woman is a bundle of nerves after looking after her three children.</i>
burn (oneself) out	to become very tired and almost sick from doing something for a long time or from working too hard	<i>After working long hours for many months the woman finally burned herself out.</i>
catch a cold	to get a cold	<i>I caught a cold last week and had to miss four days of work.</i>
catch one's death of cold	to become very ill (with a cold/flu etc.)	<i>The little boy was told to be careful in the rain or he would catch his death of cold.</i>
check-up	an examination of a patient by a doctor	<i>I plan to have my annual check-up next week.</i>

clean bill of health	a report or certificate that a person or animal is healthy	<i>My doctor gave me a clean bill of health when I visited him last month.</i>
come down with (something)	to become sick with something, to catch an illness	<i>My niece came down with a cold and was unable to visit me last week.</i>
couch doctor	a psychoanalyst or psychiatrist who puts his patients on a couch to talk to them	<i>The man was sent to see a couch doctor because of his many problems.</i>
die a natural death	to die by disease or of old age and not by an accident or by violence	<i>My grandfather was very old and he died a natural death.</i>
a dose of one's own medicine	the same treatment that one gives to others (usually this has a negative meaning)	<i>We gave the boy a dose of his own medicine after he bullied us.</i>
draw blood	to make someone bleed, to get blood from someone	<i>The doctor decided to draw blood from the patient in order to check his blood sugar level.</i>
drop dead	to die suddenly	<i>The bus driver dropped dead while driving the bus.</i>
fall ill	to become sick or ill	<i>The man fell ill last winter and has not recovered yet</i>
feel fit	to feel well and healthy	<i>I feel fit so I plan to go for a long walk this weekend.</i>
feel on top of the world	to feel very healthy	<i>I have been feeling on top of the world since I quit my job.</i>
fill a prescription	to get some medicine from a pharmacy (drug store) with the orders from a doctor	<i>The man went to the drug store to fill a prescription.</i>
flare up	to begin again suddenly (an illness or a disease)	<i>My mother's skin problem flared up when she started to use the new hand soap</i>
a flare-up	a sudden worsening of a health condition	<i>There was a flare-up of my father's sickness last week.</i>
get a black eye	to get a bruise or darkened eye after being hit or after bumping into something	<i>The boy got a black eye when he fell in the playground.</i>
get a charley horse	to develop a cramp in the arm or the leg	<i>The swimmer got a charley horse while he was swimming.</i>

get a checkup	to receive a physical examination from a doctor	<i>I go to the doctor every year to get a checkup.</i>
get over (something)	to overcome a difficulty, to recover from an illness or shock	<i>The woman is having trouble getting over her father`s death.</i>
get sick	to become ill	<i>I got sick yesterday and did not go to the movie.</i>
get (something) out of one's system	to get rid of the desire to do something	<i>I went on a short holiday so that I could get travelling out of my system.</i>
get well	to become well, to become healthy again	<i>The boy was sick but now he is getting well.</i>
give birth	to have a baby	<i>The woman gave birth to a baby boy last night.</i>
go under the knife	to have an operation in surgery	<i>The woman went under the knife at the hospital last evening.</i>
green around the gills	to look sick	<i>My colleague was looking a little green around the gills when he came to work today.</i>
hang out one's shingle	to open an office or business - especially in a profession	<i>The doctor decided to hang out his shingle as soon as he finished medical school.</i>
have a physical (examination)	to get a medical check-up	<i>Our company sent all the employees to have a physical last week.</i>
have foot-in-mouth disease	to embarrass oneself through a silly mistake	<i>The man has foot-in-mouth disease and is always saying stupid things.</i>
have one foot in the grave	to be near death (usually because of old age or illness)	<i>My uncle is very sick and has one foot in the grave.</i>
head shrinker	a psychiatrist	<i>The man went to see a head shrinker after his recent problems at work.</i>
in a family way	pregnant, going to have a baby	<i>Our new secretary is in a family way and plans to stop working soon.</i>
in good shape/condition	in good physical condition, functioning or working well	<i>My grandfather is in very good shape.</i>

in labor	a woman going through childbirth	<i>The woman was in labor for three hours.</i>
in remission	a disease that seems to be getting better	<i>The cancer of my neighbor's mother has been in remission for several months.</i>
in surgery	undergoing surgery, doing surgery	<i>The patient was in surgery for several hours this morning.</i>
in the best of health	very healthy	<i>My father has been in the best of health for many years.</i>
in the pink	in very good health	<i>My grandmother is in the pink and is doing very well.</i>
just what the doctor ordered	exactly what is needed or wanted	<i>A nice hot bath was just what the doctor ordered after my long day at work.</i>
kick a habit	to break or stop a bad habit	<i>The man used to smoke but he was able to kick the habit.</i>
kink in one's neck	a cramp in one's neck that causes pain	<i>I woke up this morning with a kink in my neck.</i>
lapse into a coma	to go into a coma	<i>The woman lapsed into a coma soon after the accident.</i>
look the picture of health	to be in good health, to look very healthy	<i>My uncle looked the picture of health when I saw him last week.</i>
nothing but skin and bones	to be very thin or emaciated	<i>The young man was nothing but skin and bones when he returned from the long camping trip.</i>
nurse (someone) back to health	to give someone care to restore him or her to good health	<i>My mother spent several weeks with my grandmother trying to nurse her back to health.</i>
on medication	taking medicine for a current medical problem	<i>The woman has been on medication for many years.</i>
on the mend	becoming better, becoming well, healing	<i>My grandfather is on the mend after he broke his leg last week.</i>

an ounce of prevention is worth a pound of cure	it is easier to prevent something bad than to deal with the results	<i>An ounce of prevention is worth a pound of cure and I decided to stay home and rest rather than go out in the cold with my sore throat.</i>
out cold	unconscious, to have fainted	<i>The patient was out cold because of the anesthesia when he entered the operating room.</i>
out of condition	not in good physical condition	<i>I am out of condition and I need to exercise more.</i>
out of shape	not in good physical condition	<i>My mother is out of shape and cannot walk for a long distance.</i>
out of sorts	not feeling well, in a bad mood	<i>Our boss is out of sorts today so you should wait until tomorrow to speak to him.</i>
over the worst	recovering from an illness	<i>The man is over the worst since his skiing accident last month.</i>
pale around the gills	to look sick	<i>My colleague was looking a little pale around the gills when he came to work today.</i>
pass away	to die	<i>The man's father passed away when he was 96 years old.</i>
pass on	to die	<i>My grandmother passed on when she was 92 years old.</i>
pass out	to faint	<i>Three teenage girls passed out at the rock concert.</i>
pick up a cold/influenza	to acquire an illness	<i>The boy picked up a cold during the weekend.</i>
picture of health	a perfect example of health	<i>The man is feeling very well and is the picture of health.</i>
pull through	to recover from a serious illness	<i>The car accident was very bad and I do not think that the driver will pull through.</i>

refill a prescription	to sell a second set of medicine on a doctor's orders	<i>I went to the pharmacy to refill a prescription for my mother.</i>
rub salt in (someone's) wound	to deliberately make someone's unhappiness or shame or misfortune worse	<i>My supervisor rubbed salt in my wound when he continued to criticize me for my mistake.</i>
run a fever/temperature	to have a higher than normal body temperature	<i>The girl has been running a fever this week.</i>
run down	to be in poor condition	<i>My father worked very hard last month and now he is run down.</i>
run in the family	to be a common family characteristic	<i>The serious illness runs in the family of my friend.</i>
run some tests	to do some medical tests on a patient	<i>The doctor decided to run some tests on the patient.</i>
show signs of an illness	to show indications or hints of an illness	<i>The man was beginning to show signs of some kind of illness.</i>
sick in bed	to remain in bed while you are sick	<i>My father was sick in bed for three days last week.</i>
spit up (something)	to throw something up, to vomit something	<i>The dog spit up the button that he had swallowed.</i>
splitting headache	a severe headache	<i>I have been suffering from a splitting headache all morning.</i>
susceptable (something) to	to easily get some kind of illness, to likely to become sick with something	<i>The young boy is very susceptable to getting a sore throat.</i>
take a sick day	to be absent from work and still receive pay	<i>I did not feel well yesterday so I decided to take a sick day.</i>
take a turn for the better	to begin to improve or get well	<i>The medical condition of my uncle has recently taken a turn for the better.</i>
take a turn for the worse	to become sicker	<i>My aunt took a turn for the worse last week and she is now in the hospital.</i>
take one's medicine	to swallow one's medicine	<i>The boy had to take his medicine before he went to bed.</i>
take sick	to become ill	<i>The little boy took sick early last night.</i>

take (someone's) pulse	to measure the beats of a person's pulse	The doctor took the patient's pulse when she arrived at the hospital.
take (someone's) temperature	to measure someone's body temperature	The nurse took my temperature when I went to the hospital yesterday.
a taste of one's own medicine	the same treatment that one gives to others (usually this has a negative meaning)	Our boss got a taste of his own medicine when people began to treat him badly like he treats others.
throw up	to vomit	The woman threw up after eating the bad shellfish.
under the weather	not feeling well	My boss has been under the weather all week and has not come to work during that time.
up and about	healthy and moving around, not sick in bed	My uncle has been up and about for a couple of days since he left the hospital.

Task 1. Compare English idioms given in the table above to the idioms in your own language.

Task2. Choose an idiom to replace the expression in the brackets:

1. When we arrived at the scene of the car accident the driver was (near death).

- A. hanging out his shingle
- B. drawing blood
- C. at death's door
- D. going under the knife

2. After walking home in the rain I (became sick) with a cold.

- A. broke out
- B. came down
- C. took a turn for the worse
- D. blacked out

3. My father is (healthy again) after his recent illness.

- A. back on his feet
- B. under the weather
- C. breathing his last
- D. having a physical

4. Our secretary has been working very hard and is (getting into poor condition).

- A. over the worst
- B. getting a splitting headache
- C. back on her feet
- D. becoming run down

5. Although the man is very sick I think that he will (recover).

- A. run a temperature
- B. throw up
- C. pull through
- D. flare up

6. I went to the doctor last week and (got a medical check-up).

- A. ran a temperature
- B. had a physical
- C. felt on top of the world
- D. went under the knife

7. After eating the seafood at the small restaurant the man began to (vomit).

- A. throw up
- B. pull through
- C. flare up
- D. break out

8. The man was forced to (go to a psychiatrist) after he began to act crazy at work.

- A. go to a head shrinker
- B. go under the knife
- C. breathe his last
- D. pull through

9. The trainer was able to (restore the boxer to consciousness) after he fainted and fell to the floor.

- A. throw the boxer up
- B. pull the boxer through
- C. bring the boxer to
- D. black the boxer out

10. Last night my grandmother (became sicker).

- A. went under the knife
- B. felt on top of the world
- C. breathed her last
- D. took a turn for the worse

Task 3. Match the idioms from column A with their meanings from column B.

Column A	Column B
1)alive and kicking	a)an unpleasant fact that one must accept
2)back on one's feet	b) a sudden worsening of a health condition
3)bitter pill to swallow	c) to look sick
4)a flare-up	d)to embarrass oneself through a silly mistake
5)get a checkup	e)exactly what is needed or wanted
6)green around the gills	f)to be well and healthy
7)have foot-in-mouth disease	g)it is easier to prevent something bad than to deal with the results
8)just what the doctor ordered	h)to receive a physical examination from a doctor
9)on medication	i)physically healthy again

10)an ounce of prevention is worth a pound of cure	j)taking medicine for a current medical problem
--	---

Task 4. Fill in the gaps using the idioms from the box and translate the sentences.

<i>as fit as a fiddle</i>	<i>out cold</i>	<i>passed out</i>	<i>run some tests</i>
<i>picture of health</i>	<i>a splitting headache</i>		<i>out of shape</i>
<i>out of sorts</i>	<i>refill a prescription</i>		<i>to take a sick day</i>

1. The patient was _____because of the anesthesia when he entered the operating room.
2. My mother is _____and cannot walk for a long distance.
3. Our boss is _____today so you should wait until tomorrow to speak to him.
4. Three teenage girls _____at the rock concert.
5. The man is feeling very well and is the_____.
6. I went to the pharmacy to _____for my mother.
7. The doctor decided to _____on the patient.
8. I have been suffering from _____all morning.
9. I did not feel well yesterday so I decided_____.
10. My grandfather is ninety years old but he is_____.

UNIT 26

<i>VOCABULARY AND READING</i>	Pharmaceutical Training Curriculum: Chemistry
<i>GRAMMAR: THEORY AND PRACTICE</i>	The Systematization of the Use of Tenses in Active Voice
<i>SPEAKING</i>	Pharmaceutical Training Curriculum: Chemistry

PHARMACEUTICAL TRAINING CURRICULUM:

CHEMISTRY

TEXT

Vocabulary

behavior	поведінка
branch of science	галузь науки
carbon skeleton	вуглецевий скелет
chemical bond	хімічний зв'язок
composition	склад
cross-disciplinary	міждисциплінарний
discovery	відкриття
distinction	відмінність
hazard	небезпека, ризик
health sciences	науки про здоров'я
life-saving medication	рятувальні ліки
living organism	живий організм
major	головний
matter	матерія
medicinal chemistry	медична хімія

molecular biology	молекулярна біологія
neurochemistry	нейрохімія
nucleic acid	нуклеїнова кислота
pathophysiology	патофізіологія
physics	фізика
property	властивість
skillful	вправний
solid background	твердий фон
sub-discipline	субдисципліна
to define	визначати
to incorporate	включати
to interact	взаємодіяти
to misuse	неправильно використовувати
tool	інструмент

Read and translate the text.

Students working toward a five-year pharmacy degree learn human biology and ways the body's chemicals interact with the medication. Pharmacists must be skillful in physiology, pathophysiology and biochemistry and have a solid background in mathematics and physics. A major part of pharmacy education is learning about drugs created from plants and animals and determining how medications interact with different people. A pharmacist must know how chemicals can be used as life-saving medication and the hazards they pose when misused. Pharmacy students may have the opportunity to work with doctors and researchers on studies of a new medication. Beyond pharmaceutical education, students are usually prepared with fundamental business practices in order to successfully operate a pharmacy.

Pharmacy is the health profession that links the health sciences with the chemical sciences. So, chemistry is of the basic subjects for pharmacy students. It studies the composition, properties and behavior of matter. Chemistry is concerned with atoms and their interactions with other atoms, and particularly with the properties of chemical bonds. Chemistry is also concerned with the interactions between atoms (or groups of atoms) and various forms of energy (e.g. photochemical reactions, changes in phases of matter, separation of mixtures, properties of polymers, etc.).

Chemistry is sometimes called "the central science" because it bridges other natural sciences like physics, geology and biology with each other. Chemistry is a branch of physical science but distinct from physics. It is not easy to precisely define the boundary of chemical sciences (or simply chemistry), because the discipline lies along the spectrum between physics on the one hand and biology on the other.

The word chemistry comes from the word alchemy, an earlier set of practices that encompassed elements of chemistry, philosophy, astrology, astronomy, mysticism and medicine.

In retrospect, the definition of chemistry has changed over time, as new discoveries and theories add to the functionality of the science. The term "chemistry" meant the subject of the material principles of mixed bodies.

Chemistry is typically divided into several major sub-disciplines. There are also several main cross-disciplinary and more specialized fields of chemistry.

Analytical chemistry is the analysis of material samples to gain an understanding of their chemical composition and structure. Analytical chemistry incorporates standardized experimental methods in chemistry. These methods may be used in all sub-disciplines of chemistry, excluding purely theoretical chemistry.

Biochemistry is the study of the chemicals, chemical reactions and chemical interactions that take place in living organisms. Biochemistry and organic chemistry

are closely related, as in medicinal chemistry or neurochemistry. Biochemistry is also associated with molecular biology and genetics.

Inorganic chemistry is the study of the properties and reactions of inorganic compounds. Neurochemistry is the study of neurochemicals; including transmitters, peptides, proteins, lipids, sugars, and nucleic acids; their interactions, and the roles they play in forming, maintaining, and modifying the nervous system.

Nuclear chemistry is the study of how subatomic particles come together and make nuclei. Modern Transmutation is a large component of nuclear chemistry, and the table of nuclides is an important result and tool for this field.

Organic chemistry is the study of the structure, properties, composition, mechanisms, and reactions of organic compounds. An organic compound is defined as any compound based on a carbon skeleton.

Task 1. Answer the questions.

1. What must pharmacists be skillful in?
2. What is a major part of pharmacy education?
3. What are students usually prepared with, beyond pharmaceutical education?
4. What is pharmacy?
5. What does chemistry study?
6. Why is chemistry sometimes called "the central science"?
7. What is alchemy?
8. What does analytical chemistry study?
9. What does biochemistry study?
10. What does inorganic chemistry study?
11. What does organic chemistry study?
12. What does nuclear chemistry study?

Task 2. Choose a suitable word given in the brackets to fill in each gap.

Chemistry (are\is) a branch of science that deals with how substances (are\is) made up, how they combine, how they act under different conditions. The chemistry laboratory stereotypically (use\uses) various forms of laboratory glassware, but glassware (are\is) not central to chemistry, and a great deal of experimental chemistry (is\are) done without (it\its). Chemical engineering is (an\a) branch of chemistry and engineering that (apply\applies) the physical sciences e.g. chemistry and physics, and/or life sciences, e.g. biology, microbiology and biochemistry, together (up\with) mathematics and economics to production, transformation, transportation and (proper\properly) usage of molecules, chemicals, materials and energy.

Task 3. Complete the sentences using the information from the text.

1. Chemistry is concerned with _____
2. The word chemistry comes from _____
3. The word alchemy in turn is derived from _____
4. Chemistry is typically divided into _____
5. Analytical chemistry is _____
6. Organic chemistry is _____
7. Other disciplines within chemistry are _____

Task 4. Tell about chemistry and its branches using the following word combinations.

Chemistry studies; a pharmacist must know; chemistry is concerned with; "the central science" is; analytical chemistry studies; biochemistry studies; inorganic chemistry studies; organic chemistry studies; nuclear chemistry is the branch of science that.



If you pour a handful of salt into a full glass of water, the water level will actually go down rather than overflowing the glass.



Prepare a speech about « Pharmaceutical Training Curriculum: Chemistry », using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	Just to start, I want to tell you about I would like to tell you about My topic is / will be very important for you because ... Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	Also, you have to know that For example, ... A good example is ... Maybe you've heard of ...
SUMMARY <i>Sum it up</i>	In conclusion, ... I'd like to finish/end by saying... To conclude... Before I finish I'd finally like to say...

GRAMMAR: THE SYSTEMATIZATION OF THE USE OF TENSES IN ACTIVE VOICE

Active voice					
	SIMPLE		CONTINUOUS	PERFECT	PERFECT CONTINUOUS
PRESENT	V Vs(es)	do does } V ₁	am is are } Ving	have has } V ₃ (ed)	have been } Ving
PAST	Ved (V ₂)	did } V ₁	was were } Ving	had } V ₃ (ed)	had been } Ving
FUTURE	(I, we) shall will } V ₁		shall will } be Ving	shall will } have V ₃	will have been } Ving

PRACTISE YOUR GRAMMAR: THE SYSTEMATIZATION OF THE USE OF TENSES IN ACTIVE VOICE

Task 1. Open the brackets and write the correct form of the verbs.

Every summer our group _____ (go) on a short trip. Last year we _____ (go) to the Ecopark. Our teacher _____ (be) very nervous. Teachers _____ (be) often nervous on a University trip. But why? We _____ (not understand) that. I _____ (take) lots of photos of a baby elephant with my cell phone. "Why _____ you _____ (not take) photos of other animals, too?" my friend _____ (ask) me. But I _____ (not want) to take photos of other animals. I _____ (want) to take photos of all my friends. They _____ (have) some bananas and _____ (show) them to the gorillas. "What _____ you _____ (do) there? Come to me!" our teacher _____ (shout). We _____ (find) a nice place for a picnic. But nobody _____ (eat) a banana, but the gorillas _____

(have) a nice lunch that day. It _____ (be) a great day at the zoo, and we _____ (have) a lot of fun.

Task 2. Open the brackets and write the correct form of the verbs (Present Perfect, Past Simple or Past Continuous).

1. _____ she ever _____ in a foreign country? (live)
2. While we _____ TV, the lights _____ out. (watch / go)
3. My groupmate _____ in the library when someone _____ him. (work/ phone)
4. He _____ at the airport. (already arrive)
5. I _____ to the radio when the fire _____. (listen / break out)
6. _____ you _____ in the laboratory last weekend? (work)
7. I _____ the window because it _____ to rain. (close / start)
8. First she _____ the experiment and then she _____ the exam. (carry out / take)
9. He _____ to the University for a week. (not be)
10. She _____ while I _____ in the sun. (surf / lie)
11. In the middle of the night the phone _____. (ring)
12. I _____ her since her birthday. (not meet)
13. They _____ back yesterday at nine in the evening. (come)
14. I _____ the housework when you _____ at work. (do / be)

Task 3. Open the brackets and write the correct future tense (Future Simple, going to, or Present Continuous).

1. They _____ (drive) to New York tomorrow morning.
2. I hope the weather _____ (be) nice.
3. I offered him this job. I think he _____ (take) it.
4. I promise I _____ (not tell) your secret to anyone.
5. Take your umbrella with you. It _____ (rain).

6. They _____ (play) cards this evening.
7. I _____ (go) to the cinema tomorrow.
8. They _____ (fly) to Seattle next summer holidays.
9. I _____ (invite) 50 people to the party, and I hope everyone _____ (come).
10. That exercise looks difficult. I _____ (help) you.
11. _____ he _____ (go) to the scientific conference?
12. Are you sure they _____ (pass) the exam?
13. She _____ probably _____ (stay) till Thursday.
14. He _____ (not leave) tomorrow.
15. We think he _____ (come) home late in the night.

UNIT 27

<i>VOCABULARY AND READING</i>	Pharmaceutical Training Curriculum: Biology
<i>GRAMMAR: THEORY AND PRACTICE</i>	The Systematization of the Use of Tenses in Passive Voice
<i>SPEAKING</i>	Pharmaceutical Training Curriculum: Biology

PHARMACEUTICAL TRAINING CURRICULUM: BIOLOGY

TEXT

Vocabulary

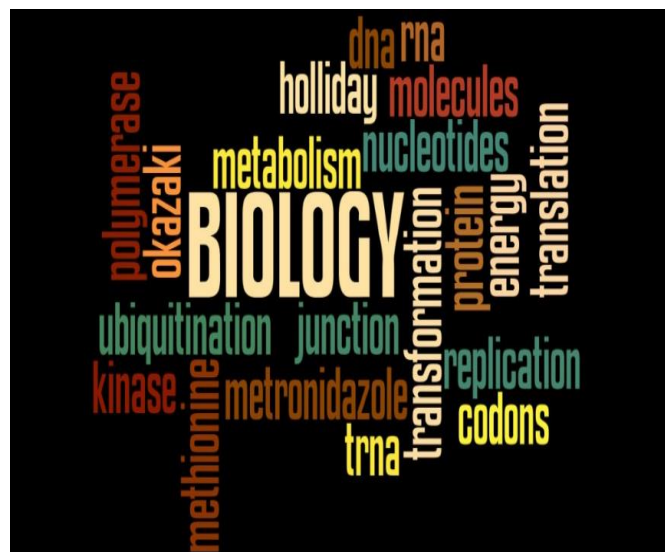
cell	клітина
advance	успіх, просування
bacterium (<i>pl.</i> bacteria)	бактерія (<i>множ.</i> бактерії)
coherent	зрозумілий, чіткий, ясний
diversity	різноманітність
helical	спіральний
heredity	спадковість
impact	вплив
trait	риса

Read and translate the text.

Pharmacy is highly interdisciplinary. It is interrelated with many sciences including biology. Biology is a natural science concerned with the study of life and living organisms, including their structure, function, growth, evolution, distribution,

and taxonomy. Modern biology is composed of many subdisciplines unified by five so-called axioms:

1. Cells are the basic unit of life.
2. Genes are the basic unit of heredity.
3. New species and inherited traits are the product of evolution.
4. An organism regulates its internal environment to maintain a stable and constant condition.
5. Living organisms consume and transform energy.



Subdisciplines of biology are defined by the scale at which organisms are studied and the methods used to study them: biochemistry examines the rudimentary chemistry of life; molecular biology studies the complex interactions among biological molecules; cellular biology examines the basic building block of all life, the cell; physiology examines the physical and chemical functions of tissues, organs, and organ systems of an organism; evolutionary biology examines the processes that produced the diversity of life; and ecology examines how organisms interact in their environment.

The term biology is derived from the Greek word βίος, *bios*, "life" and the suffix -λογία, *-logia*, "study of." The Latin form of the term first appeared in 1736 when Linnaeus (Carl von Linné) used *biology* in his *Bibliotheca botanica*.

Although modern biology is a relatively recent development, sciences related to and included within it have been studied since ancient times. Natural philosophy was studied as early as the ancient civilizations of Mesopotamia, Egypt, the Indian subcontinent, and China. However, the origins of modern biology and its approach to the study of nature are most often traced back to ancient Greece. While the formal study of medicine dates back to Hippocrates (ca. 460 BC – ca. 370 BC), it was

Aristotle (384 BC – 322 BC) who contributed most extensively to the development of biology.

Biology began to quickly develop and grow with Antony van Leeuwenhoek's dramatic improvement of the microscope. It was then that scholars discovered spermatozoa, bacteria, infusoria and the diversity of microscopic life.

Advances in microscopy also had a profound impact on biological thinking. In the early 19th century, a number of biologists pointed to the central importance of the cell.

Meanwhile, taxonomy and classification became the focus of natural historians. Carl Linnaeus published a basic taxonomy for the natural world in 1735 (variations of which have been in use ever since), and in the 1750s introduced scientific names for all his species. Georges-Louis Leclerc, Comte de Buffon, treated species as artificial categories and living forms as malleable—even suggesting the possibility of common descent. Though he was opposed to evolution, Buffon is a key figure in the history of evolutionary thought; his work influenced the evolutionary theories of both Lamarck and Darwin.

Serious evolutionary thinking originated with the works of Jean-Baptiste Lamarck, who was the first to present a coherent theory of evolution.

He posited that evolution was the result of environmental stress on properties of animals, meaning that the more frequently and rigorously an organ was used, the more complex and efficient it would become, thus adapting the animal to its environment. Lamarck believed that these acquired traits could then be passed on to the animal's offspring, who would further develop and perfect them. However, it was the British naturalist Charles Darwin, combining the biogeographical approach of Humboldt, the uniformitarian geology of Lyell, Malthus's writings on population growth, and his own morphological expertise and extensive natural observations, who forged a more successful evolutionary theory based on natural selection; similar reasoning and evidence led Alfred Russel Wallace to independently reach the same conclusions. Although it was the subject of controversy (which continues to this

day), Darwin's theory quickly spread through the scientific community and soon became a central axiom of the rapidly developing science of biology.

The discovery of the physical representation of heredity came along with evolutionary principles and population genetics. In the 1940s and early 1950s, experiments pointed to DNA as the component of chromosomes that held the trait-carrying units that had become known as genes. A focus on new kinds of model organisms such as viruses and bacteria, along with the discovery of the double helical structure of DNA in 1953, marked the transition to the era of molecular genetics. From the 1950s to present times, biology has been vastly extended in the molecular domain.

Task 1. Answer the questions.

1. What does biology study?
2. What are subdisciplines of biology?
3. What is the term biology derived from?
4. When did biology begin to develop?
5. Who was the author of a coherent theory of evolution?
6. When was the physical representation of heredity discovered?
7. What is molecular genetics?

Task 2. Complete the sentences.

1. Modern biology is composed of _____
2. The Latin form of the term biology _____
3. Biology began to quickly develop and grow _____
4. Carl Linnaeus published _____
5. The discovery of the physical representation of heredity _____
6. From the 1950s to present times, biology _____

Task 3. Fill in the gaps using the words from the box.

<i>multicellular</i>	<i>biomolecules</i>	<i>protoplasm</i>
<i>cell</i>	<i>smallest</i>	<i>unicellular</i>

The _____ is the basic structural, functional and biological unit of all known living organisms. Cells are the _____ unit of life that is classified as a living thing, and are often called the "building blocks of life". Cells consist of a _____ enclosed within a membrane, which contains many _____ such as proteins and nucleic acids. Organisms can be classified as _____ (consisting of a single cell; including most bacteria) or _____ (including plants and animals). While the number of cells in plants and animals varies from species to species, humans contain about 100 trillion (10^{14}) cells. Most plant and animal cells are between 1 and 100 micrometres and therefore are visible only under the microscope.



Hydrofluoric acid is so corrosive that it will dissolve glass. Although it is corrosive, hydrofluoric acid is considered to be a 'weak acid'.



Prepare a speech about « Pharmaceutical Training Curriculum: Biology», using the useful language from the table “The Structure of Your Speech. Useful Language”. Your speech must contain the most important information of the given topic and be no less than 10 sentences.

THE STRUCTURE OF YOUR SPEECH	USEFUL LANGUAGE
OPENING <i>Introduce what you are going to tell about</i>	To begin with, I want to tell you about First of all, I want to tell you about I would like to tell you about My topic is / will be very important for you because ... Today I'd like to give you an overview of..
MAIN BODY <i>Tell the main information</i>	Initially, I want to tell you about Secondly, I have to say that Also, you have to know that I think, To my mind, ... In my opinion, ... I believe, it is important to know that
SUMMARY <i>Sum it up</i>	Finally, ... I'd like to finish/end by saying... To conclude... Before I finish I'd finally like to say...

GRAMMAR: THE SYSTEMATIZATION OF THE USE OF TENSES IN PASSIVE VOICE

PASSIVE VOICE <i>English:</i> learn, read, enjoy!			
	Simple	Continuous	Perfect
	to be V3	to be being V3	To have been V3
Present	am } is } V3 are }	am } is } being V3 are }	have } has } been V3
Past	was } were } V3	was } were } being V3	had been V3
Future	Shall } will } be V3	-----	will have been V3

Examples of Passive

	Tense	Subject	Verb	Object
Simple	<i>Active:</i>	Rita	writes	a letter.
Present	<i>Passive:</i>	A letter	is written	by Rita.
Simple Past	<i>Active:</i>	Rita	wrote	a letter.
	<i>Passive:</i>	A letter	was written	by Rita.
Present Perfect	<i>Active:</i>	Rita	has written	a letter.
	<i>Passive:</i>	A letter	has been written	by Rita.
Future I	<i>Active:</i>	Rita	will write	a letter.
	<i>Passive:</i>	A letter	will be written	by Rita.
Hilfsverben	<i>Active:</i>	Rita	can write	a letter.
	<i>Passive:</i>	A letter	can be written	by Rita.

PRACTISE YOUR GRAMMAR: THE SYSTEMATIZATION OF THE USE OF TENSES IN PASSIVE VOICE

Task 1. Open the brackets and write the correct form of the verbs (Present, Past or Future Simple Passive).

1. The National University of Pharmacy _____ (to found) in 1921.
2. My groupmate _____ (to send) to the scientific conference next week.
3. I _____ (to ask) at the practical class yesterday.
4. I _____ (to give) an English textbook at the library last Friday.
5. Many experiments _____ (to carry out) by our students in the chemistry laboratory.
6. This work _____ (to do) tomorrow.
7. This text _____ (to translate) at the last lesson.
8. These trees _____ (to plant) by our students last autumn.
9. Many interesting reports always _____ (to make) at our scientific conferences.
10. This task _____ (to give) to these students tomorrow.
11. We _____ (to invite) to a concert last Saturday.
12. My question _____ (to answer) by our teacher yesterday.
13. Two hostels _____ (to build) last year.
14. His new textbook _____ (to finish) next year.
15. The exam in analytical chemistry _____ (to pass) two days ago.

Task 2. Rewrite the sentences in passive voice (Present, Past or Future Simple Passive).

E.g. We often speak about her. — She is often spoken about.

1. We thought about our new groupmate all the time.

2. The doctor will operate on him in a week.

3. The dean sent for the student's parents.

4. They looked for the newspaper everywhere.

5. Nobody miss the lecture.

6. The neighbour asked for the telegram.

7. Everybody listened to the lecturer with great attention.

8. The senior students laughed at the freshman.

9. The group spoke to the headmistress yesterday.

10. They sent for Jim and told him to prepare a report on that subject.

Task 3. Rewrite the sentences in passive voice (Present Perfect Passive).

1. Kerrie has paid the bill. - _____

2. A professor has delivered a lecture. - _____

3. We have passed all my exams. - _____

4. I have opened the present. - _____
5. They have not read the report. - _____
6. You have not sent the email. - _____
7. We have not agreed to this issue. - _____
8. They have not obtained a new substance. - _____
9. Has she phoned him? - _____
10. Have they noticed us? - _____

Appendix 1.

ENGLISH PHONETIC TRANSCRIPTION

ТРАНСКРИПЦІЯ АНГЛІЙСЬКОЇ МОВИ

Транскрипція англійської мови — це послідовність фонетичних символів, котра допомагає нам зрозуміти, як прочитати той чи інший звук, слово.

VOWELS	monophthongs				diphthongs			
	ɪ: sheep	ɪ ship	ʊ good	u: shoot	ɪə here	eɪ wait		
	e bed	ə teacher	ɜ: bird	ɔ: door	ʊə tourist	ɔɪ boy	əʊ show	
	æ cat	ʌ up	ɑ: far	ɒ on	eə hair	aɪ my	aʊ cow	
CONSONANTS	p pea	b boat	t tea	d dog	tʃ cheese	dʒ June	k car	g go
	f fly	v video	θ think	ð this	s see	z zoo	ʃ shall	ʒ television
	m man	n now	ŋ sing	h hat	l love	r red	w wet	j yes

Особливості англійської транскрипції

Для того, щоби простіше орієнтуватися в читанні слів, важливо знати головні особливості транскрипції:

Особливість 1. Транскрипція завжди оформляється у квадратних дужках.

Особливість 2. Щоби не заплутатись, де робити наголос у слові, варто врахувати, що він завжди ставиться перед ударним складом. ['neɪm] — транскрипція слова name.

Особливість 3. Важливо розуміти, що транскрипція — це не англійські букви та звуки, з яких складається слово. Транскрипція — це звучання слів.

Особливість 4. В англійській мові транскрипція складається з голосний звуків, дифтонгів та приголосних.

Особливість 5. Для того, щоб показати, що звук є довгим, в транскрипції використовують двокрапку.

Звичайно, знаючи тільки набори символів, доволі складно читати все грамотно, адже існує безліч виключень. Для того, щоб читати правильно необхідно розуміти, що існують закриті склади та відкриті. Відкритий склад закінчується на голосну букву (game, sunshine), закритий — на приголосну (ball, dog). Деякі звуки англійської мови можуть вимовлятися по різному, в залежності від типу складу.

ВИМОВА АНГЛІЙСЬКИХ ЗВУКІВ

Транскрипція голосних звуків

Голосні звуки бувають двох видів — поодинокі звуки та дифтонги.

<i>Звуки в англійській мові</i>	<i>Еквіваленти звуків в українській мові</i>
[ʌ]	[а]
[a:]	[а]
[i]	[і]
[i:]	[і]
[o]	[о]
[o:]	[о]

[u]	[y]
[u:]	[y]
[e]	як у слові «Репін»
[з:]	як у слові «Корабльов»

Англійські дифтонги

Дифтонг — звук, який складається з двох звуків. Частіше всього його можна розділити на 2 звуки, однак, на письмі це не передати. Частенько дифтонги позначаються не сукупністю декількох знаків, а своїм особистим знаком.

Звуки в англійській мові	Еквіваленти звуків в українській мові
[əu]	[ou]
[au]	[ay]
[eɪ]	[ей]
[oɪ]	[ой]
[aɪ]	[ай]

Правила вимови голосних в англійській

Звук «а» має чотири різновиди:

[ʌ] – короткий звук, як у словах «duck», «cut»;

[æ] – м'який звук. Аналогу йому немає в українській мові. Читається він як у слові «cat»;

[a:] – довгий звук, який читається як у слові «car»;

[ɔ] – короткий звук, який звучить одночасно подібно і на «о», і на «а». В британській вимові, це скоріше «о», як у слові «hot» або «not».

Звук «е» може читатися трьома способами:

[e] – наприклад як у слові «let»;

[ə:] – цей звук трохи нагадує українське звукосполучення «йо», тільки читається ще трохи м'якше. Наприклад, «bird», «fur»;

[ə] – один з найбільш поширених звуків в англійській транскрипції. За звучанням цей звук подібний до українського звуку «е». Він стоїть тільки у ненаголошених складах та буває практично не чуваним або невиразним, наприклад, ['letə] «letter» — лист.

Звук «і» може бути довгим та коротким:

[i] – короткий звук, наприклад, як у слові «film»;

[i:] – довгий звук, наприклад, як у «sheep».

Звук «о» також має 2 варіанти — довгий та короткий:

[ɒ] – короткий звук, як у слові «bond»;

[ɔ:] – довгий звук, як у слові «more».

Звук «и» також може вимовлятися двома способами. Він може бути довгим або коротким:

[u] – короткий звук, як у слові «put»;

[u:] – довгий звук, як у слові «blue».

Транскрипція приголосних звуків

В транскрипції приголосних звуків все достатньо просто. Здебільшого вони звучать подібно приголосним української мови.

<i>Звуки в англійській мові</i>	<i>Еквіваленти звуків в українській мові</i>
[b]	[б]

[d]	[д]
[f]	[ф]
[ʒ]	[ж]
[dʒ]	[дж]
[g]	[г]
[h]	[х]
[k]	[к]
[l]	[л]
[m]	[м]
[n]	[н]
[p]	[п]
[s]	[с]
[t]	[т]
[v]	[в]
[z]	[з]
[tʃ]	[ч]
[ʃ]	[ш]
[r]	м'яке [р], як у слові рупор
[ɒ]	знак м'якості, як в українському звукосполученні «йо» (йогурт).
<i>Приголосні англійської мови, котрих немає в українській мові та їх вимова</i>	<i>Приголосні англійської мови, котрих немає в українській мові та їх вимова</i>
[θ]	м'яка буква «с», язик знаходиться поміж передніми зубами верхньої та нижньої щелепи
[æ]	як «е», тільки більш різко
[ð]	як «θ», тільки з додаванням голосу, ніби м'яка буква «з»

[ɲ]	носовий, на французький манір, звук [n]
[ə]	нейтральний звук
[w]	як «в» та «у» разом, м'яка вимова

Appendix 2.

CHEMICAL SYMBOLS, FORMULAE & EQUATIONS

Symbols

Symbol	Name	Pronunciation
Ac	Actinium	/ækt'ɪniəm/
Ag	Silver	/'sɪlvə/
Al	Aluminium	/æljʊ'mɪniəm/
Am	Americium	/əmə'risiəm/
Ar	Argon	/'ɑ:gɒn/
As	Arsenic	/'ɑ:snɪk/
At	Astatine	/'æstəti:n/
Au	Gold	/'gəʊld/
B	Boron	/'bɔ:rɒn/
Ba	Barium	/'bæəriəm/
Be	Beryllium	/'bɛ'rɪliəm/
Bh	Bohrium	'bɔ:riəm/
Bi	Bismuth	/'bɪzməθ/
Bk	Berkelium	/'bɜ:klɪəm/
Br	Bromine	/'brəʊmi:n/
C	Carbon	/'kɑ:bən/
Ca	Calcium	/'kælsiəm/
Cd	Cadmium	/'kælmɪəm/
Ce	Cerium	/'si:riəm/
Cf	Californium	/kæli'fɔ:niəm/
Cl	Chlorine	/'klɔ:ri:n/
Cm	Curium	/'kju:riəm/
Co	Cobalt	/'kəʊbɔlt/

Cr	Chromium	/'krəʊmiəm/
Cs	Caesium	/'si:ziəm/
Cu	Copper	/'kɒpə/
Db	Dubnium	/'dʌbniəm/
Ds	Darmstadtium	/dɑ:m'stætiəm/
Dy	Dysprosium	/dis'prəʊziəm/
Er	Erbium	/'ɜ:biəm/
Es	Einsteinium	/aɪn'steɪniəm/
Eu	Europium	/ju:'rəʊpiəm/
F	Fluorine	/'flʊəri:n/
Fe	Iron	/'aɪən/
Fm	Fermium	/'fɜ:miəm/
Fr	Francium	/'frænsiəm/
Ga	Gallium	/'gæliəm/
Gd	Gadolinium	/gædə'li:niəm/
Ge	Germanium	/dʒə'meɪniəm/
H	Hydrogen	/'haɪdrədʒən/
He	Helium	/'hi:liəm/
Hf	Hafnium	/'hæfniəm/
Hg	Mercury	/'mɜ:kjʊri/
Ho	Holmium	/'həʊlmiəm/
Hs	Hassium	/'hæsiəm/
I	Iodine	/'aɪədi:n/
In	Indium	/'ɪndiəm/
Ir	Iridium	/ɪ'ri:diəm/
K	Potassium	/pə'tæsiəm/
Kr	Krypton	/'kriptən/
La	Lanthanum	/'lænθənəm/
Li	Lithium	/'liθiəm/

Lr	Lawrencium	/lə'rensiəm/
Lu	Lutetium	/lju:'ti:fəm/
Md	Mendelevium	/mendə'li:vɪəm/
Mg	Magnesium	/mæg'ni:ziəm/
Mn	Manganese	/'mæŋgəni:z/
Mo	Molybdenum	/mə'libdənəm/
Mt	Meitnerium	/maɪt'nɜ:riəm/
N	Nitrogen	/'naɪtrədʒən/
Na	Sodium	/'səʊdiəm/
Nb	Niobium	/naɪ'əʊbiəm/
Nd	Neodymium	/ni:əʊ'dɪmiəm/
Ne	Neon	/'ni:vən/
Ni	Nickel	/'nikəl/
No	Nobelium	/nəʊ'bi:liəm/
Np	Neptunium	/nep'tju:niəm/
O	Oxygen	/'ɒksɪdʒən/
Os	Osmium	/'ɒzmiəm/
P	Phosphorus	/'fɒsfərəs/
Pa	Protactinium	/prəʊtæk'tɪniəm/
Pb	Lead	/'led/
Pd	Palladium	/pə'leɪdiəm/
Pm	Promethium	/prə'mi:θiəm/
Po	Polonium	/pə'ləʊniəm/
Pr	Praseodymium	/preɪziəʊ'dɪmiəm/
Pt	Platinum	/'plætɪnəm/
Pu	Plutonium	/plu:'təʊniəm/
Ra	Radium	/'reɪdiəm/
Rb	Rubidium	/ru:'bɪdiəm/
Re	Rhenium	/'ri:niəm/

Rf	Rutherfordium	/rʌðə'fɔːdiəm/
Rg	Roentgenium	/rɒnt'geniəm/
Rh	Rhodium	/'rəʊdiəm/
Rn	Radon	/'reɪdɒn/
Ru	Ruthenium	/ru:'θiːniəm/
S	Sulphur	/'sʌlfə/
Sb	Antimony	/'æntɪməni/
Sc	Scandium	/'skændiəm/
Se	Selenium	/sə'liːniəm/
Sg	Seaborgium	/si:'bɔːgiəm/
Si	Silicon	/'sɪlɪkən/
Sm	Samarium	/sə'mɛəriəm/
Sn	Tin	/'tɪn/
Sr	Strontium	/'strɒntiəm/
Ta	Tantalum	/'tæntələm/
Tb	Terbium	/'tɜːbiəm/
Tc	Technetium	/tek'niːʃiəm/
Te	Tellurium	/tə'luəriəm/
Th	Thorium	/'θɔːriəm/
Ti	Titanium	/ti'teɪniəm/
Tl	Thallium	/'θæliəm/
Tm	Thulium	/'θjuːliəm/
U	Uranium	/ju'reɪniəm/
Uub	Ununbium	/ju:'nʌnbɪəm/
Uuh	Ununhexium	/ju:nən'heksiəm/
Uuo	Ununoctium	/ju:nə'nɒktiəm/
Uup	Ununpentium	/ju:nən'pentiəm/
Uuq	Ununquadium	/ju:nən'kwɒdiəm/
Uut	Ununtrium	/ju:'nʌntriəm/

V	Vanadium	/və'neɪdɪəm/
W	Tungsten	/'tʌŋstən/
Xe	Xenon	/'zenɒn/
Y	Yttrium	/'ɪtriəm/
Yb	Ytterbium	/'ɪtɜːbiəm/
Zn	Zinc	/'zɪŋk/
Zr	Zirconium	/zɜː'kəʊniəm/

Formulae

CO₂	Carbon dioxide
CO	Carbon monoxide
NO₂	Nitrogen dioxide
N₂O	Dinitrogen oxide
NO	Nitrogen oxide
N₂O₄	Dinitrogen tetroxide
SO₂	Sulphur dioxide
SO₃	Sulphur trioxide
H₂SO₄	Sulphuric acid
HCl	Hydrochloric acid
HNO₃	Nitric acid
PCl₅	Phosphorus pentachloride

Chemical Equations

- A chemical equation is a description of a reaction using element symbols and chemical formulas.
- The starting substances in a chemical reaction are reactants.
- The substances produced by the chemical reaction are products.



Memorize the prefixes for number of atoms

1: Mono-	6: Hexa-
2: Di-	7: Hepta-
3: Tri-	8: Octa-
4: Tetra-	9: Nona-
5: Penta-	10: Deca-

P_2S_3 : diphosphorus trisulfide

wikiHow to Write a Chemical Equation

Appendix 3.

IRREGULAR VERBS

1. arise [ə'raɪz]	arose [ə'rouz]	arisen [ə'rizn]	піднімати (ся)
2. be [bi:]	was [wɒz], were [weə]	been [bi:n]	бути
3. bear [bea]	bore [bɔ:]	born [bɔ:n]	нести, народжувати
4. become [br'kʌm]	became [br'keɪm]	become [br'kʌm]	ставати кимось, чимось
5. begin [br'gɪn]	began [br'gen]	begun [br'gʌn]	починати(ся)
6. bend [bend]	bent [bent]	bent [bent]	гнути
7. bind [baɪnd]	bound [baʊnd]	bound [baʊnd]	зв'язувати
8. bite [baɪt]	bit [bɪt]	bitten [bɪtn] (bit [bɪt])	кусати
9. bleed [bli:d]	bled [bled]	bled [bled]	сходити кров'ю
10. blow [bləʊ]	blew [blu:]	blown [bləʊn]	дути
11. break [breɪk]	broke [brəʊk]	broken ['brəʊkn]	ламати, повідомляти (новину)
12. breed [bri:d]	bred [bred]	bred [bred]	вирощувати
13. bring [brɪŋ]	brought [brɔ:t]	brought [brɔ:t]	приносити
14. build [bɪld]	built [bɪlt]	built [bɪlt]	будувати
15. burn [bɜ:n]	burnt [bɜ:nt]	burnt [bɜ:nt]	горіти, палити
16. buy [baɪ]	bought [bɔ:t]	bought [bɔ:t]	купувати
17. cast [kɑ:st]	cast [kɑ:st]	cast [kɑ:st]	розкидати
18. catch [kætʃ]	caught [kɔ:t]	caught [kɔ:t]	ловити
19. choose [tʃu:z]	chose [tʃɔuz]	chosen ['tʃɔuzn]	вибирати

20. come [kʌm]	came [keɪm]	come [kʌm]	приходити
21. cost [kɒst]	cost [kɒst]	cost [kɒst]	коштувати
22. cut [kʌt]	cut [kʌt]	cut [kʌt]	різати
23. dig [dɪg]	dug [dʌg]	dug [dʌg]	рити, копати
24. do [du:]	did [dɪd]	done [dʌn]	робити, виконувати
25. draw [drɔ:]	drew [dru:]	drawn [drɔ:n]	малювати, притягувати
26. dream [dri:m]	dreamt [dremt]	dreamt [dremt]	мріяти, снитися
27. drink [drɪŋk]	drank [draɪŋk]	drunk [drʌŋk]	пити
28. drive [draɪv]	drove [drəʊv]	driven [drɪvən]	керувати авто
29. eat [i:t]	ate [et]	eaten [i:tn]	їсти
30. fall [fɔ:l]	fell [fel]	fallen [fɔ:ln]	падати
31. feed [fi:d]	fed [fed]	fed [fed]	годувати
32. feel [fi:l]	felt [felt]	felt [felt]	почувати (себе)
33. fight [faɪt]	fought [fɔ:t]	fought [fɔ:t]	битися, боротися
34. find [faɪnd]	found [faʊnd]	found [faʊnd]	знаходити
35. flee [fli:]	fled [fled]	fled [fled]	тікати, рятуватися
36. fly [flaɪ]	flew [flu:]	flown [flaʊn]	літати
37. forget [fə 'get]	forgot [fə 'gɒt]	forgotten [fə'gɒtn]	забувати
38. get [get]	got [gɒt]	gotten [gɒtn] (got [gɒt])	отримувати, розуміти, добиратися
39. give [gɪv]	gave [geɪv]	given ['gɪvən]	давати
40. go [gəʊ]	went [went]	gone [gɒn]	їти, їхати
41. grow [grəʊ]	grew [gru:]	grown [grəʊn]	виростити
42. hang [hæŋ]	hung[hʌŋ]	hung [hʌŋ]	висіти
43. have[hæv]	had [hæd]	had [hæd]	мати (щось)

44. hear [hɪə]	heard [hə:d]	heard [hə:d]	чути
45. hide[haid]	hid [hɪd]	hidden ['hɪdn]	ховатися
46. hit [hɪt]	hit [hɪt]	hit [hɪt]	вдарити
47. hold[həʊld]	held [held]	held [held]	тримати
48. keep [ki:p]	kept [kept]	kept [kept]	тримати, зберігати
49. know [nəʊ]	knew [nju:]	known [nəʊn]	знати
50. lead [li:d]	led [led]	led [led]	лідити, вести за собою
51. learn [lə:n]	learnt [lə:nt]	learnt [lə:nt]	вчити(ся)
52. leave [li:v]	left [left]	left [left]	залишати, покидати
53. lend [lend]	lent [lent]	lent [lent]	позичати
54. let [let]	[let] let	[let] let	дозволяти, здавати в оренду
55. light [laɪt]	lit [lɪt]	lit [lɪt]	світити
56. lose [lu:z]	lost [lɒst]	lost [lɒst]	втрачати
57. make [meɪk]	made [meɪd]	made [meɪd]	робити руками
58. mean [mi:n]	meant [ment]	meant [ment]	означати
59. meet [mi:t]	met [met]	met [met] met	зустрічати, знайомитися
60. put [put]	put [put]	put [put]	класти
61. read [ri:d]	read [red]	read [red]	читати
62. ride [raɪd]	rode [rəʊd]	ridden ['rɪdn]	кататися
63. rise [raɪz]	rose [rəʊz]	risen ['rɪzn]	підніматися
64. run [rʌn]	ran [ræn]	run[rʌn]	бігти, їхати (про транспорт)
65. say [seɪ]	said [sed]	said [sed]	сказати
66. see [si:]	saw [sɔ:]	seen [si:n]	бачити

67. sell[sel]	sold [sɔʊld]	sold [sɔʊld]	продавати
68. send [send]	sent [sent]	sent [sent]	посилати
69. set [set]	set [set]	set [set]	налаштувати, встановити
70. shake [ʃeɪk]	shook [ʃʊk]	shaken [ʃeɪkən]	трясти
71. shine [ʃaɪn]	shone [ʃɒn]	shone [ʃɒn]	світити
72. shoot [ʃu:t]	shot [ʃɒt]	shot [ʃɒt]	стріляти
73. shut [ʃʌt]	shut [ʃʌt]	shut [ʃʌt]	закривати
74. sing [sɪŋ]	sang [sæŋ]	sung [sʌŋ]	співати
75. sink [sɪŋk]	sank [sæŋk]	sunk [sʌŋk]	потонути
76. sit [sɪt]	sat [sæt]	sat [sæt]	сидіти
77. sleep [sli:p]	slept [slept]	slept [slept]	спати
78. smell [smel]	smelt [smelt]	smelt [smelt]	пахнути, нюхати
79. speak [spi:k]	spoke [spəʊk]	spoken ['spəʊkən]	говорити, розмовляти
80. spend [spend]	spent [spent]	spent [spent]	тратити, проводити (час)
81. spoil [spɔɪl]	spoilt [spɔɪlt]	spoilt [spɔɪlt]	псувати
82. spread [spred]	spread [spred]	spread [spred]	поширювати, намащувати
83. spring [sprɪŋ]	sprang [spræŋ]	sprung [sprʌŋ]	стрибати
84. stand [stænd]	stood [stud]	stood [stud]	стояти
85. steal [sti:l]	stole [stəʊl]	stolen ['stəʊlən]	красти
86. stick [stɪk]	stuck [stʌk]	stuck [stʌk]	приклеювати, дотримуватись
87. sting [stɪŋ]	stung [stʌŋ]	stung [stʌŋ]	жалити
88. stride [straɪd]	strode [strəʊd]	stridden ['strɪdn]	крокувати
89. strike [straɪk]	struck [strʌk]	struck [strʌk]	бити, страйкувати

90. strive [straɪv]	strove [strɔʊv]	striven ['strɪvn]	старатися
91. swear [sweə]	swore [swɔ:]	sworn [swɔ:n]	присягатися
92. sweep [swi:p]	swept [swept]	swept [swept]	підмітати
93. swim [swɪm]	swam [swæm]	swum [swʌm]	плавати
94. swing [swɪŋ]	swung [swʌŋ]	swung [swʌŋ]	гойдатися, мінатися
95. take [teɪk]	took [tuk]	taken ['teɪkn]	брати
96. teach [ti:tʃ]	taught [tɔ:t]	taught [tɔ:t]	навчати
97. tear [teə]	tore [tɔ:]	torn [tɔ:n]	рвати на шматки
98. tell [tel]	told [tɔʊld]	told [tɔʊld]	розповідати
99. think [θɪŋk]	thought [θɔ:t]	thought [θɔ:t]	думати
100. throw [θrəʊ]	threw [θru:]	thrown [θrəʊn]	кидати
101. thrust [θrʌst]	thrust [θrʌst]	thrust [θrʌst]	штовхати
102. tread [tred]	trod [trɒd]	trodden ['trɒdn]	ступати
103. understand [ˌʌndə 'staend]	understood [ˌʌndə'stu:d]	understood [ˌʌndə'stu:d]	розуміти
104. upset [ʌp 'set]	upset [ʌp'set]	upset [ʌp'set]	засмучуватися
105. wake [weɪk]	woke [wɔʊk]	woken [wɔʊkn]	прокидатися
106. wear [weə]	wore [wɔ:]	worn [wɔ:n]	носити, одягатися
107. weave [wi:v]	wove [wɔʊv]	woven ['wɔʊvn]	ткати
108. weep [wi:p]	wept [wept]	wept [wept]	плакати
109. win [wɪn]	won [wʌn]	won [wʌn]	перемагати, вигравати
110. wind [waɪnd]	wound [waʊnd]	wound [waʊnd]	заводити

GLOSSARY

А а	
absorb	абсорбувати, вбирати, всмоктувати
accelerant	прискорювач, каталізатор
accuracy	точність, правильність, достовірність
acetic	оцтовий
acid	кислота, кислий, кислотний
acidify	підкислювати
acrid	різкий, подразнюючий, гострий
activator	збудник, активатор
acylation	ацилування
additive	додаток, домішка
adhere	склеюватися, прилипати
adhesive	речовина, яка зв'язує
adipaphoretic	засіб, що пригнічує потовиділення
administer	давати, призначати, вводити
admixture	домішка
adverse	побічний, шкідливий
affinity	схожість, спорідненість
agent	агент, фактор, засіб
agitation	бовтання, перемішування
alkali	луг
ambient	оточуючий

analgesic	болезаспокійливий засіб, анальгетик
anatriptic	лікарський засіб для втирання
antihelmintic	протиглисний
antibechic	засіб проти кашлю
anticonvulsant	протисудомний засіб
antidote	протиотрута, антидот
antiemetic	засіб проти блювоти
antifungal	протигрибковий засіб
anti-infective	протибактеріальний засіб
anti-inflammatory	Протизапальний
antineoplastic	протипухлинний засіб
antipruritic	засіб проти свербіж
antipyretic	жарознижуючий
antisensitizer	протиалергійний засіб
antispasmodic	спазмолітичний засіб
antiviral	противірусний
application	застосування, компрес, примочка
assay	проба, зразок, аналіз
astrigent	в'яжучий засіб
atomizer	розпилювач, аерозольний інгальатор
attenuant	розріджувач
auxiliary	допоміжний засіб
B b	
balance	ваги

balm	бальзам; меліса лікарська
bark	кора
base	основа
bead	гранула
bile-expelling	жовчогінний
binder	речовина, яка зв'язує
bitter	гіркота, гіркий
blend	суміш
boil	кип'ятити
bond	зв'язок
buffer	буферний розчин
bulk	маса
С с	
carbohydrate	вуглевод
carbonisation	обвуглювання
carboxylation	карбоксилування
carrier	носій
chain	ланцюг, ланцюжок
chamomile	ромашка
chlorination	хлорування
cholagogue	жовчогінний засіб
chromatography	хроматографія
cleanse	очищати, дезінфікувати
coagulation	коагуляція, згортання
coat	оболонка

combustion	горіння
compound	сполука, склад
condenser	конденсатор, холодильник
conjugate	парний, сполучений
conversion	зміна, перетворення
crucible	тигель
cure	лікування, курс лікування
D d	
decoction	відвар
decolorant	відбілювач
decompose	розпадатися, розкладатися
decongestant	засіб проти набряку
dehydration	зневоднення, дегідратація
density	густина, густість
depth	глибина, інтенсивність
derivative	похідне
develop	виявляти, розроблювати
deviation	відхилення
diluent	розріджувач, розчинник
dimension	розмір, величина, об'єм
dispense	відпускати ліки
dispersion	дисперсія, диспергування
dissolution	розчинення
distillation	дистиляція, перегонка
diuretic	сечогінний засіб

dosage	дозування
dressing	пов'язка
drier	сушарка
drip	капати, стікати по краплям
dye	барвник
Е е	
eluent	розчинник, елюент
emission	випромінювання, випускання
emollient	пом'якшуюча речовина, пом'якшувач
emulsifier	емульгатор
encapsulation	включення в желатинову капсулу
enzyme	фермент, ензим
equilibrium	рівновага
equipment	обладнання, устаткування
error	помилка, похибка
ester	складний ефір
estimation	визначення, оцінювання
ether	простий ефір
evaporate	випаровуватися, випаровувати
exchange	обмін
excipient	наповнювач
expectorant	відхаркуючий засіб
exsiccator	ексикатор, сушильна шафа
extraction	екстрагування, вилучення
Ф ф	

fat	жир
fermentation	ферментація, бродіння
fibre	волокно
film	плівка, наліт
fineness of powder	ступінь подрібнення порошку
flame	полум'я
flask	колба
fluctuate	коливатися, бути нестійким
fluid	рідина
formulary	фармакологічний довідник
formulation	технологія приготування ліків
foxglove	наперстянка
freeze	заморожувати
frequency	частота
funnel	лійка
germicide	бактерицидний
G g	
ginseng	женьшень
glue	клей, склеювати
goggles	захисні окуляри
graduate	мірна склянка, мензурка
granulation	грануляція
graph	діаграма, крива
grinding	розмелювання, розтирання
guideline	посібник, керівництво

H h	
half-life	період напіврозпаду
hazard	небезпека, шкідливий фактор
heat	тепло, теплота
hemostatic	кровоспинний засіб
heterogeneity	гетерогенність, неоднорідність
holder	тримач, штатив
homogeneous	гомогенний, однорідний
hood	витяжна шафа
humidifier	зволожувач
humidity	вологість
hydrolysis	гідроліз
hydrolyze	піддавати гідролізу, гідролізувати
hydrous	водний, водяний
hyperoxide	перекис
hypnotic	снودійний засіб
hypodermic	підшкірний
hypoisotonic	гіпотонічний
hypotensive	який знижує тиск, гіпотензивний
Ii	
identification	ідентифікація, розпізнання
identity	ідентичність, істинність
ignition	озоління
immerse	устромляти, занурювати
immunoassay	імунологічний аналіз

impurity	забруднення, домішка
inactive	інертний, пасивний
incorporation	змішування, включення
index	показник, коефіцієнт
indicate	вказувати, позначати
infiltrate	інфільтрувати, насичувати
infusion	вливання, настій
ingredient	інгредієнт, компонент, складова (частина)
inhibitor	затримуючий фактор, інгібітор
initial	початковий, вихідний, первинний
inlet	вхідний отвір, вхід
inscription	пропис рецепта
insolubility	нерозчинність
instability	нестійкість, нестабільність
installation	установка, пристрій
instill	уводити краплями, закапувати
intensifier	посилювач
intensity	інтенсивність, напруження
interaction	взаємодія, взаємозв'язок
interfere	заважати, робити перепони
intermediate	проміжний продукт
intolerance	нестерпність, нестійкість
intoxication	інтоксикація, отруєння
iodine	йод
irradiate	опромінювати, випромінювати

irreversible	необоротний
isolate	ізолювати, виділяти
J j	
jar	банка, посудина
jet	струмінь
join	з'єднувати
juice	сік
K k	
kettle	казан
kiln	випалювати, сушити
knead	м'яти, місити
knock-out	виштовхувач
krypton	криптон
L l	
label	етикетка, ярлик, мітка
labelling	етикетування, маркування
laxative	проносний засіб
layer	шар, ряд
leak(age)	витік, просочування
levigate	розтирати на порошок, вилуговувати
liniment	лінімент, рідка мазь
linkage	зв'язок, зчеплення, поєднання
liquid	рідина
load	навантаження
loop	петля

loose	вільний, нещільний
lotion	примочка, лосьйон
low-molecular	низькомолекулярний
lozenge	таблетка
lubricant	мастильний засіб
lysis	лізис, розчинення, розпад
M m	
maceration	мацерація, вимочування лікарської сировини
magistral	виготовлений за рецептом
marc	макуха (рослинної сировини)
mature	зріти
measurement	вимірювання
medication	лікарський засіб
medicinal	лікарський
medium	живильне середовище
mix	змішувати
moistening	зволожування
mold	форма; пліснява
mucilaginous	слизовий, клейкий, в'язкий
mucus	слиз
multivitamins	полівітаміни
muscular	м'язовий
N n	
nauseant	блювотний засіб
nebulization	розпилення

neutralize	нейтралізувати
nitrogenous	азотний
non-addictive	який не викликає звикання
non-aqueous	неводний
non-reversible	незворотний
non-volatile	неліткий
nostrum	патентований препарат
noxious	шкідливий, отруйний
nucleus (-i)	ядро
nutrient	поживна речовина
О о	
observation	спостереження, вивчення
obtundent	який пом'якшує, заспокійливий
occlusive	герметичний
occur	виявлятися, зустрічатися
oculumentum	мазь для очей
odour	запах
oil	олія
ointment	мазь
oleaginous	масляний
oncolytic	онколітичний, який руйнує пухлинну тканину
opacity	помутніння
oral	ротовий, пероральний
orexigenic	який збуджує апетит

organy	материнка
overstrain	перевантаження, перенапруження
oxidant	окислювач
oxidation	окислення
oxidoreduction	окислення-відновлення
Р р	
package	упаковка
pad	подушечка
pain-killer	засіб проти болю
parenteral	парентеральний
particle	частка
pathway	шлях, прохід
pellet	кулька, пілюля, гранула
penetrate	проникати
percolation	перколяція, проціджування, просочування
peroral	пероральний
peroxide	перекис
petrolatum	вазелін
pharmaceutics	технологія лікарських форм
pharmacy	фармація, аптека
phlogistic	запальний
pill	пігулка
pilot	дослідний, експериментальний
plant	рослина
plantain	подорожник

plaster	пластир
plasticizer	пом'якшувач, пластифікатор
poisonous	отруйний, токсичний
polarity	полярність
pollutant	забруднююча речовина
pollute	забруднювати
porosity	пористість
potent	сильнодіючий
potentiate	потенціювати, посилювати дію
powder	порошок
precipitate	осад, осаджувати
precipitation	випадіння осаду, преципітація
precursor	попередник
preparation	приготування
prepare	готувати
prescription	рецепт
preservative	консервант
procedure	процедура, метод
proof	перевірка, випробування, проба
property	якість
protection	захист
protective	захисний
pulverize	утирати, розтирати на порошок
pulverulent	порошкоподібний
pump	насос, помпа

purgative	проносний засіб
purification	очищення
Q q	
quality	якість
quantify	визначати кількість
qualitative	якісний
quantitative	кількісний
quantity	кількість, величина
quassation	подрібнення лікарської сировини
quenching	гашення
quinquina	хінне дерево
R r	
rack	підставка, штатив
radiate	випромінювати
radioscopy	рентгеноскопія
range	галузь, зона, інтервал, діапазон, межа
rare	рідкий, розряджений
rarefaction	розрідження
rate	швидкість, темп, норма, коефіцієнт
ratio	співвідношення, коефіцієнт
ray	промінь
reabsorption	реабсорбція, зворотне усмоктування
reach	проникати, досягати

reactant	речовина, яка реагує, реагент
reactivity	реакційна здатність
reading	відлік, показання (приладу)
recover	відновлювати
redox	окислення-відновлення
reduce	зменшувати, відновлювати
reflect	відбивати
refrigeration	охолодження, замороження
regulation	регламентація, установлення стандартів
relative	відносний
reliability	надійність, вірогідність
remedy	лікарський засіб
remove	виводити, усувати
requirement	вимога
research	дослідження, вивчення
residue	осад, залишок
resin	смола
resolution	розчинення, розщеплення
resorption	поглинання, резорбція
retain	утримувати, зберігати
ring	кільце, цикл
rinse	полоскання, полоскати
root	коріння
rotate	обертати
route	спосіб вживання

rub	розтирати
rubber	гума
S s	
safety	безпека, надійність
sage	шавлія
saline	сольовий розчин
salt	сіль
saltpeter	селітра
sample	проба, зразок
sampler	прилад для отримання зразків
sap	сік (рослини)
saturate	насичувати, просочувати
saturation	насичення
scale	шкала
score	оцінка, показник
screen	екран, щит, фільтр
seal	ущільнення, герметизація
secondary	вторинний, допоміжний
sedative	заспокійливий, седативний
sediment	осад
seed	насіння
select	відбирати
semifluid	напіврідкий
sensitivity	чутливість
separate	відділяти, виділяти

sequence	послідовність
set	комплект, набір, серія
settle	відстоюватися, осідати
setup	прилад, приладдя
shake	сколихувати, збовтувати
shape	форма
shelf-life	термін зберігання (придатності)
shell	оболонка
shift	зміщення, зсув
short-term	короткочасний
sieve	сито
sift	просівати, фільтрувати
signature	сигнатура
similarity	схожість, подібність
size	розмір, величина, обсяг
sizing	вимірювання, калібровка
slab	пластинка, смужка, блок
slurry	суспензія
soak	усмоктуватися, просочувати(ся)
soda	сода, вуглекислий натр
soften	пом'якшувати
solid	тверда речовина
solidify	холонути, твердіти
solubility	розчинність
solubilization	солюбілізація, підвищення розчинності

soluble	розчинний
solution	розчин
solvency	здатність розчиняти
solvent	розчинник
soundproof	звуконепроникний
source	джерело
sow-foot	мачушник
spa	мінеральне джерело
space	простір, проміжок
span	проміжок часу, інтервал
spatula	шпатель, лопаточка
specialties	готові лікарські засоби заводського приготування
specification	специфікація, технологічні вимоги
specimen	зразок, проба, препарат
spectrometry	спектрометрія
spectroscopy	спектроскопія
spectrum (-a)	спектр
spirit	спиртовий
splitting	розщеплення, розшаровування
spot	пляма
spray	розпиляти, розбризкувати
squeeze	стиснення, здавлювання
stability	стабільність, стійкість
stage	стадія, фаза, етап
stain	барвник, фарбувати, пляма

stand	штатив, підставка
starch	крохмаль
steam	пара
stem	стебло
sterilizer	стерилізатор
stimulant	стимулятор, подразник
stir	перемішування, збовтування
stock	запас
stopper	пробка, закупорювати
storage	зберігання
strain	напруження, навантаження, деформація
stratification	розшарування
stratochamber	барокамера
stratum (-a)	шар
strength	сила, міцність, напруженість, концентрація
stretch	витягати, розтягувати
strict	точний, суворий
strip	смуга, стрічка
subcellular	внутрішньоклітинний
subdue	послаблювати, пом'якшувати
submersion	занурення в рідину
subscription	пропис (частина рецепта)
substance	речовина
substitute	замісник, замінник

subunit	підгрупа, похідна одиниця
suction	відсмоктувальний, відсмоктування
sudorific	потогінний засіб
sulphurous	сірчастий
supersound	ультразвук
suppository	свічка, супозиторій
suppress	пригнічувати, гальмувати
surface	поверхня
survey	обстеження, дослідження
suspend	підвішувати, затримувати
suspension	суспензія, завись
sustain	витримувати, витерплювати
swell	набухати, набрякати
synthesize	синтезувати
Tt	
tablet	таблетка
taste	смак
temperate	помірний
temporary	тимчасовий
tension	тиск, напруга
test	тест, проба, випробування
thermal	тепловий, термальний
thermolysis	термоліз, тепловіддача
thickness	товщина, шар, щільність
thin-layer	тонкошаровий

threshold	поріг, межа, границя
tight	щільний, герметичний
tight-fitting	щільно підігнаний
timing	хронометраж
tincture	настоянка
tissue	тканина
titrate	титрувати
titration	титрування
tolerate	виносити, витримувати
tool	інструмент, прилад
toxicant	отруйна речовина
toxigenicity	токсигенність
training	підготовка, навчання
transfer	перенесення, переміщення
transformation	перетворення
transient	тимчасовий
tray	лотік, жолоб, піддон
treatment	обробка, лікування
triturate	розтирати на порошок
troche	пастилка, таблетка
tube	трубка, пробірка
turbidity	помутніння
tussal	який проти кашлю
Uu	
undiluted	нерозбавлений, нерозведений

unfit	непридатний, невідходящий
uniformity	однорідність, уніфікація
unipolar	однополярний
unit	одиниця (вимірювання); апарат, прилад
univalent	одновалентний
unstable	нестійкий, нестабільний
use	вживати, використовувати
V v	
value	величина, показник
valve	клапан, вентиль
vaporize	випаровувати(ся)
vehicle	наповнювач
velocity	швидкість
venom	отрута
vent	вихідний отвір
verification	перевірка, контроль, підтвердження
vessel	посудина
vial	пробірка, ампула, флакон
virulent	отруйний, вірулентний
viscosity	в'язкість, тягучість
volume	об'єм
vomitive	блювотний засіб
W w	
wall	стінка

warning	осторога, попередження
wash	мити, промивати
waste	відходи
waterproof	водонепроникний
wave	хвиля
wavelength	довжина хвилі
wax	віск
weigh	зважувати
weight	маса, вага
welding	зварювання
wet	змочувати, зволожувати
wormwood	полин гіркий
X x	
xanthene	ксантен
xanthine	ксантін
xenon	ксенон
X-rays	рентгенівські промені
xylene	ксилол
Y y	
yeast	дріжджі
yield	вихід
yperite	іприт
Z z	
zeolite	цеоліт
zero	нуль
zinc	цинк

zirconium	цирконій
zoosterols	зоостерини
zyme	фермент, ензим
Zymohexase	альдолаза
zymolysis	ферментативний гідроліз

REFERENCES

CONTENTS

PREFACE		
MODULE I		
INTRODUCTION TO THE SPECIALITY		
UNIT 1 Text: National University of Pharmacy Grammar: Pronouns: Personal, Object, Relative, Demonstrative, Indefinite, Reflexive, Possessive and Interrogative		
UNIT 2 Text: My Future Speciality Grammar: The verbs “to be”, “to have” in Present Simple Tense		
UNIT 3 Text: Chemist’s Shop Grammar: The Noun and its Number		
UNIT 4 Text 1: Prescriptions Text 2: The English Prescription Grammar: Adjectives and their Degrees of Comparison		
UNIT 5 Text 1. Coldrex Tablets Text 2. Paracetamol Grammar: Present Simple Tense		
UNIT 6 Text 1. The Chemical Laboratory Text 2. Laboratory Safety Grammar: There is\ there are		
UNIT 7 Text: What is Pharmacy? Grammar: Pronouns <i>some, any, no</i>		
UNIT 8 Text: History of Pharmacy Grammar: Past Simple Tense		
UNIT 9 Text: On the History of Chemistry in Ukraine Grammar: Pronouns <i>many, much, few, little</i>		

UNIT 10 Text: The Future of Pharmacy Grammar: Future Simple Tense		
MODULE II DRUGS: TECHNOLOGY, NAMES, CLASSES, ADMINISTRATION		
UNIT 11 Text: Medicinal and Pharmaceutical Chemistry Grammar: Modal verbs		
UNIT 12 Text: Pharmaceutical Technology, Industry and Manufacturing Grammar: Present Continuous Tense		
UNIT 13 Text: Pharmacy Management and Economics Grammar: Past Continuous Tense		
UNIT 14 Text: What is a Drug, a Medication, a Medicine? Grammar: Future Continuous Tense		
UNIT 15 Text: Drug Names Grammar: Present Perfect Tense		
UNIT 16 Text: Drug Classes Grammar: Past Perfect Tense		
UNIT 17 Text: Drug Administration Grammar: Future Perfect Tense		
UNIT 18 Text: Drug Interactions Grammar: Passive Voice in Simple Tenses		
UNIT 19 Text: Drug Toxicity Grammar: Passive Voice in Perfect Tenses		
MODULE III FOREIGN EDUCATIONAL ENVIRONMENT		

UNIT 20 Text 1. Great Britain Text 2. London Text 3. British Royal Family Grammar: Articles		
UNIT 21 Text: English Universities and Colleges Grammar: Articles in Geographical Names		
UNIT 22 Text: University of Oxford Grammar: Prepositions of Time		
UNIT 23 Text: Pharmaceutical Education in Great Britain Grammar: Prepositions of Place		
UNIT 24 Text: Western Pharmacy Education Grammar: Phrasal Verbs		
UNIT 25 Text: American Universities and Colleges Grammar: Pharmaceutical and Medical Idioms		
UNIT 26 Text: Pharmaceutical Training Curriculum: Chemistry Grammar: The Systematization of the Use of Tenses in Active Voice		
UNIT 27 Text: Pharmaceutical Training Curriculum: Biology Grammar: The Systematization of the Use of Tenses in Passive Voice		
Appendix 1. ENGLISH PHONETIC TRANSCRIPTION		
Appendix 2. CHEMICAL SYMBOLS, FORMULAE & EQUATIONS		
Appendix 3. IRREGULAR VERBS		
GLOSSARY		
REFERENCES		