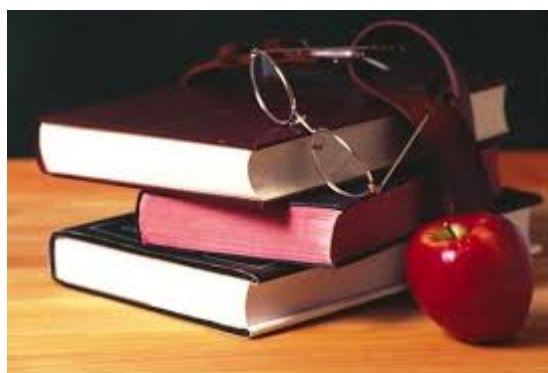


МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
ЗАПОРІЗЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ
КАФЕДРА ІНОЗЕМНИХ МОВ

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ІНОЗЕМНА МОВА.
ІНОЗЕМНА МОВА ЗА ПРОФЕСІЙНИМ
СПРЯМУВАННЯМ.

ПРАКТИКУМ
для студентів I-II курсів
фармацевтичних факультетів
спеціальності 226 «Фармація, промислова фармація», спеціалізації «Технології
парфумерно-косметичних засобів»



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О-65

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Мета практикуму – забезпечити студентів та викладачів додатковим матеріалом та завданнями для аудиторної та позааудиторної роботи, спрямованих на комплексну реалізацію особистісно-орієнтованого, діяльнісного, комунікативно-когнітивного та соціокультурного підходів до вивчення англійської мови.

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ПЕРЕДМОВА

Практикум призначено для студентів I-II курсів фармацевтичних факультетів спеціальності 226 «Фармація, промислова фармація», спеціалізації «Технології парфумерно-косметичних засобів», що цікавляться механізмами функціонування сучасної наукової мови та прагнуть сформувати й вдосконалити індивідуальну програму пізнавальної діяльності через самостійну роботу з різними джерелами наукової інформації. Практикум складено з урахуванням вимог Примірної програми підготовки фахівців другого (магістерського) рівня вищої освіти, кваліфікації освітньої «Магістр фармації», кваліфікації професійної «Провізор», «Провізор-косметолог», галузі знань 22 «Охорона здоров'я», спеціальності 226 «Фармація, промислова фармація». Примірна програма дисципліни «Іноземна мова» затверженої МОЗ України 5 жовтня 2016 р."

Цей практикум розроблено для студентів, які вивчають дисципліну «Іноземна мова» та «Іноземна мова за професійним спрямуванням» на фармацевтичному факультеті Запорізького державного медичного університету, а також для викладачів кафедри іноземних мов.

Мета практикуму – забезпечити студентів та викладачів додатковим матеріалом та завданнями для аудиторної та позааудиторної роботи, спрямованих на комплексну реалізацію особистісно-орієнтованого, діяльнісного, комунікативно-когнітивного та соціокультурного підходів до вивчення англійської мови.

Практикум складається з 32 оригінальних англомовних медичних текстів для читання й вправ, які формують навички пошуку та обробки необхідної інформації. Тематика текстів для читання охоплює весь необхідний матеріал. Тексти для читання було відібрано з оригінальної довідкової та навчальної літератури та скорочено з урахуванням вимог методики викладання іноземних

мов. Посібник розраховано на студентів, які володіють знаннями англійської мови й мовленнєвими навичками на рівні B2.

Завдання для перевірки практичних навичок підібрані й побудовані таким чином, щоб розкривати лексико-граматичний матеріал кожної теми, сприяти формуванню навичок володіння спеціальною термінологією.

Методичні завдання даного практикуму реалізуються за наступною схемою:

- Вказується тема заняття (відповідно до робочої програми).
- Опрацьовується інформаційний матеріал.
- Виконується аудиторна робота.
- Виконується самостійна позааудиторна робота студентів.
- На основі матеріалу кожної теми студент представляє підсумкове реферування за темою.

Завданнями дисциплін «Іноземна мова» та «Іноземна мова за професійним спрямуванням» є підвищення рівня володіння іноземною мовою, оволодіння студентами необхідним і достатнім рівнем комунікативної компетенції для вирішення соціально-комунікативних завдань в різних областях побутової, культурної, професійної та наукової діяльності при спілкуванні із зарубіжними партнерами, а також для подальшої самоосвіти, розвиток у студентів вміння самостійно здобувати знання - підвищення рівня навчальної автономії, здатності до роботи з мультимедійними програмами, електронними словниками, іншомовними ресурсами мережі Інтернет; розвиток когнітивних і дослідницьких умінь, розширення кругозору та підвищення інформаційної культури студентів; формування уявлення про основи міжкультурної комунікації, розширення словникового запасу і формування термінологічного апарату на іноземній мові в межах професійної сфери.

Практикум складено у відповідності до робочих програм та спрямований саме на досягнення вищезазначених завдань. Укладачі практикуму бажають великих успіхів у вивченні англійської мови!

Tema 1.

I am a Pharmaceutical Student. Zaporizhzhia State Medical University

Exercise 1. Read the following text:

ZAPORIZHZIA STATE MEDICAL UNIVERSITY

Zaporizhzhia State Medical University is well known in Ukraine and abroad. There are 8 Faculties at the University, Medical College and University Clinic for 160 patients and 250 consultations at polyclinic.

The training at the University includes pre-university, undergraduate and postgraduate periods of study. Foreign students are trained at the International Faculty No. 1 for further studies at higher educational institutions of Ukraine.

During their training at the University both Ukrainian and foreign students get higher education for the Specialist's and Master's degrees ("General Medicine", "Pediatrics", "Dentistry", "Pharmacy", "Technology of Perfume-Cosmetic Preparations").

10200 students, postgraduates, interns, students of refresher courses, teachers-probationers, masters and clinical residents study at the University. There are more than 2200 foreign students from 40 countries at the University. 1024 students are taught in English. The University has gained authority and recognition by training foreign citizens from Asia, Africa, Latin America and Europe for more than 40 years. About 10500 specialists have got medical and pharmaceutical education and are working now in more than 100 countries of the world, taking up high positions in the public health systems of their countries.

At Zaporizhzhia State Medical University students acquire knowledge subject to the requirements of the European system of education. The academic curricula are based on the best models of native and foreign practice of specialists' training.

There is a developed infrastructure of scientific units at the University including SRI (Scientific Research Institute) of medical and ecological problems, Institute of clinical pathology of a man, SMA "Pharmatron", central scientific research laboratory, certification-testing laboratory of perfume and cosmetic preparations and household products, department of doctoral candidacy and postgraduate study, editorial publishing department, Center of informatics and analytical support and testing, patent department, scientific research division, metrology service. Scientific Research Institute and laboratories are equipped with unique facilities for conducting fundamental and applied scientific researches.

Zaporizhzhia State Medical University looks like a student campus on the picturesque bank of the river Dnieper, the biggest river in Europe. It is a detached territory on which there are 5 academic buildings, 5 hostels, scientific and belletristic literature libraries with reading halls and computer rooms, medical centre, student's sanatorium-dispensary, several canteens and cafes, sports center, courts and stadium. There is an amateur art club for students who are keen on singing, dancing and playing musical instruments. Ukrainian historical and cultural parties, festivals of international friendship, competition parties are held at ZSMU.

All academic building, hostels, scientific library have access to Internet. There are Wi-Fi access points at the territory of the University. The student campus is under of the University security round-the-clock. The campus and hostels are equipped with the means of video surveillance and control.

Exercise 2. Translate the following words and phrases into English:

<ol style="list-style-type: none">1. вступати до вищого закладу освіти2. ступінь магістра3. аспірант4. лікувальні властивості5. обов'язкова освіта6. фармацевтичний факультет7. вступні іспити8. фармацевтичний представник9. аптека10. програма	Answers:
---	-----------------

Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

practical training, outlook, higher medical institutions, period of time, curriculum

1. In our country there is a wide network of _____ which train pharmacists.
2. The _____ at the faculty consists of general and special subjects.
3. Pharmaceutical students have _____, at chemist's shops.
4. For a relatively short _____ all the necessary scientific and research facilities were created at the faculty.
5. The NMU trains a new generation of pharmacists, with wide university _____ and knowledge of clinical presentation and pathology of the human body.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. What higher medical institutions of our country train pharmacists?

2. What pharmaceutical specialties do you know?

3. What is internship?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Тема 2.

Pharmaceutical Education in Ukraine

Exercise 1. Read the following text:

The Working Day of a Medical Student.

I am a first-year student of Zaporizhzhia State Medical University. I live with my parents in Zaporizhzhia. Every day I have much interesting and necessary work to do. I always remember that the lost time is never gained and that is why I do not like to waste even a minute.

I get up early in the morning – at about 6 o'clock, do my morning exercises and have a cold rubdown. As I am a medical student I consider that physical exercises are a good remedy for the protection of our health against diseases.

After breakfast I get dressed and leave home. It takes me 30 minutes to get to the University by mini – bus.

Our classes usually begin at 8.30. We have several practical classes and a lecture or two every day. It is useful to us to listen to the lectures because the professors always deliver them clearly and scientifically.

On Friday we usually have a lecture in Physics. Our professor is not only a very good specialist in his field of science but also a qualified teacher. He delivers lectures in his own way and gives us many new and interesting facts about the application of physics in medicine. The professor shows us that at present deep knowledge of this subject will be valuable in our future work.

I also spend a lot of time in the dissecting-room because I know that I shall need deep knowledge of Anatomy in the future. And only hard work in the dissecting room will give me the possibility to gain this knowledge. That's why there are always many students in the dissecting – room.

After classes I go home, have lunch and take a rest. I am often tired but I understand that every day which passes by gives me much valuable and necessary knowledge.

I also work hard in laboratories and perform different laboratory works. Sometimes I go to the library where I read additional literature and some special medical articles. I work very hard because I want to be a good pharmacist.

Exercise 2. Translate the following words and phrases into English:

<ol style="list-style-type: none">1. вступати до фармацевтичного факультету2. отримати ступінь магістра3. заочне відділення4. практика5. технологія виготовлення фармацевтичних препаратів6. хімічна лабораторія7. навчання в інтернатурі8. обов'язкова освіта9. фармацевтичні спеціальності10. іноземні студенти	<p>Answers:</p>
--	------------------------

Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

the degree, take, specialize, management, influence

1. Students _____ in four pharmaceutical specialties.
2. Applicants _____ written entrance exams in chemistry, biology and Ukrainian.
3. They master the mechanisms of drug _____ on the body.
4. Postgraduate students get _____ of the Candidate of Science.
5. Senior students study _____ and marketing of pharmacy.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. What entrance exams do the applicants take to enter a Pharmaceutical faculty?
2. What is postgraduate study?
3. Where can graduates work after completing their study?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Тема 3.

Pharmaceutical Education in Great Britain. Pharmaceutical Education in the USA.

Exercise 1. Read the following text:

What is Pharmacy?

Pharmacy is the health profession that links the health sciences with the chemical sciences and it is charged with ensuring the safe and effective use of pharmaceutical drugs.

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 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.

An establishment in which pharmacy is practiced is called a pharmacy, chemist's or drug store. In the United States and Canada, drug stores commonly sell not only medicines, but also miscellaneous items such as candy (sweets), cosmetics, and magazines, as well as light refreshments or groceries.

The word pharmacy is derived from its root word *pharma* which was a term used since the 15th–17th centuries. 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* (as it was referred to) often operated through a retail shop which, in addition to ingredients for medicines, sold tobacco and patent medicines. The *pharms* also used many other herbs not listed.

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.

Peterson N. Herbs and Health.

Exercise 2. Translate the following words and phrases into English:

1. зазнавати, переносити 2. поглиблений 3. приписувати (ліки)	Answers:
---	-----------------

4. бути задіяним у 5. розповсюдження, дозування 6. роздрібна торгівля 7. навчання чомусь у наставника 8. вимога, необхідна умова 9. ліцензія 10. споріднений	
--	--

Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

common, teaching, followed, engaged, Doctor of Philosophy, provided

1. The history of pharmaceutical education has closely _____ that of medical education.

2. Many institutions, in addition, offer graduate courses leading to the degrees of Master of Science and _____.

3. These advanced courses are intended especially for those, who are preparing for careers in research, manufacturing, or _____ in the field of pharmacy.

4. This professional training includes many subjects _____ to the medical curriculum.

5. The pharmacist is _____ in business so special training is _____ in merchandising, accounting, computer techniques, and pharmaceutical jurisprudence.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. What changes did the training of the pharmacist undergo?

2. What is the professionally trained pharmacist expected to do?
3. What is required to be permitted to practice pharmacy in Great Britain?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Тема 4.

Pharmacy.

Exercise 1. Read the following text:

My Future Profession

I want to be a pharmacist. I think it's a great profession. Usually pharmacists work in pharmacies or pharmaceutical companies. According to my observations, most pharmacies are well-organized and quiet. I like it. I think I'll feel comfortable working in a pharmacy. Of course, this is a very responsible job. Although medicines are prescribed by doctors, not pharmacists, but the pharmacy employee must be very well versed in medicines.

Customers often need advice when choosing over-the-counter medications. The pharmacist should be able to select analogs of a drug, take into account contraindications and side effects, as well as compatibility of drugs. To work as a pharmacist one needs an appropriate education. These specialists should also attend upgrading trainings. Excellent knowledge of chemistry and biology is especially important for pharmacists.

Pharmacists need another special skill: to understand the handwriting of doctors who issue prescriptions. Not all doctors write legibly. I hope I will be able to master this skill. As the population is ageing, pharmacy chains are actively developing. There are pharmacies in every district of the city. I hope that in the future I will find a job not far from my home.

Exercise 2. Translate the following words and phrases into English:

<ol style="list-style-type: none">1. гуманітарні науки2. бакалавр3. аптека4. акредитований фармацевтичний коледж5. державний іспит6. вплив ліків7. професійні курси8. дозвіл на практичну діяльність9. розвинений10. шукати	<p>Answers:</p>
--	------------------------

Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

accredited, established, required, developed, complete

1. Pharmaceutical institutes and colleges were _____ in the United States, Great Britain, and continental Europe in the 19th century.
2. Colleges of pharmacy now operate in most _____ countries of the world.
3. _____ colleges of pharmacy train pharmacists in the United States.
4. Graduates are _____ to pass a state board examination to get a license to practice.
5. Students also must _____ specialized professional courses.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. When was the first college of pharmacy founded in the United States?
2. What does each state require from graduates before granting them a license to practice in the state?
3. What is the American Pharmaceutical Association?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Tema 5.

Botany

Exercise 1. Read the following text:

What is Botany?

Botany, branch of biology that deals with the study of plants, including their structure, properties, and biochemical processes.

Also included are plant classification and the study of plant diseases and of interactions with the environment.

Plants were of paramount importance to early humans, who depended upon them as sources of food, shelter, clothing, medicine, ornament, tools, and magic. Today it is known that, in addition to their practical and economic values, green plants are indispensable to all life on Earth: through the process of photosynthesis, plants transform energy from the Sun into the chemical energy of food, which makes all life possible. A second unique and important capacity of green plants is the formation and release of oxygen as a by-product of photosynthesis. The oxygen of the atmosphere, so absolutely essential to many forms of life, represents the accumulation of over 3,500,000,000 years of photosynthesis by green plants and algae.

Although the many steps in the process of photosynthesis have become fully understood only in recent years, even in prehistoric times humans somehow

recognized intuitively that some important relation existed between the Sun and plants. Such recognition is suggested by the fact that worship of the Sun was often combined with the worship of plants by early tribes and civilizations.

Earliest humans, like the other anthropoid mammals (e.g., apes, monkeys), depended totally upon the natural resources of the environment, which, until methods were developed for hunting, consisted almost completely of plants. The behaviour of pre-Stone Age humans can be inferred by studying the botany of aboriginal peoples in various parts of the world. Isolated tribal groups in South America, Africa, and New Guinea, for example, have extensive knowledge about plants and distinguish hundreds of kinds according to their utility, as edible, poisonous, or otherwise important in their culture.

They have developed sophisticated systems of nomenclature and classification, which approximate the binomial system (i.e., generic and specific names) found in modern biology. The urge to recognize different kinds of plants and to give them names thus seems to be as old as the human race.

In time plants were not only collected but also grown by humans. This domestication resulted not only in the development of agriculture but also in a greater stability of human populations that had previously been nomadic. From the settling down of agricultural peoples in places where they could depend upon adequate food supplies came the first villages and the earliest civilizations.

Because of the long preoccupation of humans with plants, a large body of folklore, general information, and actual scientific data has accumulated, which has become the basis for the science of botany.

Exercise 2. Translate the following words and phrases into English:

1. обмін речовин	<i>Answers:</i>
------------------	-----------------

2. гриб	
3. бактерія	
4. цитологія	
5. гістологія	
6. крихітний	
7. мікроскоп	
8. патолог	
9. клітина	
10. довкілля	

Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

food chain, understand, diseases, bacteria, Taxonomy

1. _____ is the science of naming and classifying animals and plants.
2. It is necessary to study the form and structure of a plant before you can _____ how to classify the plant and how it grows and lives.
3. Plants form the base of the natural _____ - the system, in which energy is transferred from one organism to another in the form of food.
4. Pathology is concerned with many _____ that injure plants.
5. Except for certain species of _____, plants are the only organisms that can make their own food.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. What does botany study?
2. What do plant pathologists study?

3. Why is plant physiology important not only to the expert, who studies plants, but to everyone else in the world?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Tema 6.

History of Botany.

Exercise 1. Read the following text:

The development of Botany.

Humans have always been interested in the plant life around them, not only because plants are inherently fascinating but also because they can serve useful purposes as food and medicine. The ancient Greek scholar Theophrastus, who lived during the 4th Century B.C., was one of the most famous early botanists. He wrote two major sets of books on plants, and his writings made him known as the “Father of Botany”. One set of books was called Enquiry into Plants, and it classified plants into different categories like geographic ranges, sizes, ways of growing, and uses. It covered all aspects of plants, such as anatomy, reproduction and best methods of growing, and included separate books for trees, herbs, shrubs, and plants that produced food and useful resins or juices. The other set of books was called On the Causes of Plants. It was an in-depth guide on the best ways to grow plants, and also went into detail about the physical properties of plants, including their tastes and smells. On the Causes of Plants was more about the economics of growing plants rather than their medicinal uses. Theophrastus was apparently the first to discover the process of germination in plants, and he realized how important factors such as climate and soil type were to the proper growing of plants.

Another important ancient Greek physician was Dioscorides, who lived during from 90-40 A.D. He wrote an encyclopedia about herbal medicines called De Materia Medica (“On Medical Substances”). It was a scientific tome that grouped plants by

their medicinal uses, and Dioscorides did extensive personal research on each plant, traveling to different towns to get a sense of the medicinal properties of each plant according to their local usage. De Materia Medica served as an important medicinal guidebook for over 1500 years, until widespread use of the compound microscope in the 19th Century.

Once the microscope started to be used, many advances in scientific knowledge were made. The compound microscope was invented in 1665 by Robert Hooke, who was able to use it to look at cork close up (and coined the term “cell”). In the 17th and 18th centuries, botanists studied and advanced scientific knowledge in the fields of plant sexuality, plant physiology, and plant classification. In the 19th Century, chlorophyll was discovered, and scientists began to understand the process of photosynthesis. Also, the Austrian monk Gregor Mendel made advances in understanding genetic inheritance through his experiments with pea plants.

Presently, new technology is used to understand the structure of plant cells further, and research is being done on genetic engineering of plants in an attempt to solve the problem of world hunger. Research is also focusing on ecology and climate change (ecology itself became a separate discipline in the 1940s). The goals of much present-day research include finding ways of producing better crops, developing new medicines from molecules found in plants, and figuring out how best to conserve natural resources in a time of population growth and changing climate.

<https://biologydictionary.net/botany/>

Exercise 2. Translate the following words and phrases into English:

<ol style="list-style-type: none">1. поживна речовина2. паразит3. відновлення, розмноження	<p><i>Answers:</i></p>
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4. належний, підходящий	
5. задихатись	
6. поширення	
7. унікальна назва	
8. екзотичні рослини	
9. біноміальна система	
10. живі істоти	

Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

kinds of plants, distribution, carbon dioxide, cultivated plants, discoveries

1. By about 8000 B.C. people in the Middle East had begun to depend on _____ for most of their food.
2. Explorers discovered many new _____ and brought them to scholars to examine and identify.
3. The study of plant ecology developed from the research on the geographical _____ of plants.
4. In the 1900's the scientists working in plant genetics and molecular biology made many spectacular _____.
5. Without plants, the concentration of _____ in the atmosphere would increase to the point where human beings and animals suffocate.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. What is morphology?
2. How can plant life show people how to live in balance with the environment?

3. Who developed the system of naming plants that was eventually accepted as a standard classification system?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Tema 7.

Plants

Exercise 1. Read the following text:

Physiology of Plants

Plants vary greatly in size and form. Almost in every part of the world, we see such plants as flowers, grass, and trees.

Without plants, there could be no life on the Earth. The oxygen in the air we breathe comes from plants. The food that we eat comes from plants or from animals that eat plants. We build houses from timber. Much of our clothing is made from the fibres of the cotton plant. They also add beauty and pleasure to people's lives.

Scientists believe there are more than 350,000 species of plants. They divide all living things into five main groups called kingdoms. These kingdoms are (1) plants, (2) animals, (3) fungi, (4) protists, and (5) monerans. Scientists group organisms in a particular kingdom because of certain basic characteristics. These characteristics include physical structure, means of obtaining food, and means of reproduction.

Plants have characteristics that set them apart from other living things. Plants are complex organisms that are made up of many types of cells. Plant cells consist of cellulose.

All plants develop from a tiny form of the plant called an embryo. Monerans, protists, and fungi, such as mushrooms, do not develop from embryos. Plants also obtain food in ways different from those most other organisms. Almost all plants stay in one place for their entire lives. Most plants make their own food from air, sunlight,

and water by a process called photosynthesis. Some plants such as broomrape and dodder, are not green and do not produce their food by photosynthesis. They are parasites that obtain their food from other plants. Some other plants, such as Indian pipe and coralroot orchid, are saprophytes. They feed on dead plant or animal matter.

Exercise 2. Translate the following words and phrases into English:

<ol style="list-style-type: none">1. медичні рослини2. фармакологічна дія3. основні принципи4. біологічна функція5. клітинна структура6. окремі рослини7. чиста суміш8. антагоністичні принципи9. складова частина10. речовина	<p><i>Answers:</i></p>
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Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

special importance, population, compounds, drugs, many reasons

1. Medicinal plants are important for _____: they provide us with natural drugs, active constituents and intermediates for semisynthetic drugs.
2. Their biological function is often discussed but the fact is that many of them have a _____ outside the plant because of their pharmacological action.
3. Plants that give _____ have both active and inactive substances.

4. Drugs in general arise from a heterogeneous _____ of individual plants living under a variety of conditions.

5. Inactive substances include cellular structures and pharmacological inactive _____.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. What is phytopharmacy?
2. What does nature produce?
3. May the situation be complicated when there are synergistic or antagonistic principles or substances with other pharmacological effects in the plant at the same time?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Tema 8.

Homeopathic Medicine.

Exercise 1. Read the following text:

Homeopathy

Homeopathy is a system of medicine whose principles are even older than Hippocrates. It seeks to cure in accordance with natural laws of healing and uses medicines made from nature.

Homeopathy was "discovered" in the early 1800s by German physician, Samuel Christian Friedrich Hahnemann.

Homeopathy is a system of medicine that uses "natural" remedies made from animal, vegetable, and mineral substances. These remedies are prepared in such a way that they are non-toxic and do not cause side effects.

Homeopathic medicine is prescribed according to the law of similar and age-old principle that recognizes the body's ability to heal itself. After being founded homeopathy spread rapidly throughout Europe. It was extremely popular in many countries in the nineteenth century.

Clinical evidence accumulated over more than 150 years of use demonstrates that homeopathic medicine is the viable alternative to standard medicine.

Exercise 2. Translate the following words and phrases into English:

<ol style="list-style-type: none">1. лікарі-гомеопати2. засіб3. розчарування4. біль у горлі5. їдкий6. захист7. почервоніти8. укуси комах9. місце зберігання10. ранні стадії	<p>Answers:</p>
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Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

eye injuries, grief remedy, sore throat, laryngitis, hospitals

1. There are around 200 homeopathic physicians in Britain; the principal _____ offering such treatment are in London and Glasgow.

2. The person may also have _____, with a raw sensation extending into the chest.
3. The person may have a _____ or cough, headache, earache, or fever.
4. Ledum is also helpful in _____ and sprained ankle.
5. Ignatia is the _____ for the person who doesn't recover from an emotional upset such as disappointment or anger; the patient sighs very frequently.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. Have members of the Royal Family been cared for by homeopathic physicians?
2. What can *Belladonna* treat?
3. What is *Gelsemium*? What is it often needed for?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Tema 9.

Inorganic Chemistry

Exercise 1. Read the following text:

Chemistry

Chemistry is the study of matter, defined as anything that has mass and takes up space, and the changes that matter can undergo when it is subject to different environments and conditions. Chemistry seeks to understand not only the properties of matter, like the mass or composition of a chemical element, but also how and why matter undergoes certain changes — whether something transformed because it combined with another substance, froze because it was left for two weeks in a freezer, or changed colors because it was exposed to too much sunlight.

The reason why chemistry touches everything we do is because almost everything in existence can be broken down into chemical building blocks.

The main building blocks in chemistry are chemical elements, which are substances made of a single atom. Each chemical is unique, composed of a set number of protons, neutrons and electrons, and is identified by a name and a chemical symbol, such as "C" for carbon. The elements that scientists have discovered so far are listed in the periodic table of elements, and include both elements that are found in nature like carbon, hydrogen and oxygen, as well as those that are manmade, like Lawrencium.

<https://www.livescience.com/45986-what-is-chemistry.html>

Exercise 2. Translate the following words and phrases into English:

<ol style="list-style-type: none">1. властивість2. зміна3. ідентичність4. кількість5. рівновага6. темп реакції7. тверда речовина8. світіння9. штучно10. руйнування	<p>Answers:</p>
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Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

properties, comprise, quantity, particle, equilibrium

1. All the chemical elements differ by their physical and chemical _____ .

2. Natural _____ was destroyed because of government experiments with ecosystems.
3. Two these elements have ionic _____, that is why they together form a very stable complex substance.
4. The science of chemistry _____ many different but nonetheless very important fields.
5. When a pharmacist is preparing a drug, he must think not only of _____, but of quality too.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. What is chemistry? What do chemists study?
2. How many elements are there on the Earth: natural and artificially synthesized?
3. What is the difference between organic, inorganic chemistry and biochemistry?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Тема 10.

Branches of chemistry

Exercise 1. Read the following text:

The five main branches of chemistry

Traditionally, chemistry is broken into five main branches, according to the online chemistry textbook published by LibreText. There are also more specialized fields, such as food chemistry, environmental chemistry and nuclear chemistry, but this section focuses on chemistry's five major subdisciplines.

Analytical chemistry involves the analysis of chemicals, and includes qualitative methods like looking at color changes, as well as quantitative methods like examining the exact wavelength(s) of light that a chemical absorbed to result in that color change.

These methods enable scientists to characterize many different properties of chemicals, and can benefit society in a number of ways. For example, analytical chemistry helps food companies make tastier frozen dinners by detecting how chemicals in food change when they are frozen over time. Analytical chemistry is also used to monitor the health of the environment by measuring chemicals in water or soil, for example.

Biochemistry, as mentioned above, uses chemistry techniques to understand how biological systems work at a chemical level. Thanks to biochemistry, researchers have been able to map out the human genome, understand what different proteins do in the body and develop cures for many diseases.

Inorganic chemistry studies the chemical compounds in inorganic, or non-living things such as minerals and metals. Traditionally, inorganic chemistry considers compounds that do not contain carbon (which are covered by organic chemistry), but this definition is not completely accurate, according to the ACS.

Some compounds studied in inorganic chemistry, like "organometallic compounds," contain metals, which are metals that are attached to carbon — the main element that's studied in organic chemistry. As such, compounds such as these are considered part of both fields.

Inorganic chemistry is used to create a variety of products, including paints, fertilizers and sunscreens.

Organic chemistry deals with chemical compounds that contain carbon, an element considered essential to life. Organic chemists study the composition, structure, properties and reactions of such compounds, which along with carbon, contain other non-carbon elements such as hydrogen, sulfur and silicon. Organic chemistry is used in many applications, as described by the ACS, such as biotechnology, the petroleum industry, pharmaceuticals and plastics.

Physical chemistry uses concepts from physics to understand how chemistry works. For example, figuring out how atoms move and interact with each other, or

why some liquids, including water, turn into vapor at high temperatures. Physical chemists try to understand these phenomena at a very small scale — on the level of atoms and molecules — to derive conclusions about how chemical reactions work and what gives specific materials their own unique properties.

This type of research helps inform other branches of chemistry and is important for product development, according to the ACS. For example, physical chemists may study how certain materials, such as plastic, may react with chemicals the material is designed to come in contact with.

<https://www.livescience.com/45986-what-is-chemistry.html>

Exercise 2. Translate the following words and phrases into English:

<ol style="list-style-type: none">1. рідина2. однорідність3. розчинність4. властивість5. тимчасовий6. аналіз7. якісний8. кількісний9. осад10. електроліз	<p>Answers:</p>
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Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

properties, measurement, electric current, composition, kinds of matter

1. Chemistry is the study of different _____, called substances, and the changes involved when one substance is transformed into another.
2. Chemical _____ are the changes in composition undergone by a substance when it is subjected to various conditions.
3. All pure substances can be divided according to their _____ into two main classes: elements (metals and non-metals) and compounds.
4. Spectrochemical analysis is any of a group of chemical analysis methods that depend on _____ of the wavelength and intensity of electromagnetic radiation.
5. Electrolysis is the producing of chemical changes by passage of an _____ through an electrolyte.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. What states of matter do you know?
2. What is the most important characteristic of a substance?
3. What is the difference between quantitative and qualitative analysis?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Tema 11.

Classical chemical analysis

Exercise 1. Read the following text:

Chemical analysis

Chemical analysis, which relies on the use of measurements, is divided into two categories depending on the manner in which the assays are performed. Classical analysis, also termed wet chemical analysis, consists of those analytical techniques that use no mechanical or electronic instruments other than a balance. The method usually relies on chemical reactions between the material being analyzed (the analyte)

and a reagent that is added to the analyte. Wet techniques often depend on the formation of a product of the chemical reaction that is easily detected and measured. For example, the product could be coloured or could be a solid that precipitates from a solution.

Most chemical analysis falls into the second category, which is instrumental analysis. It involves the use of an instrument, other than a balance, to perform the analysis. A wide assortment of instrumentation is available to the analyst. In some cases, the instrument is used to characterize a chemical reaction between the analyte and an added reagent; in others, it is used to measure a property of the analyte. Instrumental analysis is subdivided into categories on the basis of the type of instrumentation employed.

The development of electronics during World War II and the subsequent widespread availability of digital computers have hastened the change from classical to instrumental analysis in most laboratories. Although most assays currently are performed instrumentally, there remains a need for some classical analyses.

<https://www.britannica.com/science/chemical-analysis>

Exercise 2. Translate the following words and phrases into English:

<ol style="list-style-type: none">1. однорідний2. насичення3. розчин4. розчинник5. дисоціація, розпад6. ковалентний7. різноманітний, змінний8. емульсія	<p><i>Answers:</i></p>
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9. хлороформ	
10. випаровуватися	

Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

solubility, do not dissolve, mixture, purification, dissolved substance

1. A solution is a homogeneous _____ of two or more substances in relative amounts.

2. In all solutions the _____ is called the solute, and the medium in which it is dissolved is the solvent.

3. Solutions are involved in most chemical reactions, refining and _____, industrial processing, and biological processes.

4. Some organic substances such as fats, paraffin, rubber, petroleum _____ in water.

5. The _____ of a substance (at the existing temperature) means the number of grams of the solute required to saturate a fixed volume or a fixed weight.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. What are electrolytes and nonelectrolytes?

2. Are all substances soluble in water?

3. What is the concentration of solution?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Тема 12.

The beginnings of modern chemistry

Exercise 1. Read the following text:

The foundation of modern chemistry

Lavoisier qualified for the legal profession but also studied mathematics, astronomy, botany, mineralogy, anatomy, meteorology and chemistry. As soon as his education was complete, he spent several years collaborating with one of his former teachers, Jean-Etienne Guettard (1715- 1786), on the production of a geological map of France. His first original scientific work dates from this period and concerned the various forms of calcium sulphate. Lavoisier showed that gypsum loses water on heating, and that the resulting material (plaster of Paris) sets when mixed with water as a result of a recombination process. This paper was presented to the Academy of Sciences in 1765, and in the same year Lavoisier entered a competition organized by the Academy for an essay on the best means of lighting the streets of a large town at night. Lavoisier's essay was specially commended, and he was awarded a gold medal by the King. As a result of these activities, he was elected a member of the Academy in 1768 at the early age of twenty five.

By this time Lavoisier had decided to devote his life to science. Although he had been left a considerable fortune by his mother, he wished to increase his wealth in order to pursue his Scientific researches. Accordingly, he entered the Ferme, which was a company whose members purchased from the Government the privilege of collecting the national taxes. Clearly such an arrangement was open to abuse by the Fenniers, but there is no doubt that Lavoisier and his colleagues carried out their duties with complete fairness and honesty. Nevertheless, in the period following the French Revolution, the tax collectors of the previous regime were the subject of popular hatred, and it was Lavoisier's association with the Ferme which was to be the cause of his downfall.

In 1771, three years after he joined the Ferme, Lavoisier contracted an arranged marriage with Marie Anne Pierrette Paulze, the daughter of another Fermier. Lavoisier was 28 and his bride was only half his age, but later she was to become an invaluable partner in his scientific endeavours. After the wedding she studied languages, and she eventually acquired sufficient proficiency in English to translate Scientific works for her husband. She assisted in his laboratory, and many of the entries in his laboratory notebook are in her hand.

https://link.springer.com/chapter/10.1007%2F978-1-349-22362-6_5

Exercise 2. Translate the text into Ukrainian.

Exercise 3. Write out key sentences of the text

Exercise 4. Make up a plan of the text.

Exercise 5. Render the text in the written form.

Tema 13.

Chemistry

Exercise 1. Read the following text:

Where Is Inorganic Chemistry Used?

Inorganic compounds are used as catalysts, pigments, coatings, surfactants, medicines, fuels, and more. They often have high melting points and specific high or low electrical conductivity properties, which make them useful for specific purposes. For example:

Ammonia is a nitrogen source in fertilizer, and it is one of the major inorganic chemicals used in the production of nylons, fibers, plastics, polyurethanes (used in tough chemical-resistant coatings, adhesives, and foams), hydrazine (used in jet and rocket fuels), and explosives.

Chlorine is used in the manufacture of polyvinyl chloride (used for pipes, clothing, furniture etc.), agrochemicals (e.g., fertilizer, insecticide, or soil treatment), and pharmaceuticals, as well as chemicals for water treatment and sterilization.

Titanium dioxide is the naturally occurring oxide of titanium, which is used as a white powder pigment in paints, coatings, plastics, paper, inks, fibers, food, and cosmetics. Titanium dioxide also has good ultraviolet light resistance properties, and there is a growing demand for its use in photocatalysts.

Inorganic chemistry is a highly practical science—traditionally, a nation's economy was evaluated by their production of sulfuric acid because it is one of the more important elements used as an industrial raw material.

<https://www.acs.org/content/acs/en/careers/college-to-career/areas-of-chemistry/inorganic-chemistry.html>

Exercise 2. Translate the following words and phrases into English:

1. походження 2. кислий 3. соляний 4. значний 5. нейтралізувати 6. частка 7. обумовлювати 8. травлення 9. властивість 10. зникати	Answers:
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Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

properties; acids, bases and salts; hydroxyl radical; neutralization; hydrogen ions

1. There are three big classes of chemical compounds: _____.

2. In most cases, however, the significant acid _____ do not become evident until the substance has been dissolved.

3. Chemically, the action of acids is due to the presence of _____, H^+ , that determines its chemical properties.

4. All bases contain the _____, OH^- , determining chemical properties of bases.

5. _____ is the action between an acid and a base to form a salt and water.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. How many classes of chemical compounds do you know?

2. What is the difference between acids and bases?

3. What is neutralization?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Tema 14.

Compounds, Molecules, and mixtures, symbols for elements

Exercise 1. Read the following text:

Compounds and Mixtures

Often substances may combine without forming a compound. To make a compound, there must be a chemical reaction where bonds are formed and an entirely new substance is created. Without that chemical reaction, combined substances may instead form a mixture.

The components of a mixture keep their original properties and can easily be separated. For example, a mixture of fruits in a salad can be separated back into groups of different kinds of fruit. Salt and water can be combined in a mixture, but water is still water, and salt is still salt. To separate the two components, the water can be evaporated so that the salt can be collected. Sand and water can be separated by

using a filter. The ocean, rocks, blood, and even the air we breathe are mixtures rather than compounds.

On the other hand, the components in a compound cannot be separated by physical means.

<https://sciencetrek.org/sciencetrek/topics/compounds/facts.cfm#>

Exercise 2. Translate the text into Ukrainian.

Exercise 3. Write out key sentences of the text

Exercise 4. Make up a plan of the text.

Exercise 5. Render the text in the written form.

Tema 15.

Chemical compounds

Exercise 1. Read the following text:

Compounds: Facts

When two or more atoms join together, we call it a molecule. When two or more atoms of different elements join together, we call it a compound. All compounds are molecules, but not all molecules are compounds. That is because a molecule can be made up of two atoms of the same kind, as when two oxygen atoms bind together to make an oxygen molecule. However, all compounds are made up of two or more different types of atoms.

Elements are rarely found in their pure state; compounds are much more common. There are just over 100 different kinds of atoms, but there are millions of different kinds of substances made up of different types of molecules. Probably everything you see around you is some type of compound. When atoms of different kinds combine to form a compound, a new substance is created. New compounds do not have the same physical or chemical traits of the original elements. They have a new life of their own.

Compounds are written with formulas showing which elements from the periodic table are combined. One very familiar compound is water. When two hydrogen atoms (H_2) combine with one oxygen atom (O), it makes the compound H_2O , which we know as water. All water molecules have this same combination of atoms. Water is not hydrogen or oxygen. You couldn't pour oxygen and hydrogen atoms on a fire and expect to put it out. But when they are bonded together as water molecules, they behave like water. A compound is a brand new substance with its own properties.

The same elements can build very different compounds. If you took those two hydrogen atoms and joined them to two oxygen atoms (instead of one), you would wind up not with water but with H_2O_2 , a very different compound called hydrogen peroxide - you wouldn't want to drink it!

There are many other compounds that are already familiar to you:

When one sodium atom (Na) combines with one chlorine atom (Cl), it makes the compound $NaCl$, which we know as salt.

Every time you breathe out, your breath contains CO_2 , a compound of one carbon atom (C) and two oxygen atoms (O_2) that we call carbon dioxide.

Sometimes more than two elements make up a compound. A sugar molecule (glucose) is a compound of 6 carbon atoms, 12 hydrogen atoms, and 6 oxygen atoms, written as $C_6H_{12}O_6$. These specific atoms in these exact numbers make up a sugar molecule.

When four different kinds of atoms (sodium, hydrogen, carbon, and oxygen) are combined in a certain way, we get $NaHCO_3$, which you know as baking soda. If these atoms were combined in a different way, it would not be baking soda.

<https://sciencetrek.org/sciencetrek/topics/compounds/facts.cfm#>:

Exercise 2. Translate the text into Ukrainian.

Exercise 3. Write out key sentences of the text

Exercise 4. Make up a plan of the text.

Exercise 5. Render the text in the written form.

Tema 16.

Organic Chemistry

Exercise 1. Read the following text:

Organic Chemistry

Organic chemistry is the study of the structure, properties, composition, reactions, and preparation of carbon-containing compounds, which include not only hydrocarbons but also compounds with any number of other elements, including hydrogen (most compounds contain at least one carbon–hydrogen bond), nitrogen, oxygen, halogens, phosphorus, silicon, and sulfur. This branch of chemistry was originally limited to compounds produced by living organisms but has been broadened to include human-made substances such as plastics. The range of application of organic compounds is enormous and also includes, but is not limited to, pharmaceuticals, petrochemicals, food, explosives, paints, and cosmetics.

Organic chemistry is a highly creative science in which chemists create new molecules and explore the properties of existing compounds. It is the most popular field of study for ACS chemists and Ph.D. chemists.

Organic compounds are all around us. They are central to the economic growth of the United States in the rubber, plastics, fuel, pharmaceutical, cosmetics, detergent, coatings, dyestuff, and agrichemical industries, to name a few. The very foundations of biochemistry, biotechnology, and medicine are built on organic compounds and their role in life processes. Many modern, high-tech materials are at least partially composed of organic compounds.

Organic chemists spend much of their time creating new compounds and developing better ways of synthesizing previously known compounds.

acs.org/content/acs/en/careers/college-to-career/areas-of-chemistry/organic-chemistry.html

Exercise 2. Translate the following words and phrases into English:

<ol style="list-style-type: none">1. вуглеводень2. чотиривалентний3. лейцин4. альбумін5. перетворювати6. вуглевод7. жирний8. гідроліз9. фосфоліпід10. глікоген	<p>Answers:</p>
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Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

proteins, carbohydrates, fats; living things; carbon; molecules; organic compounds

1. An organic compound is a substance whose _____ contain one or more carbon atoms.

2. Until 1828, scientists believed that _____ could be formed only by life processes.

3. Since _____ has a far greater tendency to form molecular chains and rings than other elements do, its compounds are vastly more numerous than all others known.

4. Living organisms consist mostly of water and organic compounds: _____, nucleic acids, hormones, vitamins, etc.

5. Lipids are any of a diverse class of organic compounds, found in all _____ that are greasy and insoluble in water.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. What is organic chemistry?
2. What are the three biggest classes of organic compounds?
3. What are the functions of proteins, carbohydrates and lipids?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Tema 17.

Pharmaceutical Chemistry.

Exercise 1. Read the following text:

What is pharmaceutical chemistry?

Pharmaceutical (medicinal) chemistry is concerned with the design (drug design) and synthesis of biologically active molecules. The aim is to gain new chemical molecules that could enable the discovery of new pharmaceuticals or optimize already known drug structures, thereby to expand the portfolio of chemical drugs. Although organic chemistry plays a crucial role, only knowledgeable pharmaceutical chemists are able to work effectively in a highly interdisciplinary environment and interact with scientists in other disciplines, such as molecular biology, structural biology, pharmacology, physical chemistry, biochemistry,

pharmacokinetics, pharmaceutical technology, toxicology or with experts from the field of translational medicine, etc.

The term pharmaceutical (medicinal) chemistry appeared first in the literature shortly after WW II. During the development of molecular pharmacology, it was possible to express the biological activity of any chemical compound by means of quantifiable molecular properties (e.g. IC₅₀, EC₅₀, pA₂). Since then the scientists have begun using the term "drug design" and started to develop new drugs systematically. After the computer technology and programming had been introduced, the possibility to study the relationship between the chemical structure and biological activity of a molecule (structure-activity relationships, SAR) in a quantitative sense (quantitative SAR, QSAR) was significantly increased. Nowadays, these rational methods in designing new drugs are preferred, although the observation of chance or adverse effects still plays significant role in the development of new drugs.

In the years to follow, the development of new drugs has been remarkably accelerated by radioactive drug and metabolite labelling, which in turn enables scientists to identify new therapeutic targets.

The introduction of molecular biology revolutionized the pharmacokinetics features (understanding of the fate of the drug and its metabolites in the body) and pharmacodynamics (understanding of the molecular mechanisms of drugs). The advances in analytical evaluation of new molecules, development of computer technologies and their applications in molecular modelling approaches have all significantly expanded the scope and use of pharmaceutical chemistry, and ultimately have brought the possibility to provide a broader range of new drugs with a new therapeutic potential.

At the beginning of the 21st century, pharmaceutical (medicinal) chemistry has developed new molecules with ever-increasing structural diversity. Apart from the small synthetic ligands and natural products, pharmaceutical chemists focus on the

development of modified peptides and proteins, biological agents (e.g. monoclonal antibodies), multifunctional molecular complexes and synthetic vaccines.

This rapid development comes hand in hand with the advances in chemical biology, molecular modelling, and analytical methods generally in all medical fields. As a result, pharmaceutical chemistry has become a decisive and increasingly important part of modern medical, pharmaceutical and agrochemical research.

Exercise 2. Translate the following words and phrases into English:

<ol style="list-style-type: none">1. розчинник2. розтирання на порошок3. розтирання на порох4. зціджування, відмулювання5. плавка6. відварювання7. настоювання8. розмочування9. випаровування10. частковий	<p>Answers:</p>
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Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

pharmacological properties; granulation; combustion; interdisciplinary science; therapeutic use

1. Pharmaceutical chemistry involves the identification, synthesis and development of the new chemical entities suitable for _____.
2. Medicinal chemistry is a highly _____ combining organic chemistry with biochemistry, pharmacology, pharmacognosy, molecular biology, statistics and physical chemistry.
3. The first step of drug discovery involves the identification of new active compounds, which are typically found by screening many compounds for the desired _____.
4. The process of converting a substance into granules or granlike particles is known as _____.
5. Carbon dioxide is a heavy colorless gas CO_2 that does not support _____, soluble in water to form carbonic acid.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. What does pharmaceutical chemistry study?
2. What processes may be employed in the pharmaceutical chemistry?
3. What is granulation?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Tema 18.

Drugs.

Exercise 1. Read the following text:

Administration of drugs.

We take medications to diagnose, treat, or prevent illness. They come in lots of different forms and we take them in many different ways. You may take a drug yourself, or a healthcare provider may give it to you.

Drugs can be dangerous, though, even when they're meant to improve our health. Taking them correctly and understanding the right way to administer them can reduce the risks. Read on to learn the importance of using medication as directed.

Routes of medication administration

There are several different ways drugs can be administered. You're probably familiar with injections and pills that you swallow, but medications can be given in many other ways as well.

Routes of medication administration are described in the table below.

Route	Explanation
buccal	held inside the cheek
enteral	delivered directly into the stomach or intestine (with a G-tube or J-tube)
inhalable	breathed in through a tube or mask
infused	injected into a vein with an IV line and slowly dripped in over time
intramuscular	injected into muscle with a syringe
intrathecal	injected into your spine
intravenous	injected into a vein or into an IV line
nasal	given into the nose by spray or pump
ophthalmic	given into the eye by drops, gel, or ointment
oral	swallowed by mouth as a tablet, capsule, lozenge, or liquid
otic	given by drops into the ear
rectal	inserted into the rectum
subcutaneous	injected just under the skin
sublingual	held under the tongue
topical	applied to the skin
transdermal	given through a patch placed on the skin

The route used to give a drug depends on three main factors:

- the part of the body being treated
- the way the drug works within the body
- the formula of the drug

For instance, some drugs are destroyed by stomach acid if they're taken by mouth. So, they may have to be given by injection instead.

Exercise 2. Translate the following words and phrases into English:

<ol style="list-style-type: none">1. синтезувати2. виготовляти, відпускати (ліки)3. видалення4. взаємодія5. підрозділ6. шкідливий7. хімічна терапія8. передбачуваний9. потребувати10. протиотрута	<p>Answers:</p>
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Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

food substances; processes; pharmacology; contraindications; treatment of diseases

1. Drugs are chemical substances used in medicine in the _____.

2. Some drugs are contained in _____; these drugs are called vitamins.

3. Scientists interested in pharmacodynamics study the _____ of drug absorption, metabolism and excretion.
4. Chemotherapy is the subdivision of _____, which studies drugs that are capable of destroying microorganisms, parasites, and cells within the body without destroying the body itself.
5. _____ are the factors in the patient's condition which make the use of a drug dangerous.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. What are drugs?
2. What are the branches of pharmacology?
3. Which drugs are safer: natural or chemically synthesized?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Tema 19.

Chemist's Shop

Exercise 1. Read the following text:

At the Chemist's

Chemists' shops are specialized shops where medicines are sold. Chemists' usually situated on the ground floor. They have a hall for visitors, two departments for selling drugs, and proper working rooms. The department for reception of prescriptions and delivery of drugs is called a prescription department. The other one is called a chemist's department. In the prescription department medicines are sold or made up according to prescriptions. In the chemist's department you can buy medicines without prescriptions. In this department different things for medical care

and medicinal plants are bought. The working rooms of a chemist's include rooms for washing, drying and sterilization of glassware, an analytical laboratory, a room for storing medicines, a room for dispensing them and some others.

At the chemist's all medicines are kept in drug cabinets, on open shelves and in the refrigerator. Poisonous drugs are kept in a drug cabinet with the letter A. Strong effective drugs are kept in a drug cabinet having the letter B.

The drugs prepared at the chemist's for immediate use should be kept in the refrigerator. Powders, galenical preparations and medicines produced at pharmaceutical plants are usually kept on shelves protected from light at a constant temperature, not higher than room temperature.

Every small bottle or box has a label with the name of the medicine. There are labels of four colors for the drugs prepared at the chemist's: labels of green color indicate medicines for internal use; blue labels indicate drugs used for injections. Drugs for external application have labels of yellow color. Drugs used for treatment of eye diseases have labels of pink color.

The single dose and the total dosage are indicated on the label or signature. The directions for drug administration are very important for sick people as well as for those who take care for them.

In the chemist's department medicines are kept according to the therapeutic effect: drugs for cough, cardiac medicines, drugs for headache. Disinfectants, herbs and things for medical care such as hot-water bottles, medicine droppers, cups, thermometers, etc. are kept separately.

In the prescription department one can see drugs of all kinds, boxes and parcels for different powders, ampules of glucose and camphor used for internal use; tonics and sedatives administered orally.

The personnel of an average chemist's consists of a manager of the chemist's, a dispensing pharmacist who takes prescriptions and delivers drugs, a chemist

controlling prescriptions, that is, physical, physicochemical and pharmacological compatibility of the ingredients of compounds prescribed by physicians.

The personnel includes also a chemist-analyst who controls effectiveness of the drug prepared at the chemist's as well as that of manufactured drugs. There is also a pharmacist who is in charge of the supply of necessary medicines.

Exercise 2. Translate the following words and phrases into English:

<ol style="list-style-type: none">1. прийом ліків2. кров'яний потік3. стенокардія4. водний розчин5. блювання6. подразнювати7. спинний мозок8. знеболювання9. мазь10. свічка	<p>Answers:</p>
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Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

placed under the tongue; upper layers; orally; nauseated and vomiting; parenteral

1. Drugs given _____ must pass into the stomach and be absorbed into the bloodstream through the intestinal wall.
2. *Sublingual administration* is the route of administration, when drugs are not swallowed but are _____ and allowed to dissolve in the saliva.
3. _____ *administration* is accomplished by injection through a syringe under the skin, into a muscle, into a vein, or into a body cavity.
4. *Intradermal injection* is the shallow injection which is made into the _____ of the skin.
5. At times, drugs are given by rectum when oral administration presents difficulties, such as when the patient is _____.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. Can people live without drugs?
2. Who prescribes the way of drug administration to a patient?
3. What diseases can be treated by inhalation?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Tema 20.

Cardiovascular Diseases

Exercise 1. Read the following text:

What are cardiovascular diseases?

Cardiovascular diseases (CVDs) are a group of disorders of the heart and blood vessels and they include:

- coronary heart disease – disease of the blood vessels supplying the heart muscle;

- cerebrovascular disease – disease of the blood vessels supplying the brain;
- peripheral arterial disease – disease of blood vessels supplying the arms and legs;
- rheumatic heart disease – damage to the heart muscle and heart valves from rheumatic fever, caused by streptococcal bacteria;
- congenital heart disease – malformations of heart structure existing at birth;
- deep vein thrombosis and pulmonary embolism – blood clots in the leg veins, which can dislodge and move to the heart and lungs.

Heart attacks and strokes are usually acute events and are mainly caused by a blockage that prevents blood from flowing to the heart or brain. The most common reason for this is a build-up of fatty deposits on the inner walls of the blood vessels that supply the heart or brain. Strokes can also be caused by bleeding from a blood vessel in the brain or from blood clots. The cause of heart attacks and strokes are usually the presence of a combination of risk factors, such as tobacco use, unhealthy diet and obesity, physical inactivity and harmful use of alcohol, hypertension, diabetes and hyperlipidaemia.

The most important behavioural risk factors of heart disease and stroke are unhealthy diet, physical inactivity, tobacco use and harmful use of alcohol. The effects of behavioural risk factors may show up in individuals as raised blood pressure, raised blood glucose, raised blood lipids, and overweight and obesity. These “intermediate risks factors” can be measured in primary care facilities and indicate an increased risk of developing a heart attack, stroke, heart failure and other complications.

Cessation of tobacco use, reduction of salt in the diet, consuming fruits and vegetables, regular physical activity and avoiding harmful use of alcohol have been shown to reduce the risk of cardiovascular disease. In addition, drug treatment of diabetes, hypertension and high blood lipids may be necessary to reduce cardiovascular risk and prevent heart attacks and strokes. Health policies that create

conducive environments for making healthy choices affordable and available are essential for motivating people to adopt and sustain healthy behaviour.

There are also a number of underlying determinants of CVDs or "the causes of the causes". These are a reflection of the major forces driving social, economic and cultural change – globalization, urbanization and population ageing. Other determinants of CVDs include poverty, stress and hereditary factors.

Exercise 2. Translate the following words and phrases into English:

<ol style="list-style-type: none">1. серцево-судинний2. хвороба, ураження3. лікувати4. тромб, згусток5. нудота6. блювота7. перенапруження8. інфаркт міокарду9. погіршення10. безсоння	<p>Answers:</p>
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Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

atherosclerosis; blood clot; heart disease; paralysis; stopped

1. One of the most common afflictions in the modern society is _____.
2. _____ is caused by layers of fat which line the artery walls.
3. Coronary thrombosis is a form of heart attack in which the main artery becomes blocked by a _____.

4. Stroke is caused when the blood supply to the brain is _____.

5. A _____ is caused by a stroke which affects the brain.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. What cardiovascular diseases do you know?

2. How can the risk of atherosclerosis be reduced?

3. What are the most prominent symptoms of hypertension?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Tema 21.

Cardiovascular Drugs

Exercise 1. Read the following text:

Drugs for Heart Stabilization

A wide range of medications are used to treat various heart conditions. Some examples of the drugs used in cardiovascular medicine include:

Anticoagulants or blood thinners - These agents prevent coagulation or clotting of the blood. Injectable forms of anticoagulants include dalteparin, enoxaparin, tinzaparin and heparin. Warfarin is a commonly used blood thinner that can be taken in the form of a tablet. These drugs do not dissolve existing blood clots but are preventive agents in patients who have had a heart attack.

Antiplatelet agents - Platelets play an important role in blood clotting and the formation of platelet plugs that prevent bleeding. Examples of antiplatelet medications include aspirin, ticlopidine, lopidogrel and dipyridamole. They are used as preventive agents in patients who have had a heart attack.

Thrombolytic agents - These agents are used to break up blood clots that have formed and examples include streptokinase, reteplase and alteplase.

Beta blockers or beta-adrenergic blocking agents - These agents decrease the heart rate and the final cardiac output. This lowers blood pressure and heart rate. Beta blockers are useful therapies in high blood pressure and some types of arrhythmia. Agents in this class include atenolol, bisoprolol, metoprolol, propranolol and sotalol.

Diuretics - Diuretics increase the excretion of water and sodium in the urine, therefore decreasing the total blood volume. This reduces blood pressure and the heart's workload. Examples of agents in this class include chlorothiazide, amiloride, furosemide, bumetanide, indapamide and spironolactone.

Vasodilators - These drugs relax the blood vessels and cause blood pressure to fall. They are useful in the treatment of high blood pressure, heart failure, angina and heart attacks. Examples include isosorbide, dinitrate and hydralazine.

Digoxin - This agent is used to stimulate a heartbeat in some cases of heart failure.

Statins - These agents reduce the synthesis of blood cholesterol in the liver. High blood cholesterol is one of the major causes of atherosclerosis. Some of the most well known examples include atorvastatin, lovastatin and simvastatin.

Drugs that are used to regulate an abnormal heart rhythm include quinidine, lidocaine, amiodarone, sotalol, verapamil, diltiazem, dofetilide and adenosine.

Exercise 2. Translate the following words and phrases into English:

<ol style="list-style-type: none">1. впливати2. змінювати3. скорочувати4. дигіталіс, наперстянка5. пригнічувати6. ліки, що розширюють кровоносні	<p><i>Answers:</i></p>
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судини	
7. розслаблювати	
8. судина	
9. адреналін	
10. розширювати	

Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

myocardium; arrhythmias; cardiovascular drugs; paralysis; vasoconstrictors

- _____ may be divided into three groups: drugs that affect the heart; drugs that affect blood pressure; and drugs that prevent blood clotting.
- The important effect of digitalis glycosides are the strengthening of the _____.
- Quinidine is a primary drug used to treat _____.
- _____ are used in treating blood vessel diseases.
- Diuretic promotes _____ of fluid.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

- What may cardiovascular drugs be divided into?
- What drugs are used to treat patients with heart failure?
- In what case would you prescribe heparin?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Тема 22.

Drugs for Treating Heart Diseases

Exercise 1. Read the following text:

Drugs for Prevention of Heart Impairments

There are many drugs prescribed for heart disease. It's important for people with heart disease and those who care for them to understand the meds, follow the labels, and recognize possible side effects. The ones most people with heart disease are given by their doctor include:

ACE inhibitors: These widen arteries to lower your blood pressure and make it easier for your heart to pump blood.

Aldosterone inhibitors: Eplerenone (Inspra) and spironolactone (Aldactone) are part of a class of medicine called potassium-sparing diuretics. They can ease the swelling and water buildup heart disease can cause. They help the kidneys send unneeded water and salt from your tissues and blood into your urine to be released.

These drugs may help some symptoms, even while you take other treatments. They protect your heart by blocking a chemical in your body called aldosterone that causes salt and fluid buildup. This medicine is for folks with some types of severe heart failure.

Angiotensin II receptor blockers (ARBs): These are used to lower blood pressure for people with heart failure. They help keep your blood vessels as wide as possible so blood can flow through your body more easily. They also lessen salt and fluid buildup in your body.

Beta-blockers: They block the effects of adrenaline (epinephrine). This helps your heart work better. These meds also drop production of harmful substances your body makes in response to heart failure. And they cause your heart to beat slower and with less force. Those both lower your blood pressure.

Calcium channel blockers: These treat chest pain (your doctor may say “angina”) and high blood pressure. They relax blood vessels and increase blood and oxygen to your heart. That eases its workload. They’re used only when other medicines to lower blood pressure don’t work. Ask your doctor if one is right for you.

Cholesterol-lowering drugs: Cholesterol helps your body build new cells, insulate nerves, and make hormones. But inflammation may force cholesterol to build up in the walls of your arteries. That buildup increases your chance of having a heart attack or stroke.

Exercise 2. Translate the text into Ukrainian.

Exercise 3. Write out key sentences of the text.

Exercise 4. Make up a plan of the text.

Exercise 5. Render the text in the written form.

Tema 23.

Gastrointestinal Disorders

Exercise 1. Read the following text:

Gastrointestinal Diseases.

There are various different types of gastrointestinal disease:

Gastric ulcers and duodenal ulcers

Ulcers in the stomach and duodenum make their presence known through persistent pain. With gastric ulcers, the pain is most severe after eating, while duodenal ulcers tend to hurt more when fasting at night. Pitch-black bowel movements or vomit that contains blood or resembles coffee grounds are indications that these ulcers are bleeding.

Diseases of the small and large intestine

Diseases in the area of the small and large intestine also cause abdominal discomfort, abdominal pain and changes in bowel habits. Every year, around 70,000 people in Germany develop colon or rectal cancer. Precautionary examination of the colon from the age of 50 and stool examinations can help to prevent the development of a malignant disease. This benefit is covered by the health insurance companies on a

ten-yearly basis, and even more frequently in cases with a family history of such conditions or specific alarm symptoms.

Functional gastrointestinal diseases

Chronic irritable bowel syndrome and functional stomach complaints have no physical triggers. At Schoen Clinic, we thoroughly examine your symptoms and rule out visible disorders. We then give you detailed information about any functional disorders in your gastrointestinal tract and advise you on nutrition and lifestyle habits. For example, switching to fiber-rich foods often helps with irritable bowel syndrome. In many cases, the experts in our psychosomatic department can give you advice or refer you for psychotherapy.

Gastric ulcers and duodenal ulcers are often caused by the gastric mucosal bacterium *Helicobacter pylori*.

Gastric ulcers are primarily caused by painkillers and rheumatism medicines as well as an unhealthy lifestyle.

The causes of chronic diarrhea are manifold — from intestinal diseases caused by food intolerances to metabolic diseases or even cancer.

Heartburn is often the most common complaint.

Other possible symptoms include: diarrhea; vomiting; stomach pain; stomach cramps; gastric discomfort; bloating, flatulence; nausea; headaches and aching limbs; fever.

Exercise 2. Translate the following words and phrases into English:

1. порожнистий 2. частинка 3. пухлина 4. луг 5. виразка	<i>Answers:</i>
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6. згубний; злякисний	
7. прилеглий	
8. рана, виразка	
9. споживання	
10. амєбний	

Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

colon, acute, intestine, bleeding, abdominal

1. A person with gastritis may suffer from loss of appetite, pain, nausea, vomiting, and _____ from the stomach.

2. _____ gastritis may be caused by a chemical or acid injury to the stomach lining.

3. Colitis is a disease involving inflammation of the _____ or other parts of the large intestine.

4. Peritonitis is an inflammation of the peritoneum, the thin _____ membrane that lines the cavity.

5. Dysentery is a disease involving inflammation of the lining of the large _____.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. What are the symptoms of gastritis?
2. What happens if the tissues of the stomach erode and open sores develop?
3. What are the causes of peritonitis?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Tema 24.

Gastrointestinal Drugs

Exercise 1. Read the following text:

Medicines for Stomach and Duodenum Disorders

The drugs for the gastrointestinal system are designed for care and treatment of the digestive system organs (including the liver, biliary tract and pancreas) and diseases that may affect those organs. Among the latter are included constipation and diarrhea, Crohn's disease and irritable bowel syndrome, gastroesophageal reflux disease, ulcers, stomach cancer, gallbladder disease, liver disease and hemorrhoids. The most common gastrointestinal medications include:

- The 5-aminosalicylates: they are used to treat inflammatory diseases of the intestines, such as ulcerative colitis and Crohn's disease. They act by exerting an anti-inflammatory action; among the main operating mechanisms it also performs the inhibition of prostaglandin production and the reduction of the production of antibodies by plasma cells, elements of the immune system;
- The bile agents solubilizing the cholesterol: used in the presence of non-calcified small calculations that do not necessarily require surgical removal, and they work by reducing the synthesis of cholesterol by the liver or its absorption in the gut;
- The Helicobacter pylori eradication agents: they are used in combination with antibacterial agents to treat H. pylori infection and work by reducing the acidity in the stomach. This can be antacids or proton pump inhibitors, molecule involved in the production of gastric juices;
- The antacids: they are used in case of failure associated with poor digestion and to relieve the symptoms of peptic ulcers. They act by neutralizing the acidic juices, thus increasing the pH of the stomach and sometimes are matched to the use of alginates, substances that float above the material present in the stomach and form a barrier that prevents the acid from reaching the esophagus and irritate or even damage it;

- The over-the-counter products: their common goal is to stop diarrhea, but to do so they can act very differently. In some cases, they are in the form of antibacterials that act on the removal of a microbe, but often the problem is not associated with an infection; instead, in many other circumstances an active ingredient is necessary to block the intestinal motility or an antispasmodic agent;
- The digestive enzymes: they are used in the case of difficulty of absorption of food caused by enzyme deficiencies. They act by participating in the digestion of food;
- Drugs against the functional disorders of intestines: they are used to relieve the symptoms of irritable bowel syndrome, chronic bloating, diarrhea and constipation. Their mechanisms of action are very variable depending on the active principle considered: some, for example, are antispasmodic drugs, while others act on the gut channels, finally favoring the transit of stool;
- The H₂ antagonists (or H₂ receptor antagonists): these are used in case of gastro-oesophageal reflux, gastrointestinal ulcers and other disorders associated with an excessive secretion of acids. They act on some receptors in some of the stomach mucosa cells (H₂ receptors) normally stimulated by histamine (molecule involved in allergic reactions) to promote the secretion of gastric acids. By interacting with these receptors H₂ antagonists reduce acid secretion in the stomach;
- The proton pump inhibitors: they act on some of the stomach wall cells to inhibit the secretion of acid by interfering with the activity of the so-called proton pump. They are used in case of gastric or duodenal ulcers, gastroesophageal reflux disease, or other disorders related to acid hypersecretion;
- The laxatives: these are useful for constipation, in increasing the frequency of bowel movements or favor the transit of feces, for example by taking action on a stool softener or lubricant;
- The gastrointestinal stimulating agents: used in case of gastroesophageal reflux and other gastrointestinal disorders characterized by the slowdown of movement. They act by increasing the motility of the smooth muscles of the intestine without behaving

like laxatives. Their mechanism of action varies, but the final effect is always the same: to accelerate intestinal transit;

Many gastrointestinal medications require a prescription, but many others can be purchased without one. They come in the form of tablets, solutions, gels, enemas: what matters is always to follow the instructions on the package leaflet or follow the doctor's directions in terms of dose and mode of application.

Exercise 2. Translate the following words and phrases into English:

<ol style="list-style-type: none">1. засіб, що нейтралізує кислоти2. печія3. торгівельна марка4. купувати5. сприяти6. пригнічувати7. основний, той, що лежить в основі8. чинити опір9. повторюватись, відбуватись знову10. травна система	<p>Answers:</p>
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Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

react, magnesium hydroxide, hydrochloric acid, aluminum hydroxide, Helicobacter pylori, antacids

1. _____, produced in the stomach, is important for digestion.
2. _____ help relieve or prevent pain associated with peptic ulcers by neutralizing this acid.

3. Antacids _____ with acids to form more neutral compounds that do not irritate peptic ulcers.

4. Antacids that contain _____ can cause diarrhea, while those with _____ can cause constipation.

5. Antibiotics are being increasingly used when the bacterium _____ is the major underlying cause of ulcers.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. When can hydrochloric acid cause pain in the stomach?

2. What problems may result from the long-term use of antacids?

3. What drugs can completely inhibit acid secretion?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Tema 25.

Medical Treatment of the Stomach

Exercise 1. Read the following text:

Antidiarrhoeal Drugs

Antidiarrheals are the name given to certain types of medicines that stop or slow diarrhea. Antidiarrheals only relieve the symptoms of diarrhea, such as an increased frequency and urgency when passing stools, they do not eliminate the cause of it. This means that as soon as you stop taking an antidiarrheal, diarrhea will return unless whatever has caused it has run its course. Some antidiarrheals work by slowing down intestinal contractions, increasing the time it takes for the contents of the bowel to be excreted. This allows more water to be absorbed from the bowel back into the body, reducing the water content of the stool. Others work by bulking up the stool, increasing its volume with fiber-like substances.

Oral rehydration agents may also be termed antidiarrheals; however, these do not stop or slow diarrhea, rather they ensure excessive fluid lost during diarrhea is replaced. Other agents used to help relieve the symptoms of diarrhea include antimotility agents or antispasmodic agents. Antibacterial agents can occasionally be used to treat diarrhea caused by specific infections, such as campylobacter or giardia; however, are not routinely recommended or needed.

In general, the antidiarrheal drugs may be divided into different groups based on chemical or functional similarities; these groups include adsorbents, antimotility agents, and bacterial replacements (probiotics).

While the precise mechanisms of action of adsorbents remain unclear, these agents are thought to work by binding to and thereby neutralizing the actions of diarrhea-causing toxins that are produced by infectious agents or by preventing the adherence of infectious agents to the walls of the gastrointestinal tract. Examples of adsorbents used in the treatment of diarrhea include kaolin, pectin, activated charcoal, attapulgite (aluminum silicate), and bismuth subsalicylate (Pepto-Bismol). While these substances generally have few side effects, they are ineffective at controlling fluid loss and therefore are unable to prevent dehydration.

Opioids, such as codeine and loperamide (Imodium), and anticholinergic drugs, such as dicyclomine and atropine, may be used to slow intestinal motility and to relieve pain associated with abdominal cramping. The opiate derivative diphenoxylate typically is given with atropine in a combination marketed as Lomotil. Although opioids carry a risk of dependency and addiction, codeine and the synthetic analogs diphenoxylate and loperamide produce little dependence, and they have been used successfully for diarrhea

Probiotics consist of harmless organisms that interfere with the colonization of the gastrointestinal tract by pathogenic (disease-causing) organisms. Probiotics commonly used in the treatment of diarrhea include commercial preparations of the bacterium *Lactobacillus acidophilus* and the yeast *Saccharomyces boulardii*.

Exercise 2. Translate the text into Ukrainian.

Exercise 3. Write out key sentences of the text.

Exercise 4. Make up a plan of the text.

Exercise 5. Render the text in the written form.

Tema 26.

Infectious Diseases.

Exercise 1. Read the following text:

Cause of Infectious Diseases.

Infectious diseases are caused by microorganisms such as viruses, bacteria, fungi or parasites and can spread between individuals.

Microorganisms that cause disease are collectively called pathogens.

Pathogens cause disease either by disrupting the bodies normal processes and stimulating the immune system to produce a defensive response, resulting in high fever and other symptoms.

Infectious diseases can be spread from one person to another, for example through contact with bodily fluids, by aerosols (through coughing and sneezing), or via a vector, for example a mosquito. Infectious diseases are one of the leading causes of death worldwide.

Many diseases become difficult to control if the infectious agents evolve resistance to commonly used drugs: For example, bacteria can accumulate mutations in their DNA or acquire new genes that allow them to survive contact with antibiotic drugs that would normally kill them.

Scientists are currently searching for new approaches to treat infectious diseases, focusing on exactly how the pathogens change.

Exercise 2. Translate the following words and phrases into English:

<ol style="list-style-type: none"> 1. сказ 2. черви 3. найпростіші 4. розмножуватись 5. нарив, фурункул 6. вітрянка 7. кір 8. свинка 9. краснуха 10. скарлатина 	<p>Answers:</p>
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Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

invade, one-celled, breaking down, contagious, microorganisms

1. Many kinds of bacteria, viruses, and other _____ can invade the human body and cause disease.
2. Pathogens _____ some of the body's cells and tissues and use them for their own growth and reproduction.
3. Bacteria are microscopic, _____ organisms.
4. These pathogens obtain food by _____ body tissues or by absorbing digested food from the intestines.
5. Occasionally, an infectious disease becomes highly _____ and sweeps through a community.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. How can infectious diseases be grouped?
2. What diseases are caused by viruses?
3. What conditions are called an epidemic, a pandemic, an endemic?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Tema 27.

How Infectious Diseases Spread

Exercise 1. Read the following text:

The Transmition of Illnesses

Infectious diseases are transmitted from person to person by direct or indirect contact. Certain types of viruses, bacteria, parasites, and fungi can all cause infectious disease. Malaria, measles, and respiratory illnesses are examples of infectious diseases. Infectious diseases are commonly transmitted through direct person-to-person contact. Transmission occurs when an infected person touches or exchanges body fluids with someone else. Infectious diseases can also be spread indirectly through the air and other mechanisms. For example:

Airborne transmission

Some infectious agents can travel long distances and remain suspended in the air for an extended period of time. You can catch a disease like measles by entering a room after someone with measles has departed.

Contaminated objects

Some organisms can live on objects for a short time. If you touch an object, such as a doorknob, soon after an infected person, you might be exposed to infection. Transmission occurs when you touch your mouth, nose, or eyes before thoroughly washing your hands. Germs can also be spread through contaminated blood products and medical supplies.

Food and drinking water

Infectious diseases can be transmitted via contaminated food and water. *E. coli* is often transmitted through improperly handled produce or undercooked meat. Improperly canned foods can create an environment ripe for *Clostridium botulinum*, which can lead to botulism.

Animal-to-person contact

Some infectious diseases can be transmitted from an animal to a person. This can happen when an infected animal bites or scratches you or when you handle animal waste. The *Toxoplasma gondii* parasite can be found in cat feces. Pregnant women and people with compromised immune systems should take extra care (disposable gloves and good hand washing) when changing cat litter, or avoid it altogether.

Insect bites (vector-borne disease)

Some zoonotic infectious agents are transmitted by insects, especially those that suck blood. These include mosquitos, fleas, and ticks. The insects become infected when they feed on infected hosts, such as birds, animals, and humans. The disease is then transmitted when the insect bites a new host. Malaria, West Nile virus, and Lyme disease are all spread this way.

Environmental reservoirs

Soil, water, and vegetation containing infectious organisms can also be transferred to people. Hookworm, for example, is transmitted through contaminated soil. Legionnaires' disease is an example of a disease that can be spread by water that supplies cooling towers and evaporative condensers.

Because infectious diseases can spread through direct or indirect contact, everyone is at risk of illness. You have a higher risk of becoming ill when you're around sick people or in areas susceptible to germs. If you work in or visit a care center, a day-care center, a hospital, or a doctor's office, take extra precautions to protect yourself.

Infectious diseases are caused by types of bacteria, viruses, parasites, and fungi around us. It's important to understand how these diseases are transmitted. If you

understand the transmission process, you can use this knowledge to protect yourself and help prevent the spread of illnesses.

Exercise 2. Translate the text into Ukrainian.

Exercise 3. Write out key sentences of the text.

Exercise 4. Make up a plan of the text.

Exercise 5. Render the text in the written form.

Tema 28.

Drugs That Fight Infection

Exercise 1. Read the following text:

Preventive Preparations for Contagious Infection

Infectious disease may be an unavoidable fact of life, but there are many strategies available to help us protect ourselves from infection and to treat a disease once it has developed.

Some are simple steps that individuals can take; others are national or global methods of detection, prevention, and treatment. All are critical to keeping communities, nations, and global populations healthy and secure.

Vaccines and Medicines

Medicines have existed in human society probably as long as sickness itself. However, with the advent of the modern pharmaceutical industry, biochemical approaches to preventing and treating disease have acquired a new level of prominence in the evolving relationship between microbes and their human hosts.

Vaccines

A vaccine is a biological preparation that improves immunity to a particular disease. A vaccine typically contains an agent that resembles a disease-causing microorganism and is often made from weakened or killed forms of the microbe or its

toxins. The agent stimulates the body's immune system to recognize it as foreign, destroy it, and "remember" it, so that the immune system can more easily identify and destroy any of these microorganisms that it encounters later. The body's immune system responds to vaccines as if they contain an actual pathogen, even though the vaccine itself is not capable of causing disease. Because vaccines are widely used in the United States, many once-common diseases—polio, measles, diphtheria, whooping cough, mumps, tetanus, and certain forms of meningitis—are now rare or well controlled.

Vaccinated people produce antibodies that neutralize a disease-causing virus or bacterium. They are much less likely to become infected and transmit those germs to others. Even people who have not been vaccinated may be protected by the immunity of the "herd," because the vaccinated people around them are not getting sick or transmitting the infection.

Antibiotics and Antivirals

Antibiotics are powerful medicines that fight bacterial infections. They either kill bacteria or stop them from reproducing, allowing the body's natural defenses to eliminate the pathogens. Used properly, antibiotics can save lives. But growing antibiotic resistance is curbing the effectiveness of these drugs. Taking an antibiotic as directed, even after symptoms disappear, is key to curing an infection and preventing the development of resistant bacteria.

Antibiotics don't work against viral infections such as colds or the flu. In those cases, antiviral drugs, which fight infection either by inhibiting a virus's ability to reproduce or by strengthening the body's immune response to the infection, are used. There are several different classes of drugs in the antiviral family, and each is used for specific kinds of viral infections. (Unlike antibacterial drugs, which may cover a wide spectrum of pathogens, antiviral medications are used to treat a narrower range of organisms.) Antiviral drugs are now available to treat a number of viruses, including

influenza, HIV, herpes, and hepatitis B. Like bacteria, viruses mutate over time and develop resistance to antiviral drugs.

New antiviral drugs are also in short supply. These medicines have been much more difficult to develop than antibacterial drugs because antivirals can damage host cells where the viruses reside.

Exercise 2. Translate the following words and phrases into English:

<ol style="list-style-type: none">1. антибактеріальний препарат2. сульфаніламід3. холера4. віспа5. виставляти, піддавати (чомусь)6. правець7. дифтерія8. поліомієліт, дитячий параліч9. антисироватка, імунна сироватка10. глобулін	<p><i>Answers:</i></p>
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Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

immune, antimicrobials, weakened, antiserums, exposed

1. Drugs that kill or help prevent multiplication of bacteria or viruses that infect the body are called _____ .

2. Two kinds of drugs that prevent infectious diseases are vaccines, _____ and globulins.

3. Vaccines contain a _____ or killed form of the microbe that causes a particular disease.

4. The vaccine makes the body _____ to the disease by providing resistance against attacks by it.

5. Physicians prescribe antiserums and globulins after a person who has not been vaccinated is _____ to an infectious disease.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. What are antimicrobials?
2. What are the two kinds of drugs that prevent infectious diseases?
3. What are antiserums and globulins?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Tema 29.

Antibacterial Drugs

Exercise 1. Read the following text:

Antibacterial Medicines

Antibacterial drugs stop bacterial infections in two ways: they prevent bacteria from dividing and increasing in number, or they kill the bacteria. The former drugs, which prevent bacteria from increasing in number but do not kill the bacteria, are termed bacteriostatic drugs. The latter, which kill the infectious bacteria, are known as bactericidal drugs. Both types of drugs can stop an infection.

The use of antibacterial drugs is ancient. Thousands of years ago, although the scientific basis of infection and its treatment was unknown, infections were sometimes successfully treated with molds and plants. Centuries later, the production of antibiotics by some species of molds and plants was discovered. One argument

against the large-scale deforestation of regions, such as the Amazon basin, is that there are likely still many antibiotic-producing molds and plants yet to be discovered.

The antibiotic era began in the first decade of the twentieth century, when Paul Ehrlich (1854–1915) discovered a compound that proved to be an effective treatment for syphilis. In 1928, Sir Alexander Fleming (1881–1955) discovered the antibiotic penicillin. With recognition of the compound's prowess in killing a wide variety of bacteria, interest in antibiotics soared. In 1941, Selman Waksman (1888–1973) coined the term antibiotic. In the ensuing decades, much work focused on the discovery of new antibiotics from natural sources, the laboratory alteration of existing compounds to increase their potency (and, later, to combat the problem of antibiotic resistance), and the synthesis of entirely new antibiotics.

Antibiotics kill bacteria in a variety of ways. Some alter the structure of the bacteria so that the bacteria become structurally weakened and unable to withstand physical stresses, such as pressure, with the result that the bacteria explode. Other antibiotics halt the production of various proteins in a number of ways: inhibiting the decoding of the genes specifying the proteins (transcriptional inhibition); blocking the production of the proteins following the production of the genetic message, messenger ribonucleic acid (mRNA, in a process termed translational inhibition); blocking the movement of the manufactured protein to its final location in the bacterium; or blocking the import of compounds that are crucial to the continued survival of the bacterium.

Some broad-spectrum antibiotics are effective against many different bacteria. Other narrow-spectrum antibiotics are very specific in their action and, as a result, affect fewer bacteria.

Penicillin is the classic example of a class of antibiotics known as beta-lactam antibiotics. The term beta-lactam refers to the ring structure that is the backbone of these antibiotics. Other classes of antibiotics, which are based on the structure and the

mechanism of action of the antibiotic, are tetracyclines, rifamycins, quinolones, aminoglycosides, and sulphonamides.

Every year, antibiotics continue to save millions of lives around the world. The discovery and manufacture of antibiotics continues. Screening of samples to uncover antibacterial properties has been automated; thousands of samples can be processed each day. Furthermore, the increased knowledge of the molecular details of the active sites of antibiotics and the ability to target specific regions have been exploited in the design of new antibiotics.

Exercise 2. Translate the following words and phrases into English:

<ol style="list-style-type: none">1. зразок, екземпляр2. приєднуватись, прикріплюватись3. вставляти; додатково включати4. зрештою; згодом5. дріжджі6. деменція, слабоумство7. псевдопатогенний8. посуд; приладдя9. передається10. істотний	<p>Answers:</p>
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Exercise 3. Translate the text into Ukrainian.

Exercise 4. Fill in the gaps with the words and word combinations from the list.

Translate the sentences.

prolonged, symptoms, severe, substantial, commonly, transmitted, resulted

1. People infected with HIV eventually develop _____ that also may be caused by other less serious conditions.

2. With HIV infection, however, these symptoms are _____ and often more _____.

3. HIV _____ causes a severe "wasting syndrome", resulting in _____ weight loss, a general decline in health, and, in some cases, death.

4. Studies indicate that HIV is not _____ through air, food, or water, or by insects.

5. No known cases of AIDS have _____ from sharing eating utensils, bathrooms, locker rooms, living space, or classrooms.

Exercise 5. Write out key sentences of the text.

Exercise 6. Answer the following questions.

1. What is AIDS?
2. What is AIDS caused by?
3. What are the ways of preventing HIV transmission?

Exercise 7. Make up a plan of the text.

Exercise 8. Render the text in the written form.

Tema 30.

Antibacterial Drugs

Exercise 1. Read the following text:

Sulfa Drugs.

Sulfa drug, also called sulfonamide, any member of a group of synthetic antibiotics containing the sulfanilamide molecular structure. Sulfa drugs were the first chemical substances systematically used to treat and prevent bacterial infections in humans. Their use has diminished because of the availability of antibiotics that are more effective and safer and because of increased instances of drug resistance. Sulfonamides are still used, but largely for

treating urinary tract infections and preventing infection of burns. They are also used in the treatment of certain forms of malaria.

The antibacterial effects of sulfonamides were first observed in 1932, when German bacteriologist and pathologist Gerhard Domagk noted the effects of the red dye Prontosil on Streptococcus infections in mice. It was later proved by French researchers that the active agent of Prontosil was sulfanilamide, or para-aminobenzenesulfonamide, a product of the body's metabolism of Prontosil. By the 1940s sulfanilamide was a widely used drug. During World War II white sulfanilamide powders became standard in first-aid kits for the treatment of open wounds, and sulfanilamide tablets were taken to fight intestinal infections. Though the medicine was relatively safe, allergic reactions such as skin rashes, fever, nausea, vomiting, and even mental confusion were common. With the introduction of less-toxic derivatives and especially with the mass production of penicillin, its use declined.

Many other sulfa drugs were derived from sulfanilamide in the 1940s, including sulfathiazole (systemic bacterial infections), sulfadiazine (urinary tract and intestinal tract infections), and sulfamethazine (urinary tract infections). However, all sulfa drugs induced some of the side effects listed above, and bacteria developed resistant strains after exposure to the drugs. Within a few decades many of the sulfa drugs had lost favour to more-effective and less-toxic antibiotics.

Trisulfapyrimidine (triple sulfa), a combination of sulfadiazine, sulfamerazine, and sulfamethazine, is used in the treatment of vaginal infections, and several sulfa drugs are used in combination with antibiotics to treat a wide range of conditions, from skin burns to malaria to pneumonia in HIV/AIDS patients.

Sulfa drugs are bacteriostatic; i.e., they inhibit the growth and multiplication of bacteria but do not kill them. They act by interfering with the synthesis of folic acid (folate), a member of the vitamin B complex present in all living cells. Most bacteria make their own folic acid from simpler starting materials; humans and other

higher animals, however, must obtain folic acid in the diet. Thus, sulfa drugs can inhibit the growth of invading microorganisms without harming the host.

Exercise 2. Translate the text into Ukrainian.

Exercise 3. Write out key sentences of the text.

Exercise 4. Make up a plan of the text.

Exercise 5. Render the text in the written form.

Tema 31.

Antibacterial Drugs

Exercise 1. Read the following text:

Kinds of Antibiotics.

Antibiotics are used to treat or prevent some types of bacterial infection. They work by killing bacteria or preventing them from reproducing and spreading. There are hundreds of different types of antibiotics, but most of them can be broadly classified into six groups. These are outlined below.

- penicillins (such as penicillin and amoxicillin) – widely used to treat a variety of infections, including skin infections, chest infections and urinary tract infections

- cephalosporins (such as cephalexin) – used to treat a wide range of infections, but some are also effective for treating more serious infections, such as septicaemia and meningitis

- aminoglycosides (such as gentamicin and tobramycin) – tend to only be used in hospital to treat very serious illnesses such as septicaemia, as they can cause serious side effects, including hearing loss and kidney damage; they're usually given by injection, but may be given as drops for some ear or eye infections

- tetracyclines (such as tetracycline and doxycycline)– can be used to treat a wide range of infections, but are commonly used to treat moderate to severe acne and rosacea

- macrolides (such as erythromycin and clarithromycin) – can be particularly useful for treating lung and chest infections, or an alternative for people with a penicillin allergy, or to treat penicillin-resistant strains of bacteria

- fluoroquinolones (such as ciprofloxacin and levofloxacin) – broad-spectrum antibiotics that can be used to treat a wide range of infections

Some antibiotics can also react unpredictably with other medications, such as the oral contraceptive pill and alcohol. It's important to read the information leaflet that comes with your medication carefully and discuss any concerns with your pharmacist or GP.

Exercise 2. Translate the text into Ukrainian.

Exercise 3. Write out key sentences of the text.

Exercise 4. Make up a plan of the text.

Exercise 5. Render the text in the written form.

Тема 32.

Acquired immune deficiency syndrome (AIDS)

Exercise 1. Read the following text:

HIV Infection

Acquired immune deficiency syndrome or acquired immunodeficiency syndrome (AIDS or Aids) is a collection of symptoms and resulting from the specific damage to the immune infections system caused by the human immunodeficiency virus (HIV). The late stage of the condition leaves individuals prone to opportunistic infections and tumors. Although treatments for AIDS and HIV exist to slow the virus's progression, there is no known cure. HIV is transmitted through direct contact of a mucous membrane or the bloodstream with a bodily fluid containing HIV, such as blood, semen, vaginal fluid, and breast milk. This transmission can come in the

form of anal, vaginal or oral sex, blood transfusion, contaminated hypodermic needles, exchange between mother and baby during pregnancy, childbirth, or breastfeeding, or other exposure to one of the above bodily fluids.

Most researchers believe that HIV originated in sub-Saharan Africa during the twentieth century; it is now a pandemic, with an estimated 38.6 million people now living with the disease worldwide. As of January 2006, the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the World Health Organization (WHO) estimate that AIDS has killed more than 25 million people since it was first recognized on June 5, 1981, making it one of the most destructive epidemics in recorded history.

In 2005 alone, AIDS claimed an estimated 2.4–3.3 million lives, of which more than 570,000 were children. A third of these deaths are occurring in sub-Saharan Africa, retarding economic growth and destroying human capital. Antiretroviral treatment reduces both the mortality and the morbidity of HIV infection, but routine access to antiretroviral medication is not available in all countries.

Exercise 2. Translate the text into Ukrainian.

Exercise 3. Write out key sentences of the text

Exercise 4. Make up a plan of the text.

Exercise 5. Render the text in the written form.

ПІДСУМКОВІ КОНТРОЛЬНІ РОБОТИ

ПІДСУМКОВА КОНТРОЛЬНА РОБОТА 1

ДИСЦИПЛІНА «ІНОЗЕМНА МОВА»

ВАРІАНТ 1

I. Наведіть англійські еквіваленти до наступних слів та словосполучень:

1. Навчатися в Запорізькому державному медичному університеті, заняття на фармацевтичному факультеті, лекції та практичні заняття, лекція по хімії, закінчити школу, заняття закінчуються, здавати заліки та екзамени, староста нашої групи, вивчати анатомію, улюблені предмети, працювати в аптеці, проходити практику.

2. Перекладіть виокремлені слова та словосполучення. Запишіть речення. Перекладіть речення рідною мовою.

1. When my sister went to school she was greatly interested in **хімія та біологія**.
2. Can you work at pharmaceutical plants or **хімічна лабораторія** after graduation from the University?

II. Виконайте наступні граматичні завдання. Поставте дієслова, які стоять у дужках, в необхідній формі часів Indefinite (Present, Past, Future). Перекладіть речення рідною мовою:

1. Pharmacy was an integral part of medicine when preparative pharmaceutical techniques (to be) simple.
2. I hope I (to start) an independent life one day.
3. The beginning of pharmacy is as old as a man himself; the first person who (to squeeze) juice from a succulent leaf to apply it to a wound was in a drug business.
4. Every time my cousin (to have) a headache, she (to take) aspirin.

III. Виконайте завдання на переклад. Перекладіть рідною мовою текст:

Pharmacy is the science and the art concerned with collection, preparation, and standardization of drugs. Its scope includes cultivation of plants that are used as drugs, synthesis of chemical compounds of medicinal value, and analysis and standardization of medicinal agents. The science that embraces all available

knowledge of drugs with special reference to the mechanism of their action in disease treatment is pharmacology.

Obviously this broad science has many subdivisions, such as toxicology (the study of poisons) and therapeutics (the use of drugs in disease treatment). According to the description, pharmacy is one of the subdivisions or specialties of pharmacology. Members of this profession are called pharmacists or druggists. They were once called apothecaries. The word "pharmacy" also refers to a place where drugs are prepared or sold. Most pharmacies, sometimes called drugstores, sell a variety of products in addition to drugs.

IV. Задайте запитання до речень, починаючи зі слова в дужках.

1. Pharmacy is the link between life sciences and chemistry. (What)
2. The science deals with the development and production of pharmaceutical drugs all over the world. (Where)

ПІДСУМКОВА КОНТРОЛЬНА РОБОТА 1

ДИСЦИПЛІНА «ІНОЗЕМНА МОВА»

ВАРІАНТ 2

I. Наведіть англійські еквіваленти до наступних слів та словосполучень:

1. Бути студентом-першокурсником, навчатися на фармацевтичному факультеті, бути присутнім на лекції, заняття з біології, жити в гуртожитку, закінчити університет, заняття починаються, навчальний рік, студенти нашої групи, вивчати ботаніку, стати спеціалістом, працювати у лікарні, практика.

2. Перекладіть виокремлені слова та словосполучення. Запишіть речення. Перекладіть речення рідною мовою.

1. I get a lot of **корисні знання** and necessary experience at the university.

2. Are biological and physical **науки** necessary for pharmaceutical training?

II. Виконайте наступні граматичні завдання. Поставте дієслова, які стоять у дужках, в необхідній формі часів Indefinite (Present, Past, Future). Перекладіть речення рідною мовою:

1. The chemist's usually (to start) working at 8 o'clock.
2. Paracelsus (to take) his pupils to the hospitals, chemical laboratories, for botanical excursions in the fields and mountains, etc.
3. The word "pharmacy" (to come) from the Greek word "pharmakon" which in the modern language means "a drug".
4. I (to help) you if I (to return) home just after classes at University.

III. Виконайте завдання на переклад. Перекладіть рідною мовою текст:

Pharmacists fill prescriptions written by physicians or dentists and prepare labels for medicines. On the labels, pharmacists include directions for patients given in prescriptions. At one time, pharmacists compounded their own medicines. Today pharmaceutical manufacturers supply most drugs. But pharmacists must still compound some medicines and be able to prepare antiseptic solutions, ointments, and other common remedies. They also advise people on the selection of nonprescription drugs, such as cold tablets. In addition, pharmacists are responsible for the legal sale of narcotics and poisonous substances.

Pharmacy laws generally include regulations for pharmacy practice, poisons sale, narcotics dispensing, and labeling and sale of dangerous drugs. The pharmacist sells and dispenses drugs within the provisions of the food and drug laws of the country in which he practices. These laws recognize the national pharmacopoeia (a treatise on products used in medicine, their purity, dosages, and other data) as the standard for drugs.

IV. Задайте запитання до речень, починаючи зі слова в дужках.

1. Pharmacists are the third largest healthcare profession and work in a wide variety of roles in community and primary care pharmacy, hospitals and in the pharmaceutical industry. (Where)
2. At School of Pharmacy of Birmingham University, you will be taught Physiology and Anatomy, the effect of medicines on the human body, and how medicines are designed. (What)

ПІДСУМКОВА КОНТРОЛЬНА РОБОТА 2

ДИСЦИПЛІНА «ІНОЗЕМНА МОВА»

ВАРІАНТ 1

I. Наведіть англійські еквіваленти до наступних слів та словосполучень:

1. властивість, зміна, ідентичність, кількість, рівновага, темп хімічної реакції, тверда речовина, світіння, штучно, руйнування,

2. Перекладіть виокремлені слова та словосполучення. Запишіть речення. Перекладіть речення рідною мовою.

1. **Неорганічна хімія** is the study of all elements and compounds that do not contain carbon.

2. **Ядерна хімія** is the study of radioactivity, atomic nucleus, and nuclear reactions, and the development of applications for radioactive isotopes in medicine and industry.

II. Виконайте наступні граматичні завдання. Поставте дієслова, які стоять у дужках, в необхідній формі часів CONTINUOUS (PASSIVE). Перекладіть речення рідною мовою:

1. The problem _____ widely _____ about now (*to speak*).

2. The suspension _____ when the first customer entered the chemist's (*to prepare*).

3. The liquid is now _____ into a transparent glass (*to pour*).

4. At 5 o'clock the solution _____ in the water-heater system (*to boil*).

5. When the professor came, the examination questions _____ by the students (*to dispense*).

III. Виконайте завдання на переклад. Перекладіть рідною мовою текст:

Today's chemists also know that elements are made of tiny building blocks called atoms. Some perceptive early Greek philosophers proposed that matter was made of atoms, but they performed no experiments to prove their theory. Now there is ample evidence that all matter is made of atoms. Some of this evidence is as follows:

1. Chemists have discovered that in every pure substance the ratios of the numbers of the atoms are always the same. This aspect of matter is called the Law of Definite Composition.

2. Sometimes elements combine in two different proportions to form two different substances. For example, hydrogen (H) and oxygen (O) may combine to form either water (H₂O) or hydrogen peroxide (H₂O₂). In all such cases the elements combine in ratios of whole numbers.

Observations such as these can be explained easily if it is assumed that all ordinary matter - such as plants, animals, rock, soil, air, water, coal, petroleum, and iron - is made up of atoms.

The atomic theory can be stated as follows: (1) ordinary matter is made of small particles called atoms. (2) Atoms of the same elements have the same average masses, and atoms of different elements have different average masses. (3) Chemical reactions take place between atoms or groups of atoms.

IV. Задайте запитання до речень, починаючи зі слова в дужках.

1. Atoms of most elements can react with other kinds of atoms to form compounds. (What)
2. Atoms of most elements possess the property of binding to other atoms. (What)

ПІДСУМКОВА КОНТРОЛЬНА РОБОТА 2

ДИСЦИПЛІНА «ІНОЗЕМНА МОВА»

ВАРІАНТ 2

I. Наведіть англійські еквіваленти до наступних слів та словосполучень:

1. рідина, однорідність, розчинність, властивість, тимчасовий, аналіз, якісний, кількісний, осад, проба, спектроскоп, електроліз, флюороскоп.

2. *Перекладіть виокремлені слова та словосполучення. Запишіть речення. Перекладіть речення рідною мовою.*

1. In chemistry, there is conducted determination of the properties and composition of samples of materials; **якісний аналіз** establishes what is there and **кількісний аналіз** measures how much.

2. Spectrochemical analysis is any of a group of **методи хімічного аналізу** that depend on measurement of the wavelength and intensity of electromagnetic radiation.

II. Виконайте наступні граматичні завдання. Поставте дієслова, які стоять у дужках, в необхідній формі часів CONTINUOUS (PASSIVE). Перекладіть речення рідною мовою:

1. The problem _____ now, why don't you listen to it? (to explain)

2. They _____ for pneumonia when the doctor came into the ward. (to treat)

3. Yesterday at the seminar, the question _____ by us, but you didn't come. (to investigate)

4. Yesterday at this time the question of slippery properties of bases _____. (to explain)

5. Now the reaction of neutralization _____. (to carry on)

III. Виконайте завдання на переклад. Перекладіть рідною мовою текст:

Atoms of most elements possess the property of binding to other atoms. When two or more atoms are bound together, the force of attraction that holds them together is called a chemical bond. Atoms of particular elements may form a certain precise and limited number of bonds, others may form many. When atom reacts, they gain, lose or share electrons. Metallic elements frequently combine with nonmetallie elements to form compounds. There are two types of bonding: ionic and covalent.

Ionic bonds are characteristic of sodium compounds. Sodium can gain a complete outer shell and it may acquire 7 electrons from other atoms. So, sodium can have an enormous excess of a negative charge. There is an electrostatic force of

attraction between oppositely charged ions of sodium compounds, called ionic or electrovalent bond.

There is an alternative way of bondage combination of two nonmetallic elements, both gaining electrons. They combine by sharing electrons. A shared pair of electrons is a covalent bond. If two pairs of electrons are shared, the bond is a double bond (hydrogen + oxygen = water).

There are three types of covalent substances: substances composed of small individual molecules with weak forces of attraction (gases); small molecules with weak forces of attraction (ethanol) and giant molecules (quartz).

IV. Задайте запитання до речень, починаючи зі слова в дужках.

1. A molecule can also be defined as two or more atoms in chemical combination.. (How)
2. The liquid is poured of the tap into a spare conical flask until the level of liquid in the burette drops to the zero mark. (What)

ПІДСУМКОВА КОНТРОЛЬНА РОБОТА 3

ДИСЦИПЛІНА «ІНОЗЕМНА МОВА ЗА ПРОФЕСІЙНИМ СПРЯМУВАННЯМ»

ВАРІАНТ 1

I. Додайте до кожного речення необхідне за змістом слово. Перекладіть речення рідною мовою:

Some, via, are (2), your, surgically, did, after

1. After you swallow ____ meal, your stomach closes at each end and the food can not get out.
2. No drug is absolutely safe, there is always _____risk of an adverse reaction.
3. When____ you develop the pain in the heart area?

4. No matter how good you _____ at something, there's always about a million people better than you.
5. Food enters the digestive tract _____ the mouth, which leads into the gullet.
6. Ten tons of blood _____ pumped through the heart daily.
7. In 1955, M.Amosov was the first in Ukraine who began treatment of heart diseases _____.
8. Some students go back home during vacations, but _____ they graduate most leave home for good.

II. Граматичні завдання:

1. Використайте майбутній час в реченні:

1. The intake of the drug may cause constipation, sexual dysfunction and fatigue.
2. Drugs that may be used to assist the blood pressure treatment include diuretics.

2. Зробіть речення питальним. Розпочніть зі слова в дужках.

1. The intake should be stopped immediately if signs of digitalis toxicity occur. (What)
2. Successful treatment should bring the blood pressure below systolic 160 mmHg and diastolic 90 mm Hg. (What)

III. Перекладіть наступний текст:

Drugs that correct cardiac arrhythmias also interfere with the pumping mechanism of the heart. The drug selected must be appropriate to the condition to be treated. These drugs often produce dangerous side effects and must be used with caution and care.

Dosage must be calculated to give a beneficial effect without putting the patient at risk. The effect on the patient must be monitored at all times.

When these drugs are used, especially during an emergency, staff must be ready to initiate cardiac resuscitation immediately.

These drugs should be used with special caution when disease already causes bradycardia by preventing the conduction of some stimuli through the nodes of the heart. The effect of drugs that further reduce stimulus to produce a myocardium contraction may cause bradycardia or a systole.

Many of these drugs will produce a rebound hypertension or hypotension after 1-2 h. Those drugs must not be mixed with any others during administration. It is the interchange of electrolytes across cell membranes that give cardiac cells contractile properties. Incorrect serum electrolyte values can interfere with cardiac rhythms and interrupt the therapeutic use of these drugs. Potassium is especially important, and hypokalaemia must be corrected when patients are treated with drugs to correct cardiac arrhythmias.

ПІДСУМКОВА КОНТРОЛЬНА РОБОТА 3

ДИСЦИПЛІНА «ІНОЗЕМНА МОВА ЗА ПРОФЕСІЙНИМ СПРЯМУВАННЯМ»

ВАРІАНТ 2

I. Додайте до кожного речення необхідне за змістом слово. Перекладіть речення рідною мовою:

be, on, used to, may, no, campus, well, so

1. _____ human being can exist without oxygen.
2. Before angiography, patients usually fast and may _____ given a sedative.
3. The University's has _____, two banks, bookshop, chemist's shop, a health center, hairdresser and Student's Internet Club.
4. Before I came to Britain I _____ think a typical British person was someone who was very polite and drank a lot of tea.
5. You want your parents to treat you like an adult yet you still depend _____ them for money, food and practical help.
6. A tablet of aspirin helps _____ when I suffer from my headache.

7. The blood pressure _____change several times a day.
8. Different food does different jobs in your body, _____you need to eat a good balance of all the different types.

II. Граматичні завдання:

1.Зробіть речення заперечним:

1. These drugs can initiate an allergic reaction and cause skin rashes, pruritis and bronchospasm.
2. Side effects may include a dry mouth, fluid retention, constipation or diarrhea, and sedative effect.

2 .Використайте минулий час в реченні:

1. The drugs must be used with caution in patients with hepatic or renal impairment.
2. These drugs can reduce, or increase, the rate and tone of intestinal muscles.

III. Перекладіть наступний текст.

Anabolic steroids are derivatives or synthetic models of the male sex hormone testosterone that stimulate muscle growth. In the 1950s a growing number of athletes and bodybuilders began to use anabolic steroids to increase strength and body weight and to improve athletic performance. By the 1980s, the use of anabolic steroids had spread to members of the general public - particularly adolescent boys - who were concerned with improving their appearance.

Little is known about the long-term effects of anabolic-steroid use. However, the United States Food and Drug Administration and the American College of Sports Medicine agree that anabolic steroids can have harmful effects. In men, the use of large amounts of anabolic steroids can cause the body's natural production of testosterone to decrease or even stop completely. In young, physically immature users, anabolic steroids can halt the natural lengthening of bones, thereby stunting growth. Women who use anabolic steroids may develop masculine characteristics

such as increased facial and body hair and a deepened voice. Some of these physical side effects may be permanent.

ВІДПОВІДІ
ПОТОЧНІ КОНТРОЛЬНІ РОБОТИ

Контрольна робота 1

Варіант 1

Завдання 1.

1. to enter a higher educational establishment; 2. Master's Degree; 3. Postgraduate; 4. healing properties; 5. compulsory education; 6. Pharmaceutical department; 7. entrance examinations; 8. dispensing pharmacists; 9. chemist's shop; 10. curriculum.

Завдання 2.

1- higher medical institutions; 2- curriculum; 3- practical training; 4- period of time; 5- outlook.

Контрольна робота 1

Варіант 2

Завдання 1.

1. to enter a pharmaceutical faculty; 2. to get Master's Degree; 3. extramural department; 4. practical training; 5. technology of pharmaceutical preparations; 6. chemical laboratory; 7. a period of internship; 8. compulsory education; 9. pharmaceutical specialties; 10. foreign students.

Завдання 2.

1- specialize; 2- take; 3- influence; 4- the degree; 5- management.

Контрольна робота 2

Варіант 1

Завдання 1.

1. to undergo; 2. advanced; 3. to administer; 4. to be engaged in; 5. dispensing; 6. merchandising; 7. apprenticeship; 8. requirement; 9. license; 10. cognate.

Завдання 2.

1- followed; 2 – Doctor of Philosophy; 3 – teaching; 4- common; 5 - engaged, provided.

Контрольна робота 2

Варіант 2

Завдання 1.

1. humanities; 2. bachelor; 3. drugstore; 4. accredited college of pharmacy; 5. state board examination; 6. effects of drugs; 7. professional courses; 8. permission to practice; 9. developed; 10. to seek.

Завдання 2.

1- established; 2- developed; 3- accredited; 4- required; 5- complete.

Контрольна робота 3

Варіант 1

Завдання 1.

1. *metabolism*; 2. *fungus (pi. fungi)*; 3. *bacterium (pi. bacteria)*; 4. *cytology*; 5. *histology*; 6. *tiny*; 7. *microscope*; 8. *pathologist*; 9. *cell*; 10. *environment*.

Завдання 2.

1- *Taxonomy*; 2- *understand*; 3- *food chain*; 4- *diseases*; 5- *bacteria*.

Контрольна робота 3

Варіант 2

Завдання 1.

1. *nutrient*; 2. *parasite*; 3. *reproduction*; 4. *proper*; 5. *to suffocate*; 6. *distribution*; 7. *unique name*; 8. *exotic plants*; 9. *binomial system*; 10. *living organisms*.

Завдання 2.

1- *cultivated plants*; 2- *kinds of plants*; 3- *distribution*; 4- *discoveries*; 5- *carbon dioxide*.

Контрольна робота 4

Варіант 1

Завдання 1.

1. *medicinal plants*; 2. *pharmacological action*; 3. *essential principles*; 4. *biological function*; 5. *cellular structure*; 6. *individual plants*; 7. *pure compounds*; 8. *antagonistic principles*; 9. *constituent*; 10. *substance*.

Завдання 2.

1- *many reasons*; 2- *special importance*; 3- *drugs*; 4- *population*; 5- *compounds*.

Контрольна робота 4

Варіант 2

Завдання 1.

1. *homeopathic physicians*; 2. *remedy*; 3. *disappointment*; 4. *sore throat*; 5. *pungent*; 6. *protection*; 7. *to flush*; 8. *insect bites*; 9. *storage place*; 10. *early stages*.

Завдання 2.

1- *hospitals*; 2- *laryngitis*; 3- *sore throat*; 4- *eye injuries*; 5- *grief remedy*.

Контрольна робота 5

Варіант 1

Завдання 1.

1. *property*; 2. *alteration*; 3. *identity*; 4. *quantity*; 5. *equilibrium*; 6. *reaction rate*; 7. *solid*; 8. *fluorescence*; 9. *artificially*; 10. *destruction*.

Завдання 2.

1- *properties*; 2- *equilibrium*; 3- *particle*; 4- *comprise*; 5- *quantity*.

Контрольна робота 5

Варіант 2

Завдання 1.

1. *liquid*; 2. *uniformity*; 3. *solubility*; 4. *property*; 5. *temporary*; 6. *analysis*; 7. *qualitative*; 8. *quantitative*; 9. *precipitation*; 10. *electrolysis*.

Завдання 2.

1- kinds of matter; 2- properties; 3- composition; 4- measurement; 5- electric current.

Контрольна робота 6

Варіант 1

Завдання 1.

1. homogeneous; 2. saturation; 3. solute; 4. solvent; 5. dissociation; 6. covalent; 7. variable; 8. emulsion; 9. chloroform; 10. to evaporate.

Завдання 2.

1- mixture; 2- dissolved substance; 3- purification; 4- do not dissolve; 5- solubility.

Контрольна робота 6

Варіант 2

Завдання 1.

1. derivation; 2. sour; 3. hydrochloric; 4. significant; 5. to neutralize; 6. particle; 7. to stipulate; 8. digestion; 9. property; 10. to vanish.

Завдання 2.

1- acids, bases and salts; 2- properties; 3- hydrogen ions; 4- hydroxyl radical; 5- Neutralization.

Контрольна робота 7

Варіант 1

Завдання 1.

1. hydrocarbon; 2. tetravalent; 3. leucine; 4. albumin; 5. convert; 6. carbohydrate; 7. greasy; 8. hydrolysis; 9. phospholipid; 10. glycogen.

Завдання 2.

1- molecules; 2- organic compounds; 3- carbon; 4- proteins, carbohydrates, fats; 5- living things.

Контрольна робота 7

Варіант 2

Завдання 1.

1. menstruum; 2. trituration; 3. levigation; 4. elutriation; 5. fusion; 6. decoction; 7. infusion; 8. maceration; 9. evaporation; 10. fractional.

Завдання 2.

1- therapeutic use; 2- interdisciplinary science; 3- pharmacological properties; 4- granulation; 5- combustion.

Контрольна робота 8

Варіант 1

Завдання 1.

1. to synthesize; 2. to dispense; 3. removal; 4. interaction; 5. subdivision; 6. harmful; 7. chemotherapy; 8. predictable; 9. to require; 10. antidote.

Завдання 2.

1- treatment of diseases; 2- food substances; 3- processes; 4- pharmacology; 5- Contraindications.

Контрольна робота 8
Варіант 2

Завдання 1.

1. drug taking; 2. blood stream; 3. angina pectoris; 4. solution; 5. vomiting; 6. to irritate; 7. spinal cord; 8. anesthesia; 9. ointment; 10. suppository.

Завдання 2.

1- orally; 2- placed under the tongue; 3- **Parenteral**; 4- upper layers; 5- nauseated and vomiting.

Контрольна робота 9
Варіант 1

Завдання 1.

1. cardiovascular; 2. affliction; 3. to treat; 4. clot; 5. nausea; 6. vomiting; 7. overexertion; 8. myocardial infarction; 9. impairment; 10. insomnia.

Завдання 2.

1- heart disease; 2- Atherosclerosis; 3- blood clot; 4- stopped; 5- paralysis.

Контрольна робота 9
Варіант 2

Завдання 1.

1. to affect; 2. to alter; 3. to contract; 4. digitalis; 5. to depress; 6. vasodilator; 7. to relax; 8. vessel; 9. epinephrine; 10. dilate.

Завдання 2.

1- Cardiovascular drugs; 2- myocardium; 3- arrhythmias; 4- Vasoconstrictors; 5- excretion.

Контрольна робота 10
Варіант 1

Завдання 1.

1. hollow; 2. particle; 3. tumor; 4. lye; 5. ulcer; 6. pernicious; 7. adjacent; 8. sore; 9. consumption; 10. amebic.

Завдання 2.

1- bleeding; 2- acute ; 3- colon; 4- abdominal; 5- intestine.

Контрольна робота 10
Варіант 2

Завдання 1.

1. antacid; 2. heartburn; 3. brand name; 4. to purchase; 5. to promote; 6. to inhibit; 7. underlying; 8. to resist; 9. to recur; 10. digestive system.

Завдання 2.

1- hydrochloric acid; 2- antacids; 3- react; 4- 1.magnesium hydroxide; 2. aluminum hydroxide; 5- Helicobacter pylori.

Контрольна робота 11
Варіант 1

Завдання 1.

1. rabies; 2. worms; 3. protozoans; 4. multiply; 5. boil; 6. chickenpox; 7. measles; 8. mumps; 9. rubella; 10. scarlet fever.

Завдання 2.

1- microorganisms; 2- invade; 3- one-celled; 4- breaking down; 5- contagious.

Контрольна робота 11

Варіант 2

Завдання 1.

1. antimicrobial; 2. sulfonamide; 3. cholera; 4. smallpox; 5. to expose (to); 6. tetanus; 7. diphtheria; 8. poliomyelitis (polio); 9. antiserum; 10. globulin.

Завдання 2.

1- antimicrobials; 2- antisera; 3- weakened; 4- immune; 5- exposed.

Контрольна робота 11

Варіант 3

Завдання 1.

1. specimen; 2. to attach; 3. to insert; 4. eventually; 5. yeast; 6. dementia; 7. opportunistic; 8. utensils; 9. transmitted; 10. substantial.

Завдання 2.

1- symptoms; 2- 1. prolonged; 2. severe; 3- 1. commonly; 2. substantial; 4- transmitted; 5- resulted.

Підсумкова контрольна робота 2

Варіант 1

Завдання 2.

1. is being spoken; 2. was being prepared; 3. was being boiled; 4. is being poured; 5. were being dispensed.

Підсумкова контрольна робота 2

Варіант 2

Завдання 2.

1. is being explained; 2. were being treated; 3. was being investigated; 4. was being explained; 5. is being carried on.

Підсумкова контрольна робота 3

Варіант 1

Завдання 1.

1. After you swallow your meal, your stomach closes at each end and the food can not get out.

2. No drug is absolutely safe, there is always some risk of an adverse reaction.

3. When did you develop the pain in the heart area?

4. No matter how good you are at something, there's always about a million people better than you.
5. Food enters the digestive tract via the mouth, which leads into the gullet.
6. Ten tons of blood are pumped through the heart daily.
7. In 1955, M.Amosov was the first in Ukraine who began treatment of heart diseases surgically.
8. Some students go back home during vacations, but after they graduate most leave home for good.

Підсумкова контрольна робота 3
Варіант 2

Завдання 1.

1. No human being can exist without oxygen.
2. Before angiography, patients usually fast and may be given a sedative.
3. The University's has a campus, two banks, bookshop, chemist's shop, a health center, hairdresser and Student's Internet Club.
4. Before I came to Britain I used to think a typical British person was someone who was very polite and drank a lot of tea.
5. You want your parents to treat you like an adult yet you still depend on them for money, food and practical help.
6. A tablet of aspirin helps well when I suffer from my headache.
7. The blood pressure may change several times a day.
8. Different food does different jobs in your body, so you need to eat a good balance of all the different types.

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