ODESA NATIONAL MEDICAL UNIVERSITY

PHILOSOPHY, BIOETHICS AND FOREIGN LANGUAGES DEPARTMENT

MEDICAL TERMINOLOGY
IN ENGLISH

of the 1st year of study

ODESA - 2022

CONTENT

HIPPOCRATES

Task 1. Key words

nouns	verbs	adjectives/adverbs
cleanliness	accept	accurately
disfavor	conclude	behavioral
explanation	cope with	evil
possession	reject	holistic
seizure		postpartum
severity		
superstition		

Task 2. Practice reading and guess the meaning of the following words:

Hippocrates [hɪˊpɒkrəti:z], epilepsy [ˈepɪlepsi], pneumonia [njuːˈməʊnɪə], throughout [θruːˈaʊt], melancholia [ˌmɛlənˈkəʊlɪə], mania [ˈmeɪnɪə], phobia [ˈfəʊbɪə], paranoia [ˌparəˈnɔɪə], hysteria [hɪˈstɪərɪə], oath [‘əʊθ], psychology [sʌɪˈkɒlədʒi], temperament [ˈtɛmp(ə)rəm(ə)nt].

Task 3. a) Form nouns with the help of suffixes.

Model: to recommend (рекомендувати) – recommenda**tion** (рекомендація)

- tion/sion: to conclude, to consider, to observe, to correct, to explain, to reject, to examine, to administer.

- ment: to improve, to enlarge, to impair, to establish, to treat, to measure, to develop, to require.

Task 4. Read the text:

Hippocrates

Hippocrates was a Greek physician born in 460 BC on the island of Cost, Greece. He became known as the founder of medicine and was regarded as the greatest physician of his time. He based his medical practice on observations and on the study of the human body. He held the belief that disease had a physical and a rational explanation. He rejected the views of his time that considered illness to be caused by superstitions and by possession of evil spirits and disfavor of the gods.

Hippocrates was able to draw some accurate conclusions from his observations. He concluded correctly, that the right side of the body is controlled by the left side of the brain, and the left side of the body by the brain’s right side. He presented clear descriptions of melancholia, mania, postpartum depression, phobias, paranoia, and hysteria.

Hippocrates believed that the body must be treated as a whole and not just a series of parts. He accurately described disease symptoms and was the first physician to accurately describe the symptoms of pneumonia, as well as epilepsy in children. He believed in the natural healing process of rest, a good diet, fresh air and cleanliness. He noted that there were individual differences in the severity of disease symptoms and that some individuals were better able to cope with their disease and illness than others. He was also the first physician that held the belief that thoughts, ideas and feelings come from the brain and not the heart as others of his time believed. Hippocrates traveled throughout Greece practicing his medicine.

Hippocrates founded medical school on the island of Cost, Greece and began teaching his ideas. In the 5th century BC Hippocrates developed an Oath of Medical Ethics for physicians to follow. Since that time it is called Hippocratic Oath. “I shall enter any house for the good of the

patient, I shall not do my patient any harm" – these are the words from the Hippocrates Oath. This Oath is taken by physicians today as they begin their medical practice. The oath has been numerous times modified. When the Oath was rewritten in 1964, that version has been widely accepted and is still in use today by many medical schools.

Hippocrates died in 377 BC. Today Hippocrates is known as the "Father of Medicine". He might also be regarded as an ancient "father of psychology". He described natural causes of psychological conditions, recommended holistic treatments, presented the first clear descriptions of many behavioral problems, and formulated long-lasting theories of temperament and motivation.

Task 5. Answer the questions:

1. Who was Hippocrates?
2. When and where was Hippocrates born?
3. Why is he regarded as the founder of medicine?
4. What did Hippocrates base his medical practice on?
5. Symptoms of what diseases were described by Hippocrates?
6. What was his contribution to psychology?
7. What is Hippocrates famous for?
8. What is said in Hippocrates Oath?

Task 6. Make adjectives for the nouns with the help of suffix –al:

Noun	Adjective	Noun	Adjective
nature		**practice**	
individuum		**theory**	
ratio		**spirit**	
behavior		**basis**	
psychology		**mention**	

Task 7. Fill in the gaps with the following passive forms:

will be made, is taken (x2), were achieved, are taught, was examined, were cured, were established

1. New experimental findings **…** by this scientist.
2. Blood for transfusion **…** from a healthy person.
3. New analyses **…** tomorrow.
4. Impressive record in the battle against some virulent diseases **…** by WHO.
5. The temperature **…** by the nurses regularly.
6. The 1st year-students **…** basic theoretical subjects.
7. Both children **…** by the doctor from a dangerous disease.
8. The patient **…** by different specialists several times.

Task 8. Insert the prepositions where it is necessary:

1. Hippocrates was a Greek physician born in 460 BC ... the island ... Cost, Greece.
2. He is known ... an ancient "father of psychology".
3. He based his medical practice ... observations and the study ... the human body.
4. He believed ... the natural healing process ... rest, a good diet, fresh air and cleanliness.
5. He noted that some individuals were better able to cope ... their disease and illness than others.

6. He founded a medical school ... the island of Cost, Greece.
7. This Oath is taken ... physicians today as they begin their medical practice.
8. He described natural causes ... psychological conditions.

Task 9. Choose the one correct title that fits the description:

1. Any feeling of illness or physical or mental change that is caused by a particular disease.
a. It is tension, b. It is sickness, c. It is a symptom.
2. An abnormal condition affecting a living organism
a. It is relief, b. It is a thought, c. It is a disease.
3. It causes feelings of sadness and/or a loss of interest in activities you once enjoyed
a.It is depression, b. It is obstruction c. It is paranoia.
4. It is a mental and behavioral disorder, its symptoms include elevated mood, flight of ideas and pressure of speech, increased energy, hyperactivity.
a. It is a phobia, b.It is a superstition, c. It is mania.
5. It is a belief or practice typically resulting from ignorance, a misunderstanding of science or causality, a belief in fate or magic, or fear of that which is unknown.
a. It is an idea, b. It is possession, c. It is a superstition.
6. Physical or other injury or damage.
a. It is harm b. It is a healing process, c. It is a condition.
7. It is either a statement of fact or a promise with wording relating to something considered sacred as a sign of verity.
a. It is a speech, b. It is a performance, c. It is an Oath.
8. It means the beginner or originator of something.
a. It is a physician, b. It is a scientist, c. It is a founder.

Task 10. Put questions to underlined words:

1. Hippocrates was born in <u>460 BC</u> on the island of Cost, Greece.
2. He became known as <u>the founder of medicine.</u>
3. <u>Observations</u> were the basis of his medical practice.
4. He held the belief <u>that illness had a physical and a rational explanation</u>.
5. Hippocrates was able to draw <u>some accurate conclusions from his observations</u>.
6. The right side of the body is controlled by <u>the left side of the brain</u>.
7. He presented clear descriptions of <u>melancholia, mania, postpartum depression, phobias, paranoia, and hysteria</u>.
8. Hippocrates is regarded as <u>an ancient “father of psychology”.</u>

Task 11. Match two parts of the sentences below to make an explanation of what Hippocrates Oath is:

1**.** Hippocrates developed an Oath of Medical Ethics	a) by physicians today as they begin their medical practice
2. According to this Oath	b) for physicians to follow
3. This Oath is taken	c) modified numerous times
4. The oath has been	d) doctors should enter any house for the good of the patient without doing their patients any harm

HISTORY OF MEDICINE IN UKRAINE

Task 1. Key words.

nouns	verbs	adjectives/adverbs
aid	attach	connective
detachment	concern	folk
doctrine	create	inadequate
graduate	succeed	valuable
tissue		
troop		
science		

Task 2. Give the Infinitive of the following verbs.

did, got, became, meant, knew, told, was, had, went, made, took, were, came, began, gave, found, told, taught, stood, spoke, led.

Task 3. Form new words.

the nouns by adding the suffix **-er**: to examine, to lead, to teach, to organize, to help, to write;
the verbs by adding the prefix **re-**: to join, to operate, to group, to make, to build, to form, to move.

Task 4. Read the text.

History of medicine in Ukraine

The history of medicine in Ukraine begins with the history of folk medicine. The first medical hospitals in Kyiv Rus were founded in the 11th century and were mostly in the form of alms houses attached to churches.

In the 14th and 15th centuries new hospitals were built and many physicians gave the first aid to the inhabitants of Ukraine and the soldiers of Bohdan Khmelnytsky's troops.

As the number of physicians was inadequate some medical schools which trained specialists were opened. The first higher educational establishment was Kyiv-Mohyliansk Academy which was founded in 1632. It played a prominent role in the development of the Ukrainian medicine. Many graduates of the Academy continued to enrich their knowledge abroad and received their doctors' degrees there. Many former students of this Academy have become the well-known scientists. They are the epidemiologist D. S. Samoilovych, the obstetrician N, M. Ambodyk-Maximovych, the pediatrician S. F. Chotovytsky, the anatomist 0. M. Shumlyansky and many others.

At the end of the I8th and during the 19th centuries the medical departments were formed at the Universities of Kharkiv, Kyiv, Lviv and Odesa. Since then the total number of physicians has increased in Ukraine.

During the Crimean War (1854-1856), on own Pirogov's initiative the first detachment of nurses was trained and sent to Sevastopol to help its defenders. It gave the beginning of the organization "Red Cross".

In 1886 the first bacteriological station was organized in Odesa. It was of great importance in the development of microbiology and epidemiology. The great scientists I. I. Mechnikov and M. F. Gamaliya worked at this station and succeeded much in their investigations. I.I.Mechnikov (1845 – 1916) is a world famous biologist, bacteriologist, immunologist and pathologist. He is one of the founders of evolutionary embriology and microbiology.He created the phagocyte theory of

immunity for which he got Nobel prize in 1908.Despite of favorable conditions for the successful development of natural sciences in Russia many outstanding scientists worked in Ukraine. It is known that the brilliant scientist M. I. Pirogov and his followers, such as V. O. Karavayev, O. F. Shimanovsky, M. V. Sklifosovsky and others made valuable contribution to the Ukrainian medicine.

The first president of Medical Academy in Ukraine was Daniil Kyrylovych Zabolotny (1866-1929), a prominent Ukrainian epidemiologist and microbiologist. He was the first in the world to create the department of epidemiology and was the first rector of Odesa Medical Academy (1920). Scientific interests of Zabolotny concerned different problems of epidemiology. His follower academician O.Bogomolets (1881 – 1946) was the founder of the Institute of Experimental Biology and Physiology of Ukrainian Academy of Sciences. He created a doctrine about physiological system of connective tissue and paid great attention to gerontology.The famous scientists V. P. Obraztsov and M. D. Strazhesko were founders of Kyiv therapeutic school. They made a huge progress in the field of cardiology. A great deal was done in the treatment of many eye diseases by the prominent scientist, ophthalmologist academician V. P. Filatov (1875 – 1956) who founded the Institute of Eye diseases in Odesa.

Many other outstanding scientists whose names are well known in the world worked in Ukraine.

Task 5. Answer the questions.

1.What does the history of medicine in Ukraine begin with?
2.When were the first medical hospitals founded in Kyiv?
3.What form were the first Kyiv hospitals in?
4.When were new hospitals built?
5.Whom did many physicians give the first aid to?
6.When was Kyiv-Mogylyansk Academy founded?
7.Where did many physicians receive their doctors' degrees?
8.What former students of the Academy have become the well-known scientists?
9.What Universities were the medical departments founded at?
10.What medicine was widely used at that time?
11.When was the first detachment of nurses traine
12.When and where was the first bacteriological station organized?
13.Who was the first president of Medical Academy in Ukraine and the first rector of Odesa Medical Academy?
14.What did academician O.Bogomolets found?
15.What names of Ukrainian outstanding doctors do you know? What are they famous for?

Task 6. Say is it true or false.

The history of medicine in Ukraine begins in 1991._____
The first medical hospitals were founded in the 13th century in Kyiv Rus._____
In the 14th century new hospitals were built to give the first aid to Bogdan Khmelnytsky's troops._____
The first higher educational establishment was Kyiv national Academy._____
Kyiv-Mogylyansk Academy was founded in 1832._____
I.I.Mechnikov was the founder of the first bacteriological station in Odessa._____
D.K.Zabolotny was the first rector of Odesa Medical Academy._____
Odesa Medical Academy was founded in 1820._____

Interests of academician O.Bogomolets concerned different problems of epidemiology._____

At first the Institute of Eye diseases was founded in Kyiv._____

Task 7. Read and pay attention to Passive Voice.

1. In the first term students are taught basic theoretical subjects.
2. The name of great surgeon Pirogov is known not only in our country.
3. The tissues, blood vessels and nerves were studied by many scientists.
4. The student was asked on the structure of the bones.
5. The changed condition of the patient was seen by the doctor.
6. The administrations were changed to restore the patient's health rapidly.
7. We will be delivered a lecture in Anatomy next Monday.
8. Sedatives are taken by the patient.
9. The great surgeons were often referred to in scientific papers.
10. Donors are given light breakfast before blood taking.

Task 8. Change from Active Voice into Passive.

1. The nurse sponges the patient's skin.
2. A poisonous remedy causes death.
3. This drug causes skin irritation.
4. The doctor administered laxatives.
5. The X-ray examination revealed lung trouble.
6. The doctor checked up my kidneys.
7. He handed the prescription for cough mixture.
8. The surgeon rinses his hands before the operation.
9. The students will study Pharmacology in two years.
10. Prof. Smirnov will deliver a lecture in Histology tomorrow.

Task 9. Open the brackets (active or passive is possible).

1. The patient (not to take) this medication now.
2. The diagnosis (to confirm) by the results of analyses.
3. After the drug, taken an hour ago, the patient (to feel) much better.
4. The drug (to store) in a place protected from light.
5. The human organism (to fight) against the microorganisms.
6. The professor (to deliver) an interesting lecture in Biology in 2 days.
7. A formal and serious promise to tell the truth or to do something (to call) the oath.
8. The Institute of Eye diseases (to found) in Odesa by Filatov.

Task 10. Do the test.

1. History of medicine in Ukraine begins with …

a) history of world medicine b) development of country medicine
c) development of higher education d) history of folk medicine
e) development of medical schools

2. The first medical hospitals in Kyiv Rus were founded …

a) in the middle of 18^{th} century b) in 11^{th} century c) in 20^{th} century
d) at the end of 19^{th} century e) in the 17^{th} century

3. The first higher educational establishment was …
a) Kyiv – Modylyansk Academy b) “Red cross” organization c) Kyiv therapeutic school
d) Institute of Eye diseases e) Ukrainian Academy of Science
4. The famous scientists V.P. Obraztsov and M.D. Strazhenko … founders of Kyiv therapeutic school.
a) was b) have been c) were being d) were e) to be
5. In 1886 the first bacteriological station … in Odessa.
a) has been organized b) was formed c) were developed d) to be organized e) was organized
6. N.I. Pirogov and his followers … valuable contribution to the Ukrainian medicine.
a) was made b) made c) make d) is making e) has been made
7. A doctrine about physiological system of connective tissue … by O. Bogomolets.
a) has been created b) creates c) create d) was created e) were created
8. V.P.Obraztsov and M.D.Strazhesko made a huge progress in the field of ... .
a) cardiology b) ophthalmology c) therapy d) urology e) obstetrics
9. In 1886 the first … was organized in Odessa.
a) “Red cross” organization b) bacteriological station
c) Academy of Sciences d) OSMU e) therapeutic school
10. During the Crimean War on own Pirogov’s initiate … was trained and sent to Sevastopol to help its defenders.
a) a group of soldiers b) medical troop c) regiment
d) the first detachment of nurses e) a volunteer

MYKOLA IVANOVICH PIROGOV

Task 1. Key words:

nouns	verbs	adjectives/adverbs
cholera	defend	field
ether	persuade	further
field surgery	reside	military
investigation	retire	prominent
personality		
plaster cast		
scientist		
surgeon		
thesis		

Task 2. Practice reading and guess the meaning of the following words:

Scientist ['saɪəntɪst]; defend [dɪ'fend]; personality [ˌpɜːs(ə)'nælətɪ]; surgeon ['sɜːʤ(ə)n]; persuade [pə'sweɪd]; cholera ['kɔl(ə)rə]; ether ['iːθə]; thesis ['θiːsis]; investigation [ɪnˌvestɪ'geɪʃ(ə)n].

Task 3. Form the nouns from the given verbs:

Example: *appoint-appointment.*

Appoint, serve, decide, observe, administer, amputate, withdraw, educate, suggest, treat, operate, consider, establish, infect, investigate.

Task 4. Read the following text.

M.I. Pirogov

Mykola Ivanovich Pirogov was a prominent Russian scientist, doctor, and pedagogue. He was born in Moscow in 1810. He is considered to be the most famous personality in the history of Russian medicine and the greatest of all Russian surgeons.

Pirogov was the 13-th child in the family. His father died in 1824, leaving his family without means. M. Pirogov intended to become a civil servant. However, the family doctor Efrem Mukhin, who was a professor of anatomy and physiology at Moscow University, persuaded the authorities to accept him as a student of the Medical Faculty of Moscow University in 1825, even though Pirogov was only fourteen.

Pirogov decided to specialize as a surgeon when he completed his studies in 1828. He was sent to Dorpat (now Tartu) to complete further studies. In 1832 he defended his doctor's thesis.

He travelled in Germany, visiting the Universities of Berlin and Göttingen to observe the state of surgery, and became a professor at the German University of Dorpat in 1836, aged only 26.

In 1840 Pirogov took up an appointment as professor of surgery at the academy of military medicine in Saint Petersburg.

Pirogov worked as an army surgeon in the Caucasian war in 1847, in the Crimean war in 1854, in the Franco-Prussian war in 1870, and in the Russian-Turkish war in 1877. From his work in the Crimea, he is considered to be the father of field surgery.

Pirogov also originated the intravenous administration of ether as an anesthetic. He was the first surgeon to use anesthesia in a field operation. From 1848 he conducted an important investigation of cholera, based on almost 800 sections.

Pirogov's work during the Crimean War is of such importance that he is considered to be the

founder of field surgery. Pirogov was the first to use the plaster cast in field conditions. He conceived the technique of plaster casting while observing the work of a sculptor.

At that time Pirogov also developed a new method for amputation of the foot, known as the "Pirogov's amputation".

He returned to Saint Petersburg after the end of the Crimean war in 1856, but withdrew from the academy. He wrote a paper on the problems of pedagogy, arguing for the education of the poor, non-Russians, and women. While living in Odessa, Pirogov resided at Deribasovskaya, 31 and first suggested the formation of Odessa State Medical University (as the medical faculty of Novorossiysk University).

In 1861 he retired to his estate in Vishnya in central Ukraine. He treated the local peasants, established a clinic, and learnt the Ukrainian language as a show of respect. Now the Pirogov Museum exists at his former estate.

Task 5. Answer the following questions:

1. Who was M. I. Pirogov?
2. When and where was he born?
3. At what age did he become a professor?
4. Why is Pirogov considered to be the father of field surgery?
5. What did Pirogov develop while observing the work of a sculptor?
6. What disease did Pirogov investigate?
7. What exists at the place of Pirogov's former estate?
8. What did Pirogov suggest to create in Odessa?

Task 6. Match the terms with their explanations:

1.	Surgery	a)	a liquid used as an anesthetic
2.	Aorta	b)	the removal of any part of the body
3.	Anesthesia	c)	the branch of medicine that treats injuries or diseases by operation
4.	Amputation	d)	an acute infectious disease affecting the small intestine
5.	Cholera	e)	the main artery of the body
6.	Ether	f)	the technique of reducing an individual's sensation of pain
7.	Plaster casting	g)	a colourless, volatile, sweet-smelling liquid used as a solvent and formerly as a general anaesthetic
8.	Chloroform	h)	a rigid cast to hold a fractured bone in place and prevent movement

Task 7. Fill in the gaps with the following words or word combinations:

Plaster casts, chloroform, anaesthetic, army surgeon, ether, ether anaesthesia, anaesthetic masks, field surgery, surgeon.

1.Considered to be the founder of …, Pirogov was the first surgeon to use anaesthesia in a field operation.

2. Pirogov developed his own technique of using … to treat fractured bones.

3. He was one of the first surgeons in Europe to use … as an … .

4. Pirogov worked as an … in the Crimean War.

5. Nikolay Pirogov investigated the clinical course of … on himself and his assistants before using it on his patients.

6. After his return from the Caucasian War, Pirogov administered his first anaesthesia with … .

7. In the hospitals he visited, he left … and devices for rectal anaesthesia to enable the continued application of anaesthesia during surgery.
8. Pirogov decided to specialize as a … when he completed his studies in 1828.

Task 8. Choose the correct answer.

1. At the age of … Pirogov entered the faculty of medicine im Moscaw State University.
a) 20 b) 16 c) 14 d) 18 e) 17
2. His dissertation was dedicated to…
a) dissections b) new medical equipment c) abdominal aorta bandaging
d) performing surgery on wounded soldiers e) human anatomy
3. Pirogov originated …
a) intravenous administration of ether b) new ways of bandaging
c) subcutaneous injections d) treatment of plague e) cholera agent
4. Amputation is the … of any part of the body.
a) treatment b) removal c) excreting d) extracting e) replacement
5. Cholera is an acute infectious disease affecting …
a) limbs b) intestines c) stomach d) liver e) esophagus
6. Pirogov was the founder of …
a) physiology b) neurology c) field surgery d) oncology e) traumatology
7. Pirogov's amputation is a new method of amputation of the …
a) leg b) foot c) arm d) hand e) finger
8. Observing the work of a sculptor, Pirogov conceived the technique of …
a) performing operations b) plaster casting c) helping injured people
d) bandaging e) amputation
9. At the place of Pirogov's former estate there is a …
a) new clinic b) surgical department c) museum d) dissecting room
e) university
10. Pirogov is considered to be a prominent…
a) neurologist b) bacteriologist c) surgeon d) anatomist e) sculptor

Task 9. Agree or contradict the following statements:

1. Pirogov developed a new method for amputation of the hand, known as the "Pirogov's amputation".
2. Pirogov originated the intramuscular administration of ether as an anesthetic.
3. He became a professor at the German University of Dorpat in 1836, aged only 26.
4. Anaesthesia is a state in which someone feels pain, usually of drugs they have been given.
5. Pirogov wrote a paper on the problems of pedagogy, arguing for the education of the poor, non-Russians, and women.
6. Field surgery is the treatment of wounded combatants and non-combatants in or near an area of combat.
7. From 1848 he conducted an important investigation of tuberculosis, based on almost 800 sections.
8. In 1832 he defended his professor's thesis.

Task 10. Find the corresponding nouns from the box to the following verbs to form collocations.

an appointment as professor of surgery, a clinic, the intravenous administration, the state of

surgery, an important investigation, the technique of plaster casting, further studies, a civil servant.

to complete -
to take up –
to conduct -
to observe –
to originate -
to conceive –
to establish -
to become -

Task 11. Put up questions to the underlined words:

1. Efrem Mukhin persuaded the authorities to accept Pirogov as a student at the age of 14.
2. His father died in 1824.
3. Pirogov worked as an army surgeon in the Crimean War.
4. From 1836 to 1840 Pirogov worked at the German University of Dorpat.
5. His experience in field surgery became well-known abroad.
6. Pirogov performed 12,000 dissections.
7. He treated the local peasants.
8. Pirogov originated the intravenous administration of ether.

Task 12. Use verbs in brackets in proper tense forms:

1. M.I.Pirogov (to be) a corresponding member of the Russian Academy of sciences.
2. Pirogov (to be) a heavy smoker and (to die) of cancer.
3. To prevent infections Pirogov (to use) substances which (to be) still in use today.
4. Pirogov (to treat) Giuseppe Garibaldi for a trauma of his foot.
5. In 1840 the minister Kleinminchel (to invite) Pirogov to work in St. Petersburg.
6. Later Pirogov (to test) and (to begin) using another anesthetic – chloroform.
7. The Pirogov Museum (to exist) in Vinnitsa now.
8. Pirogov (to die) on 5 December 1881 in the village of Vishnya.

Task 13. Put the verbs in brackets into the Past Simple Active or Passive:

1. Pirogov's lectures (to attend) not only by medical students, but also by other people.
2. Newspapers (to dedicate) him articles, comparing the surgeon's lectures with Italian singer.
3. The surgeon (to accept) all appointments in hospitals, consulting local medics.
4. Pirogov's project of first Anatomy Institute in the world (to approve) by the tsar.
5. He (to invent) equipment for performing fast and accurate surgical operations.
6. As soon as Nikolay Pirogov (to send) to Caucasus, he (to start) performing surgery on wounded soldiers.
7. His activities (to provoke) a conflict with authorities, and Pirogov (to force) to leave his position.
8. Preparing dead bodies, Mykola Ivanovych (to observe) cholera germ under the microscope, but he (not to attach) any importance to this.

Task 14. Insert prepositions:

1. … the age …14 Pirogov entered the faculty of medicine in Moscow State University.
2. The boy got a position … prosector … local anatomy theatre.

3. The job gave him experience … anatomy and promoted his desire to become a surgeon.
4. Pirogov graduated … the university among best students.
5. The young man spent 5 years … local surgery clinic and brilliantly defended his PhD, becoming Doctor of Medicine.
6. His dissertation was dedicated … abdominal aorta bandaging.
7. The surgeon went … France, and … 1841 was invited to head surgery department … St. Petersburg Academy … Surgery and Medicine.
8. … his clinic the medic founded another branch … medical science – hospital surgery.

THE WORLD HEALTH ORGANIZATION

Task 1. Key words:

Noun	Verb	Adjective
adolescence	be concerned with	communicable
abuse	cure	current
headquarters	eliminate	virulent
morbidity	eradicate	
mortality	shift	
neonate	sign	
smallpox	warn	
outbreak		

Task 2. Practice reading and guess the meaning of the following words:
WHO [ˊdʌblˊeitʃˊəu], Geneva [dʒi'ni:və], Switzerland[ˊswitsələnd], HIV [ˊeitʃˊaiˊvi:], AIDS [eidz], cure [kjuə], sign [sain], smallpox[ˊsmɔ:lpɔks], neonate [niəˊneit], current [ˊkʌrənt].

Task 3. a) Form nouns with the meaning "quality, state, or degree» using the suffix –(i)ty.
Model: *rapid → rapidity*
Severe, immune, morbid, possible, real, formal, safe, mortal, reactive
b) Form adjectives with the meaning "tendency, disposition, function, connection» using the suffix -- ive. ***Model:*** *regulate → regulative*
Compare, illustrate, construct, connect, inform, attract, prevent, demonstrate, communicate, create, collect, express, progress, reproduct, impress

Task 4. Read the following text:

The World Health Organization

The World Health Organization (WHO) is a specialized agency of the United Nations (UN) that is concerned with international public health. It was established on 7 April 1948, with its headquarters in Geneva, Switzerland.

The constitution of the World Health Organization had been signed by all 61 countries of the United Nations by 22 July 1946. As of 2013, WHO has 194 member states.

WHO has achieved an impressive record in pursuing its main aim, especially in the battle against some of the world's most virulent diseases. Its most remarkable success has been the campaign against smallpox and malaria, the former now completely eradicated from the earth.

One of the main services carried out by WHO is the service of epidemic warnings. WHO gathers information and broadcasts it daily by radio to health authorities, ports, airports and ships at sea. WHO also informs national health services about outbreaks of viral diseases such as influenza and poliomyelitis.

Besides epidemic information WHO also provides services which are needed by all the countries, such as an international quarantine measures, world health statistics, international standardization of medicines and vaccines, development of medical research and technical publication program.

Its current priorities include communicable diseases, in particular, HIV/AIDS, malaria and

tuberculosis; the elimination of the effects of non-communicable diseases; sexual and reproductive health, development, and aging; nutrition, food security and healthy eating; occupational health; substance abuse.

WHO also works to "reduce morbidity and mortality and improve health during key stages of life, including pregnancy, childbirth, the neonatal period, childhood and adolescence.

In recent years, the emphasis has shifted to the long-term tasks of building up permanent health services and improving environmental conditions to eliminate the causes of diseases, build up resistance. In other words, the stress is more on prevention than on cure.

WHO Member States appoint delegations to the World Health Assembly, WHO's supreme decision-making body. The World Health Assembly is the legislative and supreme body of WHO. Based in Geneva, it typically meets yearly in May.

Task 5. Answer the questions to the text:

1. When was WHO founded?
2. How many member-states are there in WHO?
3. What are the most active forms of WHO activities?
4. How are national health services informed about outbreaks of viral diseases?
5. Where is a headquarters of WHO stationed.
6. What are the current priorities of WHO?
7. What is the World Health Assembly?
8. What disease has been completely eradicated from the earth?

Task 6. Match the words with their synonyms in the text:

Word	Synonym
Illness	
struggle	
purpose	
virulent	
state	
collect	
death rate	
eliminate	

Task 7. Find 7 words being the noun and verb at the same time (formed by conversion).

Example: work – to work

Task 8. The words in this list are all verbs. Form the corresponding nouns:

1.prevent	2. eradicate	3. decide
4. establish	5. occupy	6. achieve
7. develop	8. treat	9. improve
10. resist	11. inform	12. warn

Task 9. Match the terms with their explanation:

1. nutrition	a. a disorder with a specific cause and recognizable signs and symptoms
2. vaccine	b. the state of being diseased

3. morbidity	c. the incidence of death in the population in a given period
4. poliomyelitis	d. the intake of nutrients and their absorption and assimilation by the tissues
5. disease	e. a special preparation of antigenic material that can be used to stimulate the development of antibodies
6. mortality	f. an infectious virus disease affecting the central nervous system
7. malaria	g. a highly contagious viral infection of the respiratory passages causing fever, severe aching, and catarrh.
8. influenza	h.an infectious disease caused by protozoan parasites from the Plasmodium family.

Task 10. Agree or disagree with the statements given below. The following phrases may be helpful.

Indeed, sure, certainly, I can't agree, nothing of the kind, far from it, that goes without saying

1. WHO is a specialized agency concerned with international public health.
2. The Supreme body of WHO is in Paris, France.
3. Malaria is a noncommunicable disease.
4. WHO is not interested in nutrition, food security and healthy eating.
5. Smallpox is widely spread on the Earth.
6. The priorities of WHO are communicable diseases, such as HIV/AIDS, tuberculosis and others.
7. Besides epidemic information WHO provides other services, i.e. quarantine measures, standardization of medicines, statistics, etc.
8. The emphasis of WHO work is more on prevention than on cure.

Task 11. Open the brackets using correct tense and voice.

1. The nurse (to come) to give injections three times a day this month.
2. Vitamins (to assist) the biochemical process of the body.
3. Standardization of medicines and vaccines as well as development of medical research (to provide) by WHO since its foundation.
4. Odessa (to warn) about epidemic of cholera in 1973.
5. Tomorrow we (to attend) the lecture in Biology.
6. The World Health organization (to establish) in 1948.
7. WHO (to inform) national health services about outbreaks of viral diseases.
8. The students (to show) the wards for patients with burns.

Task 12. Express the following sentences in the Passive voice:

Model: *The doctor has examined all the extremities.*
All the extremities have been examined by the doctor.

1. The surgeons have operated on these patients.
2. These drugs have arrested bleeding.
3. The doctor has set a fractured bone.
4. The surgeon has prevented the fatal outcome of the disease.
5. The physician had discharged this convalescent.
6. The nurse had introduced the solution of antibiotics into the wound.
7. The patient has survived the operation for cholecystitis well.

8. The stomach ulcer has caused a profuse abdominal bleeding.

Task 13. Put questions to the underlined words:

1. There are 194 member-states in WHO now.
2. WHO provides information about international quarantine measures.
3. The World Health Organization is concerned with international public health.
4. was established in 1948.
5. WHO has achieved success in the campaign against small pox and malaria.
6. WHO works to improve health during key stages of life.
7. A disease can spread to a healthy person through direct contact with the patient.
8. Patients must be warned against the dangers of secondary infection.

Task 14. Fill in the missing prepositions. Some of prepositions may be used more than once.

with into of from by on about against during

1. The severity of the disease depends…. the particular viral strain.
2. Toxin released … the blood circulation may produce fever.
3. secondary infection can be treated … appropriate antibiotics.
4. Children are routinely immunized … poliomyelitis, whooping cough and other diseases.
5. WHO works to improve health…key stages of life, i.e. pregnancy, childbirth, childhood.
6. The Constitution of WHO was signed … 194 states.
7. There are six patients suffering … flu.
8. Malaria is transmitted … the bite of a mosquito.

Task 15. Choose the correct answer:

1. The World Health Organization was established in … .
   a) 1945 b) 1946 c) 1948 d) 1950 e) 1952
2. There are … member-states of WHO now.
   a) 61 b) 90 c) 100 d) 194 e) 200
3. The main aim of WHO is the battle against …
   a) environmental pollution b) world's most virulent diseases c) aging
   d) diseases' complications e) food poisoning
4. One of the main services carried out by WHO is … .
a) general standardization of the medicines b) medicinal research
c) medical publications d) health improvement during childhood e) service of epidemic warnings
5. The World Health Assembly, the supreme body of WHO is based in … .
   a) Paris b) Geneva c) Berlin d) Rome e) Vienne
6. The World Health Assembly of WHO typically meets in…
   a) January b) March c) May d) June e) September
7. The world's most virulent disease … is eradicated from the earth.
   a) flu b) measles c) scarlet fever d) smallpox e) mumps
8. What word is not related to the key stages of life?
   a) pregnancy b) childbirth c) childhood d) overeating e) adolescence
9. In recent years, the emphasis is more on… of the diseases than on cure.
   a) eradication b) causes c) prevention d) research e) information
10. WHO also informs national health services about….

a) storm b) outbreak of viral diseases c) weather changes
d) earthquakes e) floods

FIRST AID

Task 1. Key words.

Nouns	verbs	adjectives/adverbs
bandage	apply	available
bleeding	breathe	common
burn	elevate	critical
cardiac arrest	injure	external
childbirth	improve	internal
choking	maintain	immediate
circulation	reduce	life-saving
cramps	render	life-threatening
dislocation	vomit	trained
drowning		trouble
equipment		
first aid		
fracture		
life-saving technique		
poisoning		
pressure		
scratch		
sprain		
stroke		
swelling		
victim		

Task 2. Read the text.

First Aid

First aid is emergency care and treatment of an injured or ill person before professional medical and surgical treatment is available**.** It is usually performed by non-expert, but trained personnel to a sick or injured person. It generally consists of a series of simple and in some cases, potentially life-saving techniques that an individual can be trained to perform with minimal equipment.

Conditions Requiring First Aid

There are a lot of conditions which may require first aid, from a little scratch to severe shock. The list of the most common conditions where first aid is needed also includes bone fractures, burns, cardiac arrest, choking, cramps in muscles, drowning, bleeding, poisoning, stroke, childbirth, and others.

Here are some recommendations as to rendering first aid in several critical conditions. But remember, that to be effective and be able to really save lives, you should take first aid courses and have extensive practice.

Bleeding. Major bleeding may be a life-threatening condition requiring immediate attention. Bleeding may be external or internal. Bleeding may be from an artery, a vein or a capillary.

How to Control Bleeding

- Apply direct pressure on the wound. Use a dressing, if available. If a dressing is not available, use a rag, towel, piece of clothing or your hand alone.

• If bleeding continues, and you do not suspect a fracture, elevate the wound above the level of the heart and continue to apply direct pressure.

• If the bleeding still cannot be controlled, the next step is to apply pressure at a pressure point.

The final step to control bleeding is to apply a pressure bandage over the wound. After the bandage is in place, it is important to check the pulse to make sure circulation is not interrupted.

Shock. Shock is common with many injuries, regardless of their severity. The first hour after an injury is most important because it is during this period that symptoms of shock appear. If shock is not treated, it can progress to cause death! Any type of injury can cause shock. Shock is a condition when the heart is unable to supply enough blood to the vital organs of the body, namely the heart, lungs and brain.

Treatment for Shock

• Put a victim in a lying-down position to improve circulation.

• If the victim is not suspected of head or neck injuries, or leg fractures, elevate the legs.

• If you suspect head or neck injuries, keep the victim lying flat. If the victim vomits, turn on their side.

• If victim is having trouble breathing, place them in a semi-reclining position.

Maintain the victim's body temperature, but do not overheat.

Fractures, Sprains and Dislocations

Fractures, sprains and dislocations may be hard for the lay person to differentiate between. For this reason, first aid treatment of any of these conditions is rendered as though the injury was a fracture.

First aid for any of these conditions should be as follows:

• control bleeding, if present

• care for shock

• splint affected area to prevent further movement

• apply cold packs to reduce pain and swelling

Victims with traumatic injuries, such as those caused by automobile accidents, falls, etc. should not be moved except by trained rescue workers. Head, neck and back injuries are serious and require special care for movement and transport of victims with these conditions. In exceptional circumstances, such as when a victim is at risk of further injury unless moved, the victim's head and neck should be stabilized and the body moved with minimal flexing of the head, neck or spinal cord.

Task 3. Say whether the following statements are true or false. Correct the false statements.

1. Not all medical emergencies require medical attention.
2. First aid in emergency is rendered only by professional personnel.
3. Shock is common only for severe injuries.
4. A victim suffering from shock should be given lots of liquid.
5. If an artery bleeds, direct pressure should be applied below the place of bleeding.
6. You shouldn’t move limbs in case of bleeding.
7. First aid in case of fracture is applying splints to limbs.

Task 4. Answer the questions.

1. What is first aid?
2. Who renders help in medical emergencies?

3. What emergencies require first aid?
4. Why does major bleeding require immediate attention?
5. What types of bleeding do you know?
6. What are the methods to control bleeding?
7. What is shock?
8. What is the treatment for shock?
9. What is the treatment in case of fractures, sprains and dislocations?

Task 5. Fill in the correct word(s) from the list below, synonyms to which are given in the brackets.

prevent	*maintain*	*elevated*
reduces	*rendered*	*suspected*
save	*applied*	*vomit*

1. It was too late for the doctor to _____ (rescue) her life and she died that night.
2. They _____ (gave) assistance to the disaster victims.
3. The pressure _____ (used) to the wound will stop the bleeding.
4. The drug is _____ (supposed) of causing over 100 deaths.
5. It is important that the injured leg should be _____ (lifted).
6. The government managed to _____ (keep on the same level) prices.
7. Giving up smoking _____ (decreases) the risk of heart disease.
8. Nothing would _____ (stop) him from speaking out against injustice.
9. The smell made her _____ (feel sick).

Task 6. Mach the verb with the noun or word combination.

1. render, require	**a.** swelling
2. apply	**b.** future movement
3. suspect	**c.** affected area
4. elevate	**d.** temperature
5. interrupt	**e.** first aid
6. maintain	**f.** life
7. prevent	**g.** circulation
8. reduce	**h.** wound
9. save	**i.** pressure
10. splint	**j.** stroke
11. suffer from	**k.** fracture

Task 7. Match up the definition with the correct term.

1. A break in a bone _____
2. A shift in two bone ends out of their normal position _____
3. An injury to a ligament causing pain and swelling but not dislocation _____
4. An injury caused by the sun, heat, fire, acid _____
5. Inability to breathe because the airways are blocked _____
6. A sudden painful involuntary contraction of muscle or muscles _____
7. Death through immersion in water or other fluid and inability to breathe there _____
8. The state of having swallowed or absorbed toxic substance _____

9. The process of giving birth to a baby _____
10. A sudden serious illness when blood circulation in the brain is damaged _____
11. To eject food from the stomach through the mouth _____
12. The process of losing blood _____

Fracture, childbirth, stroke, poisoning, bleeding, drowning, cramp, choking, burn, vomit, dislocation, sprain

Task 8. Complete the sentences using the words from exercise 7.

1. Press firmly on the wound to stop _____.
2. Protect your skin, it will_____ easily in the sun.
3. You should not exercise so much or you will get _____ in your muscles.
4. Use artificial respiration to rescue the _____ man.
5. Old people should eat food rich in calcium, because their bones are more prone to _____.
6. Patients with second - and third-degree _____ were admitted to the emergency department.
7. Be careful! There are a lot of snakes in this region. Their bites may cause _____!
8. _____ is one of the symptoms of food poisoning.

Task 9. Find the odd word out.

1. lung, brain, blood, heart, tongue, eye
2. aid, help, support, assessment, assistance
3. bandage, dressing, gauze, syringe, cotton wool
4. accident, cardiac arrest, shock, poisoning, stroke
5. injury, fever, hurt, harm, damage

Task 10. Give the definitions to the following words

1. stroke	**a.** a serious situation that happens unexpectedly and demands immediate action.
2. breathing	**b.** the breaking of a bone or cartilage
3. fracture	**c.** the state of being poisoned.
4. poisoning	**d.** any acute clinical event, related to impairment of cerebral circulation, that lasts more than 24 hours
5. emergency	**e.** inhalation and exhalation of air or gaseous mixtures.

Task 11. Match the beginning and ending of the sentences?

1. Check that	**a.** warm
2. Shall I bandage	**b.** some painkillers.
3. Take	**c.** move the patient's head and neck, it's dangerous.
4. Don't	**d.** apply more pressure on the vessel.
5. You should	**e.** the patient's pulse again.
6. Give	**f.** the wound now?
7. Keep the patient	**g.** the patient is breathing.

Task 12. Work in pairs. Think of three emergencies a member of the public might have to deal with. For each one, write three instructions to help them. Tell your instructions to other students. They should guess the emergency.

e.g. (a patient is unconscious)

Don't move the person.
Make sure he is still breathing.
Keep the person warm until medical help arrives

Task 13. Use the verb in brackets in the proper form. You may use any form of Simple Active, Simple Passive, Continuous Active or Imperative.

1. When the little girl _____ (to eat) a biscuit, she _____ (to start) choking.
2. You _____ (to have) a test at 10 a.m. tomorrow. _____ (not to eat) for 4-6 hours before the test.
3. First aid _____ (to need) in a number of conditions, such as burns, choking, drowning, *etc.*
4. When the nurse _____ (to give) an injection, the patient suddenly _____ (to faint).
5. Always _____ (to remember) what you _____ (to teach), _____ (to be) responsible, _____ (to respect) your colleagues and patients, and you _____ (to make) a wonderful doctor.

Dr Omar Noori

My name _____ (to be) Omar Noori and I _____ (to work) as a phlebotomist in central England. I _____ (to come) from Afghanistan. I _____ (to educate) there so I have to go through re-qualification known as the Professional and Linguistic Assessment Board (PLAB). It _____ (to administer) by the General Medical Council (GMC) of the United Kingdom. I _____ (not to work) as a doctor now. But I _____ (to hope) that I _____ (to pass) the PLAB next year and _____ (to allow) to take this career. Now I _____ (to work) as a phlebotomist. Last year I _____ (to follow) a course including safety guidelines, infection control, documentation and other issues. I _____ (to practise) a lot on outpatients and on the wards. I _____ (to assess) by the Commission. On the job itself, I _____ (to communicate) a lot, and it _____ (to improve) my speaking skills. There _____ (to be) no time to think in Dari or Pushto, my main languages. If you _____ (not to react) quickly and politely, the job _____ (to be) really hard. It _____ (to be) good training for my work as a doctor in future.

HUMAN BODY

Exercise 1. Topic vocabulary:

Nouns	verbs	adjectives/adverbs
Buttocks chest conjunctiva cornea eyebrow eyelash esophagues forehead gallbladder heart injury intestine iris kidney limb lens palate skull stomach thumb tongue trunk pupil wrist	breathe comprise connect consist cover grow protect support	internal principal

Exercise 2. Read the following word combinations. Make your own sentences.

Injury: occupational injury, sports injury, intentional injury, soft tissue injury, brain injury, the cause of injury. He escaped from the accident without injury.

To breathe: to breathe in, to breathe out, to breathe easily/freely, to breathe one's last, a natural fabric that breathes. Give me a moment to breathe. Don't breathe a word of this.

Surface: outer surface, interior surface, facial surface, buccal surface, masticatory surface, lingual surface, superficial.

Extremity: upper extremity, lower extremity, complex extremity trauma. it is important to keep the extremities warm. Extremity angiography is a test used to see the arteries in the hands, arms, feet or legs.

Exercise 3. Read the text:

Human body

The human body refers to the entire structure of a human being.

The principal parts of the human body are the head, the trunk, and limbs (extremities).

The head consists of 2 parts: the skull contains the brain and the face includes the forehead, the eyes, nose, the mouth, the cheeks, the ears and the chin.

Each eye has the eyelids and the eyelashes that grow along the edge of the eyelids. There are the eyebrows over our eyes. The eyes serve as the organ of sight. The outer layer of the eye consists of 8 eye parts: lens, pupil, iris, cornea, conjunctiva and sclera.

The nose is the organ of smell through which we breathe.

The ear includes 3 principal parts: the external ear, the middle ear and the internal ear. The ear is responsible for hearing and balance.

The mouth has 2 lips: the upper and the lower lip. The tongue which is the organ of taste, teeth and hard and soft palates are located in the mouth.

The head is connected with the trunk by the neck.

The upper part of the trunk is the chest. The principal organs in the chest are the lungs, the heart and the esophagus (gullet).

The lower part of the trunk called abdomen consists of the stomach, the liver, the spleen, the intestines, the kidneys, the gallbladder and the bladder.

The surface of the body from the neck to the buttocks is called the back.

The waist is the narrow middle part of the body above the hips.

When we speak of the upper extremity, we mean the arm. The upper extremity connected with the chest by the shoulder consists of the upper arm, the forearm, the elbow, the wrist and the hand. We have 5 fingers on each hand which allow grasp the objects. A short finger set apart from the other is called the thumb. Fingers contain some of the densest areas of nerve endings on the body, are the richest source of tactile feedback, thus the sense of touch is intimately associated with hands.

The lower extremity called the leg consists of the thigh, the knee, the calf, the ankle and the foot. The foot is composed of the toes, the heel, the sole and the arch. The nail is a hard part at the end of a toe and finger.

The framework of bones called the skeleton supports the soft parts and protects the organs from injury. The bones are covered with muscles.

The body is covered with the skin.

Exercise 4. Answer the questions:

1. What are the principal parts of the human body?
2. What does the face include?

3. What is the organ of taste?
4. Where do eyelashes grow?
5. What does the eye consist of?
6. What do we breathe through?
7. What organ is responsible for hearing and balance?
8. What are the principal organs in the chest?
9. What organs does the abdomen consist of?
10. What does the upper/lower extremity consist of?
11. Why are fingers important?
12. What part of the body is responsible for sense of touch?
13. What supports the soft parts and protects the organs from injury?

Exercise 5. Fill in the gaps with the proper words:

1. The bones are covered with… .
2. When we speak of the upper extremity we mean … .
3. The … is the narrow middle part of the body above the hips.
4. The upper part of the trunk is the … .
5. The head is connected with the … by the neck.
6. The … is the organ of taste.
7. The mouth has 2 … : the upper … and the lower … .
8. The nose is the organ of … through which we breathe.

Exercise 6. Complete the sentences:

1. There are five fingers on my … .

2. There are five toes on my … .

3. I can smell with my … .

4. I can hear with my … .

5. I can taste with my … .

6. Put your hand in front of your … when you yawn.

7. I hope I will pass my exam, I cross my … .

8. When you agree with someone you generally nod your … .

Exercise 7. Match the following parts of the body to their definitions:

Kidney	a) a long pipe leading from the stomach which takes waste matter from the body;
Lung	b) a sac-like organ in which food is broken down;
Liver	c) an organ in the head which controls thought and feeling;
Heart	d) one of the paired organs which separate waste liquid from the blood;
Brain	e) a large organ which cleans the blood;
Stomach	f) a passage from the back of the mouth down inside the neck;
Intestine	g) one of a pair of breathing organs in the chest;
Throat	h) an organ in the chest controlling the flow of blood by pushing it round the body.

Exercise 8. What parts of the body are described?

1. The movable part of the body at the end of the leg on which a person stands.
2. The upper front part of the body between the neck and the abdomen, enclosing the heart and lungs.
3. The part of the face above the mouth which is the organ of smell and through which air is breathed.
4. The opening on the face through which a person can take food into the body and speak.
5. The front part of the head from the chin to the forehead and hair.
6. The lower part of the arm between the hand and the elbow.
7. The upper part of the face above the eyes and below the hair.
8. The front part of the face below the mouth.
9. The front part of the body below the chest.
10. The part of the leg just above the foot.

Exercise 9. Divide the words into two columns – nouns and adjectives.

Example: heart (n) – cardiac (adj), neck (n) – cervical (adj).

Facial, spinal, pelvis, lung, basic, neck, anatomical, buccal, palate, extremity, skull, nasal, surface, cranial, cheek, cervical, renal, tongue, pulmonary, liver, trunk, lingual, mouth, cardiac, oral, kidney, palatine, hepatic, tongue, pelvic.

Exercise 10. Read and pay attention to prepositions:

In the chest, in the patient, in the child; at the table, at the academy, at the hospital; on the shoulder, on the wrist; behind the stomach; between the lungs, between the upper arm and the forearm; in front of the hospital, in front of the kidney; near the heart; to the right of the stomach, under the diaphragm, above the diaphragm, above the elbow; below the liver; to the hospital, to the heart; from the heart; into the room, into the muscle; through the heart; out of the lungs.

Exercise 11. Fill the blanks with prepositions:

1. There are eyebrows … our eyes.
2. The nose is the organ … smell … which we breathe.
3. The head is connected … the trunk … the neck.
4. The teeth are located … the mouth.
5. We have 5 fingers … each hand.
6. The skeleton protects the organs … injury.
7. The body is covered … the skin.
8. A short finger set apart … the other is called the thumb.

Exercise 12. Put the questions to the underlined parts of the sentences:

1. Some strange spots have covered both his palms and feet.
2. His tongue was dry and white.
3. The upper extremity is connected with the chest by the shoulder.
4. Eyelashes protect the eye from entering of foreign bodies.
5. All human beings have five fingers on each hand.
6. Each toe consists of three phalanx bones.
7. The skin covered by your nail is called a nail bed**.**
8. During the last winter, doctors have noted a great number of broken ankles.

Exercise 13. Arrange the sentences in the correct order to get some additional information about a human body:

1. Out of these 78 organs of a male or female body, skin is the largest organ.
2. Other major organs of the body have their names, location and functions.
3. The major organ in the body of human beings is the brain.
4. There are almost 78 organs in a human body which have various sizes, functions or actions.
5. The cells in the body organs are highly specialized.
6. An organ is a collection of millions of cells which group together to perform single functions in our body.

Exercise 14. Name the organs and parts of the body localized in:

Thoracic cavity
Abdominal cavity
Upper extremity
Lower extremity

Exercise 15. Speak about a human body according to such points:

- basic parts of the human body;
- vital organs of the human body
- sensory organs

SYSTEMS OF THE HUMAN BODY

Task 1. Key words.

nouns	verbs	adjectives/adverbs
ability	communicate	accessory
activity	consists of	integumentary
chyme	contribute	
indigestion	maintain	
elimination	nourish	
equilibrium	permit	
excess	process	
gamete		
gonad		
fertilization		
indigestion		
ingestion		
means		
pylorus		
testis		
well-being		

Task 2. Read the following paying attention to the rules of reading.

c - [s] before e, i, y – place, cell, acid, circulatory, process, accessory, excess, maintenance
c - [k] except before e, i, y - ducts, carbon, testicle, contribute, endocrine, pancreas, excrete

g – [ʤ] before e, i, y – age, agent, oxygen, digestion, ingestion, digestive, cartilage, charged
g - [g] except before e, i, y - group, gland, gauze, organism, aggregation, ligament, gamete

Task 3. Read the text.

Systems of the Body

System of the body is a group of organs that work together to perform a certain task. The human body consists of many interacting systems. Each system contributes to the maintenance of homeostasis (a physiological process by which the internal systems of the body such as blood pressure, body temperature and acid-base balance are maintained at equilibrium) of itself, other systems, and the entire body. A system consists of two or more organs, which are functional collections (aggregation) of tissue. Systems do not work in isolation, and the well-being of the person depends upon the well-being of all the interacting body systems.

The major systems of the human body are as follows: the musculoskeletal, the nervous, the circulatory, the digestive, the respiratory, the urinary, the endocrine, the reproductive and other systems.

The musculoskeletal system consists of the human skeleton (which includes bones, ligaments, tendons and attached muscles. It gives the body basic structure and the ability for movement.

The nervous system consists of the brain and spinal cord, nerves, ganglia and receptors. It is a complex information system with all the necessary means for receiving, processing, and communicating information.

The circulatory system, also called the cardiovascular system, is an organ system that permits blood to circulate and transport nutrients (such as amino acids and electrolytes), oxygen, carbon dioxide, hormones, and blood cells to and from cells in the body to nourish it and help to fight diseases, stabilizing body temperature and pH level, and maintaining homeostasis.

The human digestive system consists of a long muscular tube and several accessory organs such as the salivary glands, pancreas and gall bladder. It is responsible for food ingestion and digestion, absorption of digestion products and the elimination of undigested materials.

The respiratory system consists of the lungs, the air passages leading to them and associated structures. It brings oxygen from the air to the lungs and excretes carbon dioxide and water back into the air.

The urinary system consists of the kidneys, two ureters, bladder, and urethra. It removes water from the blood to produce urine, which carries a variety of waste molecules and excess ions and water out of the body.

The endocrine system consists of a number of glands throughout the body which produce regulatory substances called hormones. The endocrine system serves to regulate a large number of activities.

The lymphatic system is a network of organs, lymph nodes, lymph ducts, and lymph vessels that make and move lymph from tissues to the bloodstream. The lymph system is a major part of the body's immune system. It includes the tonsils, adenoids, spleen, and thymus. Lymph nodes make immune cells that help the body fight infection. They also filter the lymph fluid and remove foreign material such as bacteria and cancer cells.

The reproductive system or genital system is a system of sex organs within an organism which work together for the purpose of sexual reproduction. The sex glands or gonads (the ovaries in females and the testes in the males) produce the germ cells also known as gametes (ovum or sperm) that unite and grow into a new individual. Reproduction begins when the germ cells unite, a process called fertilization.

Task 4. Answer the questions.

1. What are the major body systems of the human?
2. What does the musculoskeletal system consist of?
3. What system helps us to receive, process, and communicate information?
4. What is the main function of the circulatory system?
5. What system is responsible for food ingestion and digestion, absorption of digestion products and the elimination of undigested materials?
6. What organs does the urinary system include?
7. What body system brings oxygen from the air to the lungs and excretes carbon dioxide and water back into the air?
8. What physiological process helps to maintain the internal systems of the body at equilibrium?
9. In what case does fertilization occur?
10. What does the well-being of any person depend upon?

Task 5. Find the organs corresponding to the following human body systems.

Lymphatic system	the heart, blood and blood vessels
Musculoskeletal system	a muscular tube, the salivary glands, pancreas and gall bladder
Reproductive system	the pineal gland, pituitary gland, pancreas, ovaries, testes, thyroid gland, parathyroid gland, hypothalamus, gastrointestinal tract and adrenal glands
Digestive system	skin, hair, nails, sweat and other exocrine glands
Nervous system	lymph nodes, lymph ducts, and lymph vessels
Integumentary system	bones, ligaments, tendons and attached muscles
Respiratory system	brain and spinal cord, nerves, ganglia and receptors
Urinary system	ovaries, fallopian tubes, uterus, cervix, vagina//bladder, prostate, urethra, penis, testicles
Cardiovascular system	the airway, the lungs, and the muscles of respiration
Endocrine system	the kidneys, two ureters, bladder, and urethra

Task 6. Match the terms with their definitions.

1. digestion	a) the thick fluid mass of partially digested food that leaves the stomach;
	b) a chemical compound that dissociates in solution into ions;
2. pylorus	c) the maintenance of metabolic equilibrium within the human body by a tendency to compensate for disrupting changes;
3. indigestion	d) the small circular opening at the base of the stomach through which partially digested food (chyme) passes to the duodenum;
4. electrolyte	e) difficulty in digesting food, accompanied by abdominal pain, heartburn, and belching;
5. homeostasis	f) the act or process in living organisms of breaking down ingested food material into easily absorbed and assimilated substances by the action of enzymes and other agents.
6. chyme	

Task 7. Match the following systems of the human body with the functions they perform:

9. Respiratory system	-largest sensory organ -vitamin D syntheses -protects deeper tissue -regulates fluid and blood loss
10. Reproductive system	-stores calcium -framework for the body -protects vital organs -produces red blood cells
11. Integumentary system	-generates heat -creates movement -maintains posture -uses energy
12. Muscular system	-portions of many different systems that fight disease
13. Endocrine system	-maintains fluid balance to defend the body against disease by producing lymphocytes
14. Urinary system	-transportation of nutrients and gas waste -supports immune function

15. Digestive system	-gets rid of nitrogenous waste out of blood -regulates electrolytes, fluid and pH balance
16. Lymphatic system	-breaks down food into the building blocks for the body
17. Cardiovascular system	-portions moistens and heats air -gas exchange
18. Skeletal system	-sensory input -interpretation of input or thought -elicits and signals responses -coordination of muscles
19. Immune system	-secrets hormones that regulate growth, metabolism and general body function
20. Nervous system	- production offspring -production of hormones

Task 8. Open the brackets and insert the prepositions where it is necessary.

with; of; without; between; by; on

Homeostasis

Homeostasis (to be) the term used to describe how the body maintains its normal composition and functions. Because organ systems communicate … each other, the body (to be able) to maintain stable amounts … internal fluids and substances. Also, the organs neither underwork nor overwork, and each organ (to facilitate) the functions … every other organ.

Communications to maintain homeostasis (to occur) … means …the autonomic nervous system and the endocrine system. Special chemicals called transmitters (to carry) … the communications.

The autonomic nervous system largely controls the complex communication network that regulates bodily functions. This part … the nervous system functions … a person's thinking about it and without much noticeable indication that it is working. Transmitters called neurotransmitters (to conduct) messages … parts … the nervous system and between the nervous system and other organs.

Exercise 9. Read the sentences choosing the proper Participle.

1. System of the body is a group of organs (*working/worked*) together to perform a certain task.
2. The bottom of the thoracic cavity (*forming/formed*) by the diaphragm plays a leading role in breathing.
3. The musculoskeletal system (*consisting/consisted*) of the bones, ligaments, tendons and attached muscle gives the body basic structure and the ability for movement.
4. Arteries (*dividing/ divided*) into smaller vessels are called arterioles.
5. The circulatory system (*permitting/ permitted*) blood to circulate transports nutrients and helps to fight diseases.
6. The urinary system (*removing/ removed*) water from the blood produces urine carrying a variety of waste molecules and excess ions and water out of the body.
7. Bile (*producing/produced*) by the liver enters the duodenum through the common bile ducts.
8. Estrogen (*involving/ involved*) in the development of female sexual features such as breast growth accumulated the body fat around the hips and thighs.

Exercise 10. Put questions to the underlined parts of the sentences.

1. The earliest operations on the pericardium taken place in the 19th century were performed by Romero and Dalton.
2. The immune system will respond to *Helicobacter* by sending white cells, killer T cells and other infection-fighting agents to restore it.
3. The gas moving through the larynx, pharynx and mouth allows humans to speak, or phonate.
4. In 1956, Forssmann and Richards were awarded the Nobel Prize in Medicine for their discoveries.
5. Some neurologists have just examined the patient with the severe disturbed brain circulation.
6. Disorders of the respiratory system are usually treated internally by a pulmonologist and respiratory therapist.
7. In 1242, the Arabian physician became the first person accurately described the process of pulmonary circulation.
8. All additional investigations in order to maintain acid-base balance will have been completed by our immunologists by next week.

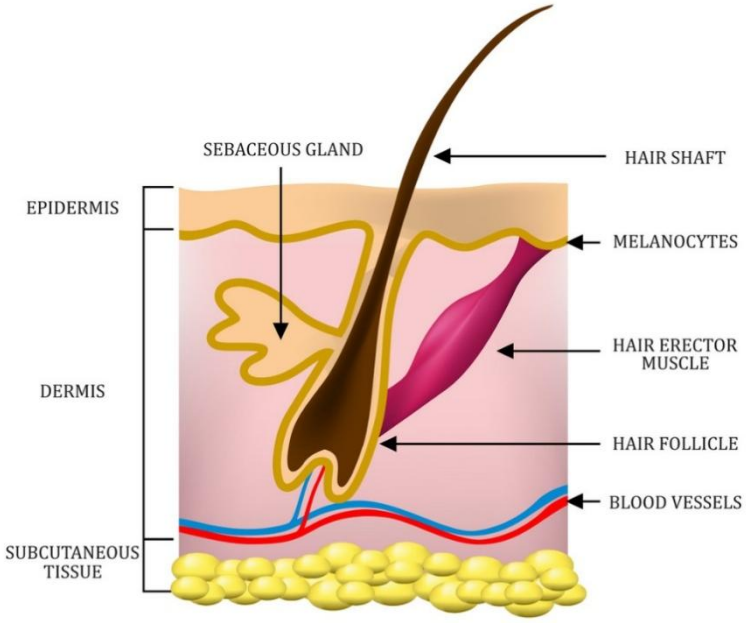
SKIN

Exercise 1. Topic vocabulary:

nouns	verbs	adjectives/adverbs
bottom	constitute	subcutaneous
dermis	distribute	hazard
epidermis	magnify	thin
follicle	transmit	sweat
integumentary system	warn	scale-like
sebaceous gland		
sebum		
squamous cell		

Exercise 2. Match each receptor with its definition. Remember that receptors get classified based on the type of stimulus activating them:

Mechanoreceptors	These become activated by extreme pressure, temperature, or noxious chemicals. These are also in the skin.
Photoreceptors	Activated by changes in pressure.
Chemoreceptors	Located in the skin and include cold and warm receptors.
Thermoreceptors	Activated by light.
Nociceptors	Activated by chemicals and serve for olfaction and taste.



Exercise 3. Read the text:

Skin

The sense of touch is distributed throughout the body. Nerve endings in the skin and other parts of the body transmit sensations to the brain. Four kinds of touch sensations can be identified: cold, heat, contact and pain. Hairs on the skin magnify the sensitivity and act as an early warning system for the body. The fingertips and the sexual organs have the greatest concentration of the nerve endings.

The **skin** and its associated structures make up

the **integumentary system.** This body-covering system protects against infection, dehydration, ultraviolet radiation, and injury. The skin also serves in temperature regulation and sensory perception.

The skin is composed of three layers – the epidermis, the dermis, and the subcutaneous tissue.

The thin outer layer of the skin is the epidermis, which is made of tough, flat, scale-like cells called squamous cells. Dead cells at the surface form a scaly protective layer, and as these are lost, new skin cells are formed in the basal cell layer at the bottom of the epidermis. Also, in this bottom layer are melanocytes, which produce the pigment melanin, giving the skin its colour and protecting it from UV light.

The skin's inner layer, the dermis, is made of strong, elastic tissue. It contains nerve endings and small blood vessels.

Sebaceous glands produce sebum, an oil that rises to the surface of your epidermis to keep your skin lubricated and waterproof.

Sweat is produced in sweat glands, and comes up through sweat ducts to the surface of the skin from where it comes out through tiny pores. Body hairs grow in follicles in the dermis.

Under the skin is a layer of subcutaneous fat. This keeps the body warm, absorbs shocks, and helps hold your skin to all the tissues underneath it.

Exercise 4. Answer the questions:

1. What parts of the body have the greatest concentration of nerve endings?

2. What are the functions of the skin?

3. What are the main layers of the skin?

4. What does epidermis contain?

5. What gives the color to the skin?

6. What is dermis? What is it made of?

7. What glands are found in the skin? What is their role?

8. What is the function of subcutaneous fat?

Exercise 5. Make up the sentences using the following words and word-combinations:
1. capillaries / blood vessels / dilate / or / constrict / and / according to / the body's temperature / in /the skin.

2. dead skin cells / the outermost surface / the epidermis / of / is made up / of .

3. beneath /makes up / the dermis / found / 90 percent / of / the epidermis / the bulk / of the skin. 4. to / gives /strength / elasticity / the dermis / and / the skin.

5. collagen / the / connective / is / tissue / fibers.

6.is not / as thick / as the dermis / the epidermis.

7. is divided / layer / and / the dermis / into / reticular / papillary / one.

Exercise 6. Match the term and its definition:

1. gland	a. the layer of skin beneath the epidermis.
2. dermis	b. beneath the skin.
3. epidermis	c. the pigment that gives human skin, hair, and eyes their color.
4. subcutaneous	d. protein of the extracellular matrix.
5. elastin	e. secretory organ from which secretions may be released into the blood, a cavity, or onto a surface.
6. collagen	f. major connective tissue protein of elastic tissue.
7. melanin	g. outermost layer of the skin.

Exercise 7. Insert the missing words given bellow:

Cells that manufacture skin constitute about 95 percent of the _____ . The remaining cells produce a black _____, called melanin. Melanin provides the coloring of the skin and helps _____ it from ultraviolet light. People of all races are born with the same _____ of pigment cells. However, the rate at which melanin granules are formed in these cells and their degree of _____ in the epidermis are inherited characteristics and major factors in skin color differences.

Protect; pigment; epidermis; number; concentration.

Exercise 8. Read the following abstract and determine your skin type:

What is your skin type?

The skin of your face is generally the best guide in classifying skin type. Examine your skin closely, especially the pores.

Oily Skin. Oily skin is caused by overactivity of the sebaceous glands. Oily skin is thick and has large pores. Oily skin has a greater tendency to develop acne but not wrinkles. Most people with oily skin also have oily hair.

Dry Skin. Dry skin can be caused by underactivity of the sebaceous glands, environmental conditions, or normal aging. Dry skin is usually thinner and most easily irritated. It often is associated with dry hair and small pores. There is a greater tendency to develop wrinkles but not acne. Your skin tends to become drier as you age.

Balanced Skin. Balanced skin is neither oily nor dry. It is smooth and has a fine texture and few problems. However, it has a tendency to become dry as a result of environmental factors and aging.

Combination Skin. Combination skin consists of oily regions (often on the forehead and around the nose) and regions that are balanced or dry.

Exercise 9. Insert the correct tense-forms for verbs in brackets:

1. The skin (to compose of) a layer of dense, irregular connective tissue called the dermis and (to cover) by a layer of epithelial tissue called the epidermis.

2. The dermis (to be) responsible for the most of the structural strength of the skin.

3. Nerve endings, hair follicles, smooth muscles, glands, and lymph channels (to extend) into the dermis.

4. The papillary layer (to derive) its name from projections called papillae that (to extend) toward the epidermis.

5. The papillary layer (to contain) a large number of blood vessels that (to supply) the overlying avascular epidermis with nutrients, (to remove) waste products, and (to aid) in regulating body temperature.

6. The epidermis (to separate) from the dermis by a basement membrane.

7. The epidermis (to contain) no blood vessels and (to derive) nourishment by diffusion from capillaries of the papillary layer.

8. Cells (to produce) in the deepest layer of the epidermis.

9. During the movement from the deeper epidermal layers to the surface, the cells (to undergo) keratinization, a process that (to involve) change in shape, structure, and chemical composition.

10. Skin color (to determine) by pigments in the skin and by blood circulating through the skin.

Exercise 10. Put questions to the underlined words:

1. There are approximately <u>100, 000</u> bacteria living on every square centimeter of our skin.

2. On average, your skin renews <u>itself</u> every 28 days.

3. The colour of human skin depends on <u>the amount of pigment melanin that the body produce</u>.

4. <u>Small amounts of melanin</u> result in light skin while large amounts result in dark skin.

5. It's estimated that there are 100 trillion atoms <u>in every human cell</u>.

6. There's thought to be <u>100 trillion</u> cells in the average human body.

7. <u>We</u> lose about 30-40 thousand skin cells every single minute.

8. While dead skin is a waste product for us, it's the main food source for mites.

REFLEXES

Exercise 1. Topic vocabulary:

nouns	verbs	adjectives/adverbs
conjunctiva consciousness cornea effector extension extensor flexor glare quadriceps reflex	excite experience induce mediate respond	inborn instantaneous involuntary inward outward patellar plantar pupillary upward

Exercise 2. Read the following, paying attention to the rules of reading:
e [i:] – b**e**, h**e**, sh**e**, m**e**, diam**e**ter, centim**e**ter, millim**e**ter, kilom**e**ter, lact**o**m**e**ter
ar [ə] – tart**ar**, patell**ar**, plant**ar**, p**ar**ticul**ar**, down**war**d, upw**ar**d, forw**ar**d, irregul**ar**
er, ir, ur [ə:] – t**er**m, c**ir**cle, f**ur**, m**ur**mur, c**ir**cuit, j**er**k, n**er**ve, f**ir**m, f**ur**ther, g**er**m
a, o, u [ə] - l**a**bor**a**t**o**ry, involunt**a**ry, stimul**u**s, aut**o**matic, sens**o**ry, c**o**ntrol, comm**o**n
or [ə] – doct**or**, mirr**or,** mot**or**, flex**or**, extens**or**, supervis**or,** anteri**or**, posteri**or**

Exercise 3. Read the following words or word-combinations
reflex: a reflex action, a reflex arc, a reflex response, a pupillary reflex, conditioned and unconditioned reflexes, abnormal reflexes;
response: automatic response, instantaneous response, in response to a stimulus, to be responsible for the movements;
instantaneous: instantaneous decision, instantaneous death, instantaneous reaction, instantaneously, done in an instant;
consciousness: unconsciousness, to lose consciousness, loss of consciousness, to recover consciousness.

Exercise 4. Read the text:

Reflexes

In biology, a reflex is an automatic and often inborn response to a stimulus that typically involves a nerve impulse passing inward from a receptor to the spinal cord and then passing outward from the spinal cord to an effector (such as a muscle or gland) without reaching the level of consciousness and often without passing to the brain.

The word "reflex" was introduced into Biology by a 19th-century English neurologist, Marshall Hall. By reflex, Hall meant the automatic response of a muscle or several muscles to a stimulus that excites an afferent nerve.

All reflexes are divided into unconditioned and conditioned ones.

An *unconditioned* reflex is a normal, instinctive, unlearned reaction to a stimulus that occurs naturally and is not dependent on previous experience. Unconditioned reflexes are also called inborn reflexes.

There are a lot of unconditioned reflexes, such as patellar, plantar, pupillary, lacrimal reflexes and many others, but the simplest ones include *swallowing, salivation, sweating, sneezing, yawning, blinking, scratching, sucking (in infants), and others.*

Probably the best-known reflex is the pupillary light reflex. If a light is flashed near one eye, the pupils of both eyes contract. Greater intensity light causes the pupil to become smaller, whereas lower intensity light causes the pupil to become larger.

Another reflex involving the eye is known as the lacrimal reflex. When something irritates the eye, the lacrimal reflex causes nerve impulses to stimulate the lacrimal glands. Usually secretion of tears occurs in response to irritation of the cornea or conjunctiva as, for example, when first wearing contact lenses, but it may also be induced by eyestrain, glare, laughing, etc.

A *conditioned* reflex is an action or feeling that you learn to do in response to a specific situation or stimulus. The response is occasioned by a secondary stimulus repeatedly associated with the primary stimulus.

In Pavlov's classic experiment, dogs learned to associate the sound of a bell with feeding time and would salivate at the bell's sound whether food was then presented to them or not.

Speaking, reading, writing, walking, running, typewriting, playing different musical instruments, cycling, driving are examples of conditioned reflexes.

Conditioned reflexes are also called acquired reflexes or trained reflexes and behavior reflexes.

Unlike conditioned reflexes, the unconditioned reflexes are mostly stable. The conditioned reflexes are not only unstable but can be modified.

A leading role in the performance of unconditioned reflexes is played by the lower divisions of the higher nervous system, the subcortical nuclei, brain stem, and spinal cord. Conditioned reflexes, in contrast, are a function of the cerebral cortex.

The investigation of conditioned reflexes became the basis for the theory of how organisms learn.

Exercise 5. Answer the following questions to the text:

1. What do we call a reflex in biology?
2. Who was the first to introduce the term "reflex"?
3. What reflexes may all reflexes be divided into?
4. What reflexes are called unconditioned reflexes?
5. What is the main function of the pupillary light reflex?
6. What produces the lacrimal reflex?
7. What reflexes are called conditioned reflexes?
8. What are the examples of conditioned reflexes?

Exercise 6. Say for which reflexes the following statements are true:

Model: *they are also called acquired reflexes – conditioned reflexes*

1) they are learned through training;
2) they are also called inborn reflexes;
3) they are not dependent on previous experience;
4) they are a function of the cerebral cortex;
5) the foundation for the rest of the nervous activity of the body;
6) they are also called behavior reflexes;

7) they can be modified;
8) they are unstable;
9) they are a function of the subcortical nuclei, brain stem, and spinal cord;
10) they are unlearned reactions

Exercise 7. Match the names of unconditioned responses to their definitions:

1. swallowing 2. salivation 3. blinking 4. scratching 5. sucking 6. sneezing 7. yawning	a) the common motor response to itching; b) a reflex act of a sudden violent spasmodic expiration of breath through the nose and mouth following irritation of the nasal mucous membrane; c) the process that usually involves the movement of food from the mouth to the stomach via the esophagus; d) secretion or production of saliva; e) an involuntary act, or reflex action, usually associated with drowsiness or boredom when the mouth is opened wide and a slow, deep breath is taken through it; f) movements of an infant's lips elicited by touching them or the adjacent skin; g) a reflex that closes and opens the eyes rapidly.

Exercise 8. Insert the prepositions where it is necessary:
1. Russian physiologist Ivan Pavlov first discovered classical conditioning when he ran an experiment ... which he rang a bell every time he fed a group of dogs.
2. When a sensory nerve ending is stimulated a nerve impulse travels along a sensory (afferent) neuron ... the spinal cord.
3. The dogs had learned to associate the bell ... food, and their reaction ... the bell was a conditioned response.
4. A patellar reflex (the knee-jerk) is a test to the connection between the sensory nerves to stretch receptors … the muscle, the spinal cord, and the motor neurons.
5. Disease or damage may result … absence of the reflex.
6. A pupillary (light) reflex is the reflex change ...the size of light entering … the eye.
7. In dim light the pupils open due … stimulation of the sympathetic nervous system.
8. The motor neuron carries the impulse ... a muscle which contracts and moves the body.

Exercise 9. Put questions to the underlined words:
1. Now the term “reflex” is widely being used by many scientists to describe an action that is an inborn central nervous system activity.
2. English neurologist Marshall Hall introduced the term “reflex” into Biology in the 19th century.
3.To test the patellar reflex, the examiner taps the ligament below the patella with a small rubber hammer.
4. By reflex, Hall meant the automatic response of a muscle or several muscles to a stimulus that excites an afferent nerve.
5. Russian physiologist Pavlov found that a hungry dog trained to associate the sound of a bell with food.
6. Pavlov divided all reflexes into unconditioned and conditioned reflexes.
7. Generally, decreased reflexes indicate a peripheral problem.
8. Newborn babies have a number of other reflexes which are not seen in adults, referred to as primitive reflexes.

Exercise 10. Open the brackets using the verb in the appropriate form. Translate them into your native language:
1. The physician said that sanatorium treatment (to be) helpful for the neurological patients.
2. The patient stated that four hours before admission he (to lose) suddenly consciousness.
3. The students were informed that in medicine, reflexes often (to use) to assess the health of

the nervous system.
4. The doctor was told that the conjunctiva (to infect).
5. The patient said he never (to experience) such acute pain on swallowing before.
6. He believed that the new method of treatment (to use) more extensively next year.
7. The neurologist declared that the negative extensor response (to indicate) the disease in the brain.
8. The patient was informed that his pathologic reflexes (to underlie) some internal diseases.

ANATOMY AND PHYSIOLOGY OF THE DIGESTIVE SYSTEM

Exercise 1. Topical vocabulary:

nouns	verbs	adjectives/adverbs
absorption	decompose	
alimentary tract	ingest	
caecum	digest	
colon	excrete	
duodenum		
ileum		
jejunum		
length		
pancreas		
portion		
rectum		
salivary glands		

Exercise 2. Form nouns from verbs with the help of suffix –tion:

To educate, to relate, to pronounce, to imagine, to distribute, to transport, to decompose, to ingest, to digest, to excrete, to absorb, to secrete, to correct, to collect, to direct, to define, to explore, to imitate, to coordinate, to prescribe.

Exercise 3. Read the following word-combinations.

canal: alimentary canal, musculomembraneous canal, nasal canal, root canal

cavity: oral cavity, abdominal cavity, pulp cavity, nasal cavity, thoracic cavity

gland: salivary gland, endocrine gland, urethral glands, mucous gland, lymph gland

tube: thin-wall muscular tube, inner-tube, test-tube, Fallopian tube, drainage tube

palate: hard palate, soft palate, cleft palate, to have a delicate palate, depraved palate

Exercise 4. Put words in the appropriate column:

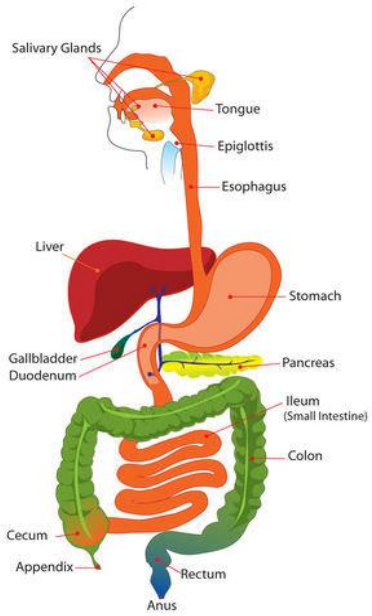
Ileum, heart, vessel, anus, jejunum, artery, duodenum, tongue, vein, pharynx, stomach, capillary, esophagus, intestine, aorta, atria, rectum, oral cavity, salivary glands, mouth, chamber, caecum, colon, teeth, ventricle.

Parts of the cardiovascular system	Parts of the alimentary tract

Exercise 5. Read and translate the text:

The Digestive System

The digestive system is a group of organs working together to convert food into energy. Food passes through a long musculomembraneous tube known as the alimentary canal or the gastrointestinal tract. It is made up of the oral cavity, pharynx, esophagus, stomach, small intestines, and large intestines. In addition, there are several important accessory organs that help your body to digest food: the teeth, tongue, salivary glands, liver, gallbladder, and pancreas. Six major functions take place in the digestive system:



- Ingestion
- Secretion
- Mixing and movement
- Digestion (mechanical and chemical)
- Absorption
- Excretion

Food begins its journey through the digestive system in the mouth. Teeth chop food into small pieces, which are moistened by saliva before the tongue and other muscles push the food into the pharynx.

From the mouth food passes through the pharynx to the esophagus and then to the stomach.

The stomach is a muscular sac that is located on the left side of the abdominal cavity. It is about the size of their two fists placed next to each other. This organ acts as a storage tank for food so that the body has time to digest large meals properly. It contains hydrochloric acid and digestive enzymes.

The small intestine is a thin-walled muscular tube about 6.5 metres long. It is located in the middle portion of the abdominal cavity. The small intestine is composed of the duodenum, jejunum and ileum.

The large intestine is the last part of the alimentary tract. Its function is to absorb water from the remaining indigestible food matter, and then to pass useless waste material from the body. It is about 1.5 metres long. It is divided into caecum, colon and rectum.

The liver is the largest gland in the human body. It is a dark reddish brown color. It lies in the right upper part of the abdominal cavity under the diaphragm. The weight of the liver is 1,500 g. This organ plays a major role in metabolism and has a number of functions in the body, including glycogen storage, decomposition of red blood cells, plasma protein synthesis, hormone production, and detoxification, convertion of excess amino-acids from digested protein foods into body fuel and urea, secretion of bile. It manufactures heparin which prevents clotting of the blood, and antibodies to protect the body against disease.

The gallbladder is a hollow sac lying on the lower surface of the liver, where bile is stored, before it is released into the small intestine.

The pancreas is a long thin gland lying behind the stomach. It produces enzymes which help to digest proteins, carbohydrates and break down fats.

Exercise 6. Answer the questions to the text:

1. What is the digestive system?

2. What does the alimentary tract consist of?

3. What is the 1st division of the alimentary tract formed by?

4. What is the stomach?

5. What is the small intestine?

6. What is the function of the large intestine?

7. What largest gland in the human body do you know?

8. What is the function of the gallbladder?

9. What does pancreas produce?

10. What are the major functions of the digestive system?

Exercise 7. Match the terms to their definitions:

1.alimentary tract	a) the passage between the pharynx and the stomach;
2. stomach	b) the process in the alimentary canal by which food is broken up mechanically, by the action of the teeth, and chemically, by the action of enzymes, and converted into a substance suitable for absorption and assimilation into the body;
3. pharynx	c) a large, reddish-brown, glandular organ located in the upper right side of the abdominal cavity, divided by fissures into five lobes and functioning in the secretion of bile and various metabolic processes;
4.small intestine	d) the tubular passage extending from the mouth to the anus, through which food is passed and digested;
	e) the process by which food is crushed and ground by teeth;
5.large intestine	f) a pear-shaped, muscular sac attached to the undersurface of the right lobe of the liver, in which bile is stored and concentrated;
6. esophagus	g) beginning with the cecum and ending with the rectum; includes the caecum and the colon and the rectum; extracts moisture from food residues which are later excreted as feces;
7. liver	h) an enlarged and muscular saclike organ of the alimentary canal; the principal organ of digestion;
	i) the passage to the stomach and lungs; in the front part of the neck below the chin

	and above the collarbone;
8. gallbladder	j) the longest part of the alimentary canal; where digestion is completed.
9. mastication	
10. digestion	

Exercise 8. Say what organ is spoken about:

1. This organ is the largest gland in the human body. It is in the upper part of the abdominal cavity under the diaphragm in the right side of the abdomen. Its upper surface is convex. This organ consists of small lobules connected together by connective tissue, different vessels and nerves.

2. This organ is pyriform in shape. It is a dilated portion of the alimentary canal. It is in the upper part of the abdomen under the diaphragm. The liver is above this organ, and the colon is below it. The pancreas is behind this organ.

3. It is the beginning of the alimentary tract and the digestion starts here when taking the first bite of food. Chewing breaks the food into pieces that are more easily digested, while saliva mixes with food to begin the process of breaking it down into a form your body can absorb and use.

4. This organ is the portion of the alimentary tract that is located between the stomach and rectum. In the human being it is divided in to two parts. Its function is to digest food and to enable the nutrients released from that food to enter into the bloodstream.

5. It is a tubular organ that lies behind the trachea and heart and in front of the spinal colomn; it passes through the diaphragm before entering the stomach.

6. This organ is a part of two different systems of the body, digestive system and respiratory system. It is a passageway leading from the mouth and nose to the esophagus and larynx.

7. This is a long, narrow gland that is located across the upper abdomen, behind the stomach and the spleen. It produces important digestive enzymes and hormone called insulin.

8. This is a hollow organ located beneath the right lobe of the liver and measures 8 centimeters in length. Its function is to store bile.

9. This is a thin cartilaginous flap that covers the entrance to the larynx during swallowing, preventing food from entering the trachea.

10. It is the last part of the digestive system. Water is absorbed here and the remaining waste material is stored as feces before being removed by defecation.

Exercise 9. Fill in prepositions where necessary and translate into your native language:

If (2); by; or; in (4); for (2); through (2)

One of the most common locations ____ a foreign body is the alimentary tract.

It is possible ___ foreign bodies to enter the tract from the mouth, or from the rectum.

The objects most commonly swallowed ____ children are coins. Meat impaction is more common ____ adults.

Swallowed objects are more likely to lodge ____ the esophagus or stomach than ____ the pharynx or duodenum.

____ the person who swallowed the foreign body is doing well, usually a x-ray image will be taken. It will show any metal objects, and should be repeated a few days later to confirm that the object has passed all the way _____ the alimentary tract. Also it needs to be confirmed that the object is not stuck _____ the airways, in the bronchial tree.

Most objects that are swallowed will pass all the way ____ the gastrointestinal tract unaided.

____ the foreign body causes problems like pain, vomiting ____ bleeding it must be removed.

Exercise 10. Arrange the following sentences in a correct order to describe the following term "stomach":

1. The stomach has three tasks in digestion: mixing foods with gastric juices, storing swallowed food and liquid, moving food into the small intestine.

2. It is located in the upper part of the abdomen under the diaphragm.

3. The stomach is a hollow, saclike organ enclosed in a muscular wall.

4. The stomach receives food from the esophagus.

5. These flexible muscles allow the stomach to extend when you eat.

6. As food reaches the end of the esophagus, it enters the stomach through a muscular valve called the lower esophageal sphincter.

Exercise 11. Continue the following sentences using the text to describe the term "intestine":

1. Intestine is the last part of the alimentary tract and consist of ….. and ….. .
2. The small intestine is composed of ….., ….., ….. .
3. The large intestine is divided into ….., ….. and ….. .
4. The function of intestine is ….. and then ….. .

Exercise 12. Put questions to the underlined words:

1. First step in the digestive system takes place in the mouth.

2. The soft palate is a continuation of the soft tissues covering the hart palate.

3.The weight of the largest of the salivary glands is 28gr.

4. The liver consists of small lobules connected together by connective tissue, different vessels and nerves.

5. The duodenum is called so because its length measures about the length of twelve fingers.

6. The liver consisting of lobes is covered with a fibrous coat.

7. A foreign body that enters the alimentary tract can cause different problems.

8. Gastroendoscopy shows all the damages in the stomach.

Exercise 13. Open the brackets using the verb in the appropriate voice:

1. The mechanical digestion of the food (to start) by the action of mastication and the wetting contact of saliva.

2. The esophagus (to line) with smooth muscle, which forces the food down the pipe to the stomach.

3. When food is swallowed, the stomach (to produce) hydrochloric acid.

4. The shape of the stomach (to change) when it dilates and its borders greatly extend.

5. The liver (to play) a major role in metabolism and (to have) a number of functions in the body.

6. Discharged from the liver bile (to store) in the gallbladder.

7. 95% of absorption of nutrients (to occur) in the small intestine.

8. Waste material (to eliminate) from the rectum during defecation.

ANATOMY AND PHYSIOLOGY OF THE URINARY SYSTEM

Exercise 1. Topic vocabulary:

nouns	verbs	adjectives/adverbs
breakdown	alert	free
extremity	consume	major
renal pelvis	convey	soluble
renal cortex	expand	sterile
ureter	filter	triangle-shaped
urethra	keep	
urine	regulate	
waste	store	
	squeeze	
	tighten	

Exercise 2. Read the following word-combinations:

Ureter: There are 2 ureters in the human body. Ureters convey urine from the kidneys.

Duct: bile duct, obstruction of the urinary ducts.

Convey: convey oxygen from the lungs, convey waste substances from the kidneys.

Urethra: Inflammation of urethra, the difference between male and female urethra. The urethra is the organ of the urinary system.

Urinary bladder: urinary bladder infection, rupture of the urinary bladder. Cystitis is an inflammation of the urinary bladder.

Kidney: two kidneys, inflammation of kidneys, kidney extremity, kidney infection, the enlarged boarders of the kidney.

Exercise 3. Form nouns with the help of suffixes:

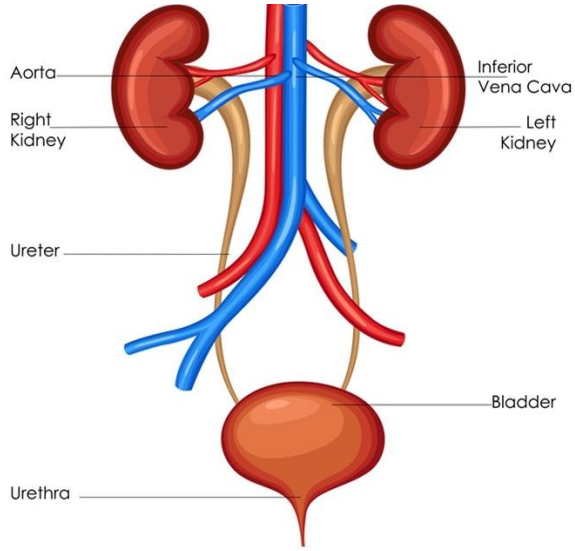
–sion/-tion: to urinate, to secrete, to eliminate, to manifest, to expand.
-ment: to improve, to enlarge, to move, to attach, to achieve.

-ance: to appear, to differ, to depend, to maintain, to correspond.

Exercise 4. Read and translate the text:

The Anatomy and Physiology of the Urinary System

The urinary system is a group of organs in the body concerned with filtering out excess of fluid and wastes from the bloodstream. Wastes in the blood come from the normal breakdown of tissues and from food.



The urinary system keeps the chemicals and water in your body balanced. A type of waste called urea is removed from the blood by the urinary system. Urea is produced when foods containing protein, such as meat, are broken down in the body and is carried in the bloodstream to the kidneys.

The urinary system consists of two kidneys, which secrete the urine, the ureters, which convey urine to the urinary bladder, where it is stored for some time; and the urethra, through which it is discharged from the body.

The kidneys are paired bean-shaped organs with two surfaces, two borders, and an upper and lower extremity. There are three major regions of the kidney: the renal cortex, the renal medulla and the renal pelvis. The kidneys are situated behind the peritoneum. They are covered by the renal capsule.

The functional unit of each kidney is a nephron. Its chief function is to regulate the concentration of water and soluble substances by filtering the blood, reabsorbing what is needed and excreting the rest as urine. The nephron eliminates waste substances from the body, regulates blood volume and blood pressure and regulates blood pH.

The ureters are two tubes which convey the urine from the kidneys to the urinary bladder. Muscles in the ureter walls continually tighten and relax forcing urine away from the kidneys.

The urinary bladder is a triangle-shaped, hollow musculomembranous organ located in the lower part of the abdomen. It is held in place by ligaments attached to other organs and the pelvic bones. The urinary bladder is a temporary storage for the urine. The bladder's walls relax and expand to store urine, and contract to empty it. Nerves in the bladder alert a person when it is time to urinate.

The urethra is a tube that connects the urinary bladder with the outside of the body. Male and female urethra differs in shape and length. The brain signals the bladder muscles to tighten, which squeezes urine out of the bladder. Normal urine is sterile fluid which contains fluids, salts and waste products, but it is free of bacteria, viruses and fungi.

Exercise 5. Match the terms to their definitions:

1. kidney 2. ureter 3. urethra 4. urinary	a) each of the functional units in the kidney, consisting of a glomerulus and its associated tubule, through which the glomerular filtrate passes before emerging as urine; b) a membranous sac in which the urine, excreted from the kidneys, is stored; c) each of a pair of organs in the abdominal cavity of mammals, birds, that excrete urine;

bladder	d) colorless crystalline compound that is the main nitrogenous breakdown product of protein metabolism in mammals;
5. renal cortex	e) the duct by which urine is conveyed out of the body from the bladder;
6. nephron	f) the duct by which urine passes from the kidney to the bladder or the cloaca;
7. urea	g) the outer portion of the kidney containing the glomeruli and the tubules;
8. urine	h) a watery, typically yellowish fluid which contains nitrogen compounds such as urea and other waste substances removed from the blood by the kidneys.

Exercise 6. Answer the questions to the text:

1. What does the urinary system consist of?

2. What is urine?

3. Where are the kidneys situated?

4. What is the function of nephrons?

5. What is the function of the ureters?

6. Where is the urine stored before it is discharged from the body?

7. What is the urethra?

8. What is the function of the urethra?

9. What conveys urine from the kidneys?

10. What is the function of the urinary bladder?

Exercise 7. Find synonyms to the words *in italics* in the text (sometimes more than 1 word is possible):

to keep the urine in the bladder,

to remove urine from the body,

to carry urine out of the body,

these organs *are placed* behind the peritoneum,

substances that can *be dissolved*, *absorb* substances *again*,

inflammation of nephrons,

unwanted (unnecessary) materials.

Exercise 8. Find the proper object to the verb and translate it into your native language:

1. to excrete	a) muscles in the bladder
2. to alert	b) an infection
3. to regulate	c) urine out of the body
4. to remove	d) food and fluid
5. to consume	e) blood volume and pressure
6. to break down	f) waste substances
7. to maintain	g) nerves in the brain
8. tighten and relax	h) active tissues
9. to filter	i) water balance
10. to cause	k) blood through the nephrons

Exercise 9. Fill in the gaps with words from the box:

nephrons	urine	bladder	kidneys	wastes	urea	ureters	nerves

1. …… in the blood come from the normal breakdown of active tissues.

2. Normal …….. contains fluids, salts and waste products.

3. …….. usually holds 300-350 ml of urine.

4. ……. carry urine from the kidneys to the bladder.

5. All the blood in our bodies passes through …….. several times a day.

6. Urine is formed by …….. together with water and other waste substances.

7. A person gets an alarm from the …….. in the bladder when it is time to urinate.

8. In humans, a normal kidney contains 800,000 to 1.5 million……

Exercise 10. Agree or contradict the following statements:

1. Urine is stored in the urethra before discharging from the body.
2. A nephron regulates the concentration of water and soluble substances.
3. The urinary bladder is a hollow bean-shaped organ, which discharges urine from the body.
4. The ureters convey the urine from the kidneys to the urinary bladder.
5. Kidney is a muscular sac which stores the urine before eliminating it from the body.
6. The urine is discharged from the body through the ureters.
7. Urethra is a tube that connects the kidney and the urinary bladder.
8. The main function of the ureters is to regulate the concentration of water and soluble substances.

Exercise 11. Translate the sentences into your native language paying attention to Participles:

1. Microorganisms invading the urinary bladder can develop cystitis.

2. Ducts carrying urine to the urinary bladder are called ureters.

3. Urine being a sterile fluid is free from bacteria, viruses and fungi.

4. A nephron eliminating wastes from the body, regulates blood volume and blood pressure.

5. Being examined by the physician the patient was prescribed antibiotics.

6. Being located in the posterior part of the abdomen the kidneys receive blood from the paired renal arteries.

7. Having asked the patient about his complains the doctor could make a diagnosis of a kidney infection.

8. Having been operated successfully the patient was gradually recovering.

Exercise 12. Read and translate paying attention to the translation of Absolute Participle Construction:

1. The nephron carrying out nearly all of the kidney's functions, its chief function is to regulate the concentration of water.
2. The nephrons in the kidney being inflamed, the patient was administered antibiotics.
3. The patient suffering from pains in the lumber area, urine analyses were made.
4. The patient being admitted to the hospital, the doctor examined him in the reception ward.
5. The patient having been hospitalized, the infection in the renal pelvis was treated several weeks later.
6. The patient having survived the operation well, the danger of peritonitis was eliminated.
7. Cystitis having been proved to result from infection of the urinary bladder.
8. Hypertension complicating the nephritis, the patient was prescribed vasodilators and diuretics.

Exercise 13. Make questions to the underlined words:

1. The human organism can fight against the microorganisms.

2. The doctor has just examined this patient.

3. The administrations were changed to prevent nephritis.

4. The kidneys perform regulation of the body's salt, potassium and acid.

5. Bacteria cause inflammation of the urinary bladder.

6. The bladder is composed of serous, muscular, submucous, and mucous coats.

7. High blood pressure caused kidney damage in this patient.

8. The symptoms of acute pyelonephritis are aching pain in the lumbar region and fever.

Exercise 14. Open the brackets and translate the sentences:

1. A kidney infection already (to develop) because of urine standing still.
2. The urine (to form) in three steps: Filtration, Reabsorption, and Secretion.

3. Significant sex difference (to exist) in the shape and length of male and female urethra.

4. A test in the structure of the kidneys (to pass) the day after tomorrow.

5. Last night she (to experience) an attack of acute pain in the lumber region.

6. The inflammation of nephrons in the kidneys (to call) nephritis.
7. The patient (to complain) of pain and burning during urination a week ago.
8. When he entered the room, they (to carry out) the experiment.

Exercise 15. Arrange the following sentences in a correct order to describe the term "a kidney":

1. The function of the kidneys is to secrete the urine.
2. The major regions of the kidney are the renal cortex, the renal medulla and the renal pelvis.
3. The kidneys are paired bean-shaped organs with two surfaces, two borders, and an upper and lower extremity.
4. The urinary system consists of two kidneys, the ureters, the urinary bladder and the urethra.
5. They are covered by the renal capsule.
6. The kidneys are situated in the posterior part of the abdomen, behind the peritoneum.

Exercise 16. Arrange the following sentences in a correct order to describe the term "the urinary system":

1. The urinary bladder stores the urine until it is discharged from the body through the urethra.

2. The urinary system consists of two kidneys, the ureters, the urinary bladder and the urethra.

3. The urinary system keeps the chemicals and water in your body balanced.

4. The kidneys secrete the urine out of the body.

5. The urinary system is a group of organs in the body concerned with filtering out excess of fluid and wastes from the bloodstream.

6. The ureters convey urine to the urinary bladder.

Exercise 17. Arrange the following sentences in a correct order to describe the term "the urinary bladder":

1. Nerves in the bladder alert a person when it is time to urinate.

2. The bladder's walls relax and expand to store urine, and contract to empty it.

3. It is a membranous sac in which the urine, excreted from the kidneys, is stored.

4. The urinary bladder is one of the organs of the urinary system.

5. The urinary bladder is located in the lower part of the abdomen.

ANATOMY AND PHYSIOLOGY OF THE REPRODUCTIVE SYSTEM

Exercise 1. Topic vocabulary:

nouns	verbs	adjectives/adverbs
coitus	combine	external
embryo	lead to	female
enlargement	occur	internal
estrogen	produce	male
fetus	release	reproductive
fertilize	result in	sexual
gonads	stimulate	viable
maturity	take place	
ovaries		
placenta		
pregnancy		
puberty		
umbilical cord		
uterus		
zygote		

Exercise 2. Read the following words, paying attention to the rules of reading:

[əs] fetus, nervous, numerous, coitus, uterus

[ɜ:] occur, sperm, nurse, surgeon, urgent, fertility

[ʃən] menstruation, ovulation, abortion, fertilization, reproduction, implantation

[aɪ] height, fertilize, cycle, either, lining, time

[i] system, female, visible, skin, fill, implant

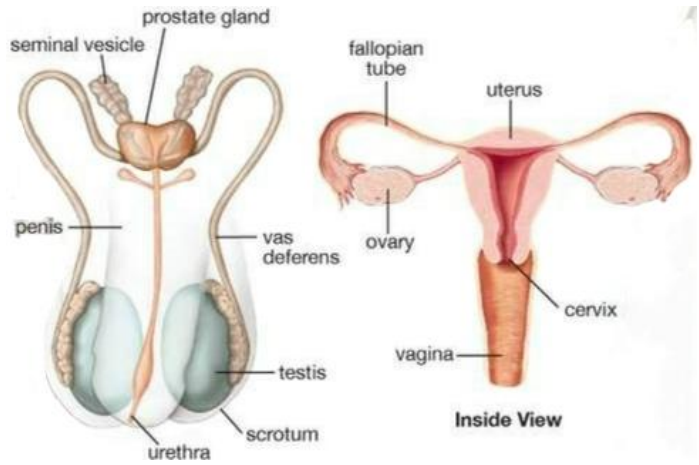
Exercise 3. Form and the new words using the given suffixes:
E.g.: infect – infect**ion** excite – excite**ment**

- ion (-ation), -sion, -tion: implant, transport, stimulate, distribute, fertilize, collect, ovulate, menstruate.
- ment: require, achieve, treat, develop, enlarge, involve, move, impair, nourish.

Exercise 4. Read the text:

Anatomy and Physiology of the Reproductive System

The reproductive system is a collection of organs that work together for the purpose of producing a new life. The major organs of the reproductive system include the external genitalia and internal organs. The anatomy of male and female reproductive system is different. The male reproductive system includes the scrotum, testicles, spermatic ducts, sex glands and penis. These organs work together to produce sperm for fertilization of egg cells while producing offspring. Unlike the female reproductive system, most of the male reproductive system is located outside of the body. The female reproductive anatomy includes vagina, uterus, ovaries, and fallopian tubes. Together with male reproductive organs, they lead to the reproduction of human life.



Reproductive physical maturity and the capacity for human reproduction begin during **puberty**. During puberty, the **hypothalamus** produces **hormones**, which stimulate the **gonads** to produce **testosterone** (in males) and **estrogen** and **progesterone** (in females).

Male puberty generally occurs between the ages of 13-15 and is characterized by the secretion of the male hormone **testosterone**, which stimulates **spermatogenesis**, and the development of **secondary sexual characteristics** (increased height and weight, broadening shoulders, voice deepening, and muscle development).

Female puberty generally occurs between the ages of 9-13, and results in **ovulation** and **menstruation,** which involve cyclic hormonal changes in estrogen and progesterone. Secondary sexual characteristics (breast enlargement, widening hips, increased height, weight and fat distribution) also occur as part of the female pubertal process.

Function of the reproductive system is reproduction. Fertilization is the first step in pregnancy. During **coitus** (sexual intercourse) between a male and a female, semen is released into the vagina and transported through the uterus into the fallopian tube. Fertilization can only occur if intercourse takes place before the time of **ovulation** that usually occurs “mid-cycle”, or about 14 days before the woman's next menstrual period. At the time of ovulation, the ovum is released from the ovary and transported in the fallopian tube where it remains for about 24-48 hours. Pregnancy is most likely to occur if fresh semen is present when ovulation occurs.

Sperm cells remain viable within the female reproductive tract for about 72 hours. During fertilization, the sperm enters the cell membrane of the ovum so the nuclei of the sperm and egg cells combine to form a **zygote**.

Various exceptions are possible, for example, in vitro fertilization is a process by which an egg is fertilised by sperm outside the body.

Exercise 5. Answer the questions to the text:

1. What is the reproductive system?
2. What does the word puberty mean?
3. What does the hypothalamus regulate?
4. When does male puberty occur?
5. When does female puberty occur?
6. When can fertilization occur?
7. How long do sperm cells remain viable in the reproductive tract?
8. What is a zygote?

Exercise 6. Match the words from the column A to those from the column B to form the word-combinations. There are possible several variants with one word.

Column A	Column B
cell	intercourse
sexual	membrane
pubertal	changes
hormonal	process
voice	tube
fallopian	deepening
widening	lining
uterine	hips

Exercise 7. Match the terms to the definitions:

1. puberty 2. testosterone 3. estrogen 4. fertilization 5. gonads	a) a white crystalline steroid hormone produced primarily in the testes and responsible for the development and maintenance of male secondary sex characteristics; b) the act or process of initiating biological reproduction by insemination; c) the stage of adolescence in which an individual becomes physiologically capable of sexual reproduction; d) any of several steroid hormones produced chiefly by the ovaries and responsible for promoting estrus and the development and maintenance of female secondary sex characteristics; e) any organ or gland in which gametes are produced; an ovary or testis.

Exercise 8. Insert the necessary preposition:

of as via at into

Development of embryo and fetus

The development ___ the mass of cells that will become the infant is called embryogenesis. During this time, cells begin to differentiate ____ the various body systems. The basic outlines of the organ, body, and nervous systems are established. ____ the end of the embryonic stage, the beginnings ___ features such ___ fingers, eyes, mouth, and ears become visible. Also ____ this time, there is development ____ structures important to the support of the embryo, including the placenta and umbilical cord.

After ____ 10 weeks of gestational age, the embryo becomes known ___ a fetus instead. At the beginning of the fetal stage, the risk ___ miscarriage decreases sharply. When the fetal stage commences, a

fetus is typically ____ 30 mm in length, and the heart can be seen beating ____ ultrasound; the fetus can be seen making various involuntary motions ____ this stage.

Electrical brain activity is first detected between the 5th and 6th week of gestation.

Exercise 9. Open the brackets. Put the verb in the correct tense form. Pay attention to the conditional sentences 1st type.

E.g.: If you treat this infection at once, you will avoid infertility.

1. The infant (to be fed) artificially, unless the mother's health (to be restored).

2. As soon as it (to be) time of puberty, the endocrine system (to release) sexual hormones.

3. When the egg (to be fertilized), zygote (form).

4. If fresh semen (to be present) during ovulation, fertilization (to occur).

5. The operation (to be continued) as soon as the bleeding (to be stopped).

6. If she (not to take) these medicines she (to have) miscarriage *(викидень)*.

7. When the operation (to be over), the doctor (to consult) this pregnant woman.

8. If you (to go) to the doctor right now, you (to recover) more quickly.

Exercise 10. Put questions to the underlined words:

1. The reproductive system is known as a collection of organs that work together for the purpose of producing a new life.
2. Substances such as fluids, hormones, and pheromones are also important to the effective functioning of the reproductive system.
3. The genes that parents pass along to their children are what make children similar to others in their family.
4. Many parts of the male and female reproductive systems that can be affected by cancer.
5. Pregnancy is the time a mother carries the baby from conception until birth.
6. When the baby is ready to be born baby's head presses against the cervix.
7. This pregnant woman has been complaining of nausea for 2 months.
8. Human reproduction is guided at every step by powerful hormones.

Exercise 11. Read the text. Insert the necessary noun:

infertility, testosterone, progesterone, brain, bloodstream, ovulation, estrogen

Hormones and reproduction

In both men and women, reproduction begins in the _____. A part of the brain (hypothalamus) produces a substance called gonadotropin-releasing hormone (GnRH). GnRH causes the pituitary gland to release two hormones into the _____: luteinizing hormone (LH) and follicle-stimulating hormone (FSH).

In men, LH causes the release of the male hormone _____, while FSH causes the testicles to produce sperm. In women, LH and FSH cause eggs to mature and be released (_____). They also cause production of the female hormones _____ and _____.

Many problems with _____ are caused by too little or too much of these hormones, the pattern of hormone levels over time, or problems in the hypothalamus or pituitary gland.

Exercise 12. Open the brackets and put the verbs in the correct tense and voice form:

1. Like all complex organ systems the human reproductive system (to affect) by many diseases.
2. Endocrine hormones (to know) as critical controlling factor in the normal differentiation of the reproductive system.
3. The doctor on duty (to perform) the operation on the uterus right now.
4. Chromosome characteristics (to determine) the genetic sex of a fetus.
5. Genital infections such as chlamydia and gonorrhea can (to cause) infertility in men.
6. Some diets (to prove) to be significant for increasing fertility lately.
7. Studies (to show) that exercising too much may lead to the release of too many steroid hormones, which can affect fertility.
8. A very low or very high BMI (body mass index) (to disrupt) ovulation and may also affect production of hormones.

Exercise 13. Arrange the following sentences in a correct order to describe the term "fertilization":

1. Fertilization is the first step in pregnancy.
2. The purpose of ovulation is producing a new life.
3. During fertilization, the nuclei of the sperm and egg cells combine to form a **zygote**.
4. Fertilization can occur if intercourse takes place before the time of **ovulation**.
5. Fertilization is the union of a human egg and sperm occurring in the fallopian tube.

METABOLISM

Exercise 1. Topic vocabulary:

nouns	verbs	adjectives/adverbs
carbohydrate	break down	chemical
compound	determine	constructive
fat	enable	destructive
protein	maintain	metabolic
source	release	

Exercise 2. Read the following word combinations:

Activity: increased activity of the brain , mental activity, electrical activity, illegal activity, to stimulate activity, cortical activity, milk-electing activity;

Compound: essential compound, protein compound, chemical compound, compound microscope, complicated compounds;

Protein: vegetable protein, whey protein, regenerated protein, defensive protein, crude protein;

Release: release energy, release the waste products, release hormones, to be released by glands;

Substance: harmful substance, poisonous substance, natural substance, pure substance, soluble substance, medicinal substance, to contain substance.

Exercise 3. Read and translate the text:

Metabolism

Metabolism is the chemical reactions in the body's cells that change food into energy. Our bodies need this energy to do everything from moving to thinking to growing.

Specific proteins in the body control the chemical reactions of metabolism. Thousands of metabolic reactions happen at the same time — all regulated by the body — to keep our cells healthy and working.

After we eat food, the digestive system uses enzymes to:

- break proteins down into amino acids
- turn fats into fatty acids
- turn carbohydrates into simple sugars (for example, glucose)

The body can use sugar, amino acids, and fatty acids as energy sources when needed. These compounds are absorbed into the blood, which carries them to the cells.

After they enter the cells, other enzymes act to speed up or regulate the chemical reactions involved with "metabolizing" these compounds. During these processes, the energy from these compounds can be released for use by the body or stored in body tissues, especially the liver, muscles, and body fat.

Metabolism is a balancing act involving two kinds of activities that go on at the same time:

- building up body tissues and energy stores
- breaking down body tissues and energy stores to get more fuel for body functions

Anabolism (the buildup of substances), or constructive metabolism, is all about building and storing. It supports the growth of new cells, the maintenance of body tissues, and the storage of energy for future use. In anabolism, small molecules change into larger, more complex molecules of carbohydrates, protein, and fat.

Catabolism (the breakdown of substances), or destructive metabolism, is the process that produces the energy needed for all activity in the cells. Cells break down large molecules (mostly carbs and fats) to release energy. This provides fuel for anabolism, heats the body, and enables the muscles to contract and the body to move.

As complex chemical units break down into more simple substances, the body releases the waste products through the skin, kidneys, lungs, and intestines.

Several hormones of the endocrine system help control the rate and direction of metabolism. Thyroxine, a hormone made and released by the thyroid gland, plays a key role in determining how fast or slow the chemical reactions of metabolism go in a person's body.

Another gland, the pancreas, secretes hormones that help determine whether the body's main metabolic activity at any one time are anabolic or catabolic. For example, more anabolic activity usually happens after you eat a meal. That's because eating increases the blood's level of glucose — the body's most important fuel. The pancreas senses this increased glucose level and releases the hormone insulin, which signals cells to increase their anabolic activities.

Metabolism is a complicated chemical process. So, it's not surprising that many people think of it in its simplest sense: as something that influences how easily our bodies gain or lose weight. That's where calories come in. A calorie is a unit that measures how much energy a particular food provides to the body. A chocolate bar has more calories than an apple, so it provides the body with more energy — and sometimes that can be too much of a good thing. Just as a car stores gas in the gas tank until it is needed to fuel the engine, the body stores calories — primarily as fat. If you overfill a car's gas tank, it spills over onto the pavement. Likewise, if a person eats too many calories, they "spill over" in the form of excess body fat.

The number of calories someone burns in a day is affected by how much that person exercises, the amount of fat and muscle in his or her body, and the person's **basal metabolic rate (BMR)**. BMR is a measure of the rate at which a person's body "burns" energy, in the form of calories, while at rest.

The BMR can play a role in a person's tendency to gain weight. For example, someone with a low BMR (who therefore burns fewer calories while at rest or sleeping) will tend to gain more pounds of body fat over time than a similar-sized person with an average BMR who eats the same amount of food and gets the same amount of exercise.

BMR can be affected by a person's genes and by some health problems. It's also influenced by body composition — people with more muscle and less fat generally have higher BMRs. But people can change

their BMR in certain ways. For example, a person who exercises more not only burns more calories, but becomes more physically fit, which increases his or her BMR.

Exercise 4. Answer the questions:

1. What is metabolism?

2. Why are enzymes necessary for the digestive system?

3. What are the body's energy sources?

4. How does metabolism act?

5. What is anabolism?

6. What is catabolism?

7. What does catabolism provide?

8. What controls metabolism?

9. What is a calorie?

10. What is BMR?

Exercise 5. Match the terms to their explanation:

1. protein 2. carbohydrate 3. starch 4. glucose 5. fat 6. insulin	a) is a molecule that have carbon, hydrogen and oxygen atoms and is an energy source; b) is a large biomolecule made up of amino acids that join together to form long chains; c) is an essential part of our diet along with carbohydrates and proteins; d) a simple sugar containing six carbon atoms, it is an important source of energy; e) is a hormone that your pancreas makes to allow cells to use glucose; f) a white odorless tasteless granular or powdery complex carbohydrate.

Exercise 6. Look at the table and learn nutrients needed by the body and what they are used for:

Type of nutrient	Where it is found	How it is used
Carbohydrate (starches and sugars)	• Breads • Grains • Fruits • Vegetables • Milk and yogurt • Foods with sugar	Broken down into glucose, used to supply energy to cells. Extra is stored in the liver.

Protein	• Meat • Seafood • Legumes • Nuts and seeds • Eggs • Milk products • Vegetables	Broken down into amino acids, used to build muscle and to make other proteins that are essential for the body to function.
Fat	• Oils • Butter • Egg yolks • Animal products	Broken down into fatty acids to make cell linings and hormones. Extra is stored in fat cells.

Exercise 7. Read the sentences having different forms of Participles:

1. Excess carbohydrate, not immediately required by the body, is stored in the liver and muscles in the form of glycogen

2. The circulating volume of the blood depends on the changes in the air temperature.

3. Excess protein, not required by the body, can be converted into glucose and used as an energy source.

4. The inorganic salts, absorbed from the soil or water, are built up by living things into organic salts.

5. The protein molecule is a complex structure made up of one or more chains of amino acids.

6. Proteins, carbohydrates and fats are complicated compounds found in plant and animal matter.

7. Metabolism is the term applied to all changes that occur in the body in connection with the use of food.

8. The glucose required for immediate use is carried straight through the liver and enters the circulation.

Exercise 8. Change the sentences using the Passive voice:

Model: Amino acids synthesize proteins in the body. → Proteins are synthesized in the body by amino acids.

1. A high concentration of salt or sugar will check the growth of many bacteria.

2. Milk may transmit infection from animals to man.

3. Special enzymes convert proteins into simple amino acids so that the body can use them.

4. The kidneys excrete the waste products of protein metabolism in the urine.

5. A lot of people use herbs as food.

6. Plants form the base of the natural food chain.

7. The most active tissues of the body require glucose.

8. The production of heat and energy needs the use of fats as fuel.

Exercise 9. Fill in prepositions where necessary:

1. Glucose occurs ... many fruits and is present ... the blood ... animals.

2. Hydrogen, oxygen and nitrogen are ... the most common.

3. Some vegetable foods are very rich ... proteins.

4. The condensation ... amino acids leads ... building ... proteins.

5. Proteins are separated ... groups based chiefly ... physical properties.

6. The granules of starch can be recognized ... a microscope, … the iodine test.

7. Fructose is produced directly ... photosynthesis.

8. The urea being useless for fuel is carried away … the blood stream and excreted … the blood … the kidneys.

Exercise 12. Put questions to the underlined words:

1. The vitamins and certain salts act as regulators of tissue activity.

2. Fuel is required to produce the energy for the body activity.

3. The infants and children require extra building material for the process of growth.

4. We should eat less fat.

5. Glucose contains six carbon atoms.

6. Metabolic changes take place in every living thing.

7. The waste products of the combustion of the carbohydrates are carbon dioxide and water.

8. The fatty acids combine with alkalines in the intestine to form soap.

Exercise 10. Open the brackets using correct voice. Translate the sentences:

1. The diet (to be) the daily ration of foods required by the individual.

2. The caloric value required by the individual (to affect) by age, exercise, sex, weight and build, climate and weather, temperament.

3. The amount of carbohydrate required (to depend) on the energy output.

4. A man doing heavy work (to require) more carbohydrates than a sedentary worker.

5. It (to be) also essential that the food (should, to contain) cellulose. It is indigestible and therefore (to remain) in the bowels and (to stimulate) it to empty.

6. The value of foods (to calculate) by the amount of heat which they (to give) on combustion.

7. The heat (to measure) in calories.

8. The caloric value of a normal diet (should, to be) 3,000 to 3,300 calories per day.

VITAMINS AND MINERALS

Exercise 1. Topic vocabulary:

nouns	verbs	adjectives/adverbs
copper	expose (to)	diverse
exception	ingest	fat-soluble
iodine	store	sufficient
iron	strengthen	naturally
nutrient		water-soluble
potassium		
sodium		
sulfur		
tin		

Exercise 2. Read the word combinations with the new words:

Compound: acid compound; iodine compound; oxygenated compound; low molecular weight compound.

Exception: without exception; an exception to the rule; as an exception; make an exception; be no exception.

Nutrient: nutrient medium; nutrient absorption; nutrient excess; intravenous nutrient; nutrient-enriched food.

Sufficient: sufficient quantity; sufficient skills; sufficient energy; self-sufficient; sufficient reason.

Exercise 3. Form nouns with the help of the following suffixes, translate them into Ukrainian:

-ance(-ence): perform, assist, differ, maintain, appear, occur, disturb, resist

-ion: except, reflect, direct, ingest, suggest, collect, infect, solute, combine

Exercise 4. Read the text:

Vitamins and Minerals

A vitamin is an organic compound required as a nutrient in tiny amounts by an organism. In other words, an organic chemical compound is called a vitamin when it cannot be synthesized in sufficient quantities by an organism, and must be obtained from the diet. If a molecule can be synthesized in the body,

it is not a vitamin. The single exception to this rule is vitamin D which can be synthesized in the skin, but only when exposed to sunlight and Niacin (B3) which itself can be synthesized in the liver in small amounts.

Vitamins are classified as either water-soluble or fat-soluble. There are 13 universally recognized vitamins: 4 fat-soluble (A, D, E, and K) and 9 water-soluble (8 B vitamins and vitamin C). Fat-soluble vitamins are stored in the body's fatty tissue, so they do not need to be ingested every day. Water soluble vitamins cannot be stored and must be ingested frequently for optimal health. They are easily excreted through the urine.

Vitamins have diverse biochemical functions. For example, vitamin A helps to develop and maintain body tissues such as bone and skin; it also helps the body's vision. Vitamin C helps form tissues, cells, bones and teeth and improves the immune system's performance.

Along with vitamins human body needs a certain amount of minerals. There are 20 minerals including copper, iodine, chromium, iron, tin, zinc, magnesium, sodium, potassium, chlorine, phosphorus, calcium, sulfur and others. The body uses minerals to perform many different functions — from building strong bones to transmitting nerve impulses. Some minerals are even used to make hormones or maintain a normal heartbeat. For example, copper is needed by enzymes for metabolizing; iodine assists the thyroid gland in working properly; calcium and phosphorus build bones and teeth; iron delivers oxygen to the body's cells, and so on.

Vitamins and minerals not only help the body function, but they work to strengthen each other. The body absorbs iron through the help of vitamin C. Vitamin D helps the body absorb phosphorus and calcium.

A diet naturally high in vitamins and minerals can be the best defense against many diseases. You can develop health problems if you do not get enough of a particular vitamin. It is good to know that fat-soluble vitamins should be taken before meals, and water-soluble ones should be taken after meals.

Exercise 5. Answer the questions:

1. What vitamins can be synthesized in the body?
2. How are vitamins classified?
3. How many vitamins are universally recognized?
4. Why is it unnecessary to ingest fat-soluble vitamins daily?
5. How are water-soluble vitamins excreted out of the body?
6. What minerals are there?
7. What does iron do in the body?
8. How do vitamins and minerals strengthen and help each other?

Exercise 6. Match the words to their definitions:

1. vitamin	a) any vitamin that is soluble in water
2. fat-soluble vitamin	b) an inorganic element, such as calcium, iron, potassium, sodium, or zinc, that is essential for the nutrition of humans, animals, and plants;
3. water-soluble vitamin	c) any substance that nourishes an organism
4. nutrient	d) any of various organic compounds that are needed in small amounts for normal growth and activity of the body
5. mineral	e) any vitamin that is soluble in fats

Exercise 7. Put the words in the correct order to make questions:

1. can / be / How / vitamins / classified?

2. Where / produced / vitamins / are / synthetic?

3. helps / change / into energy / What / the body cells / carbohydrates?

4. folate / does / form / help / What?

5. for / What / essential /is / biotin?

6. the body / leave / vitamins / do / How / water-soluble?

7. What / the body's fatty tissue / vitamins / stored / are / in?

8. the first / isolated / Who / vitamin complex?

Exercise 8. Put questions to the underlined words:

1. Vitamin supplements are usually available as isolated vitamins or in combination with other nutrients.

2. The skin creates vitamin D when it is exposed to sunlight.

3. Vitamin K is produced by intestinal bacteria.

4. Along with vitamins human body needs a certain amount of minerals.

5. Iodine assists the thyroid gland in working properly.

6. The body absorbs iron through the help of vitamin C.

7. Calcium and phosphorus build bones and teeth.

8. The body absorbs iron through the help of vitamin C.

Exercise 9. Ask questions beginning with the question word given in brackets:

1. Cashmir Funk was the first scientist who used the term "vitamine". (Who?)
2. In the 1930s a scientific discovery demonstrated the biochemical functions of the vitamins. (When?)
3. Vitamins have been commercially produced since 1930. (Since what time?)
4. Niacin can lower blood cholesterol levels. (What?)
5. Vitamins were given letters to go with their chemical names to simplify discussion about them. (Why?)
6. Fat-soluble vitamins are absorbed through the intestinal tract. (How?)
7. Water-soluble vitamins dissolve easily in water. (Where?)
8. Vitamin C promotes wound healing. (What?)

Exercise 10. Open the brackets, using the verbs in either active or passive tenses:

1. Vitamins (to contribute) to good health by regulating the metabolism and assisting the biochemical processes of the body.

2. Water-soluble vitamins (to excrete) out of the body within one day.

3. Vitamin D (to help) the body absorb calcium.

4. Vitamin E (to know) as tocopherol.

5. Scientific research (to prove) that excesses of isolated vitamins or minerals can produce vitamin poisoniong.

6. Vitamin supplements (to divide) into two groups: synthetic and natural.

7. The term “vitamin” (to derive) from “vitamine” by Polish scientist Casimir Funk.

8. In 1812 Polish biochemist Casimir Funk (to isolate) a complex of micronutrients and named them “vitamines”.

Exercise 11. Change the sentences as in the model (using Passive Voice instead of Active Voice): Model: *Enzymes need copper for metabolizing. – Copper is needed by enzymes for metabolizing.*

1. Iron delivers oxygen to the body’s cells.
2. Vitamins and minerals strengthen each other.
3. The skin creates vitamin D when it is exposed to sunlight.
4. The body absorbs iron through the help of vitamin C.
5. Polish scientist Casimir Funk made up a combination word "vitamine" from *vital* and *amine.*
6. Medical men used lipid from fish oil to cure rickets during the late 18th and early 19th centuries.
7. In 1881, Russian surgeon Nikolai Lunin studied the effects of scurvy.
8. Japanese scientist Umetaro Suzuki isolated the first vitamin complex in 1910.

Exercise 12. Put the sentences into the correct order to explain the term “vitamin”:

__Water soluble vitamins cannot be stored, with the exceptions of B_{12} and Folic Acid and must be ingested frequently for optimal health.

__Vitamins are classified as either water-soluble or fat-soluble.

__There are 13 universally recognized vitamins: 4 fat-soluble (A, D, E, and K) and 9 water-soluble (8 B vitamins and vitamin C).

__A vitamin is an organic compound that is needed in a small amount for normal growth and activity of the body.

__Fat-soluble vitamins are stored in the body's fatty tissue, so they do not need to be ingested every day.

Exercise 13. Put the sentences into the correct order to explain the term “mineral”:

__For example, the body absorbs iron through the help of vitamin C and vitamin D helps the body absorb phosphorus and calcium.

__Minerals are essential for the nutrition of humans, animals, and plants.

__A mineral is an inorganic element, such as calcium, iron, potassium, sodium, or zinc.

__Vitamins and minerals not only help the body function, but they work to strengthen each other.

__There are 20 minerals, which play significant roles in the body.

HEALTHY NUTRITION

Task 1. Key words.

nouns	verbs	adjectives/adverbs
anorexia	absorb	proper
bulimia	avoid	saturated
carbohydrate	suffer	unsaturated
drinking water		
fat		
glucose		
heartbeat		
junk food		
obesity		
protein		

Task 1. Read the text.

Nutrition

Food provides the energy and nutrients you need to be healthy. Nutrients include proteins, carbohydrates, fats, vitamins, minerals and water.

Protein is in every living cell in the body. Our bodies need protein from the foods we eat to build and maintain bones, muscles and skin. We get proteins in our diet from meat, dairy products, nuts and certain grains and beans. It is important to get enough dietary protein. You need to eat protein every day, because your body doesn't store it the way it stores fats or carbohydrates. The average person needs 50 to 65 grams of protein each day.

Carbohydrates are one of the main types of nutrients. They are the most important source of energy for your body. Your digestive system changes carbohydrates into glucose (blood sugar). Your body uses this sugar for energy for your cells, tissues and organs. It stores any extra sugar in your liver and muscles for when it is needed.

Carbohydrates are called simple or complex, depending on their chemical structure. Simple carbohydrates include sugars found naturally in foods such as fruits, vegetables, milk, and milk products. Complex carbohydrates include whole grain breads and cereals, starchy vegetables and legumes.

Fat is a major source of energy and aids your body in absorbing vitamins. It's important for proper growth, development and keeping you healthy. Fats are an especially important source of calories and nutrients for infants and toddlers.

Dietary fat also plays a major role in your cholesterol levels. But not all fats are the same. You should try to avoid

- Saturated fats such as butter, solid shortening, lard and fatback
- Trans fats, found in vegetable shortenings, some margarines, crackers, cookies, snack foods

Vitamins should be supplied daily in the diet. Your body uses minerals for many different jobs, including building bones, making hormones and regulating your heartbeat.

The food which contains all above nutrients and provides the optimal growth and development is known as a balanced diet, whereas an unbalanced diet causes various health problems, such as obesity, anorexia, bulimia.

In today's fast-moving world people have less and less time to spend eating, let alone cooking. It is probably for this reason that junk food has become so popular. Junk food includes anything that is high in calories but lacking in nutrition. The researchers suggest that the new generation will be much more likely to suffer from heart and liver diseases because of unhealthy food. Learning to eat nutritiously is not hard. The key is to

- Eat a variety of foods, including vegetables, fruits and whole-grain products
- Eat lean meats, poultry, fish, beans and low-fat dairy products
- Drink lots of water
- Go easy on the salt, sugar, alcohol, saturated fat and trans fat

Task 3. Answer the questions.

1. What is the main function of food? List the nutrients we get from food.
2. What is the role of protein?
3. Which food contains protein?
4. What is the most important source of energy for your body?
5. What types of carbohydrates are there? Where can we get them from?
6. What do we need fat for? Which fats are not healthy?
7. What kinds of minerals are there? Give examples.
8. Which problems can unbalanced diet cause?
9. What would you recommend to provide balanced diet for your patient?

Task 4**. Determine the role of nutritional substances in our lives.**

1. minerals	*a.* building and maintaining bones, muscles, skin.
2. carbohydrates	*b.* absorption of vitamins, proper growth especially for infants and toddlers.
3. proteins	*c.* source of energy for cells, tissues and organs.
4. vitamins	*d.* building bones, making hormones, regulation of heartbeat
5. fats	*e.* synthesis of DNA, RNA, cell division, energy metabolism, bone and teeth development.

Task 5. **Compose word-combinations using adjectives and nouns.**

Adjectives: saturated, trans, dietary, solid, macro, trace, simple, complex, hydrogenated, olive, sunflower, drinking, balanced, healthy, unbalanced, junk, high in calories, lacking in nutrition, snack

Nouns: carbohydrates, fats, minerals, water, diet, food, product, oils

Task 6. **Complete the sentences by using appropriate prepositions.**

from, into, for, on (x2), in (x2), as

1. Daily consumption of water depends_____ your size and activity level.
2. Fats play an important role _____ cholesterol level.
3. Our generation suffers _____ heart and liver diseases because of unhealthy food.
4. Vitamins and different minerals should be supplied_____ our diet.
5. People should go easy_____ saturated fat, salt, sugar and alcohol.
6. The food which provides the optimal growth and development is known_____ a balanced diet.

7. Fats are important_____ proper growth and development of the body.
8. The digestive system changes carbohydrates _____ glucose.

Task 7. **Divide foods into three groups. Indicate which of them are good for health, and which are not.**
legumes, grain breads, starchy vegetables, dairy products, poultry, lard, cereals, butter, soybeans, shortening, nuts, meat, grains, fruits, olive and sunflower oil, fatback.
Proteins: _____
Carbohydrates: _____
Fats:_____
Which of the healthy foods do you eat each day? What would you like to add to your diet?

Task 8. **Fill in the blanks with the words from the table.**

calories, fats, cholesterol, balanced diet, malnutrition, carbohydrates, minerals, vitamins, fast food, genetically modified

Most children enjoy eating 1_____, but scientific tests have shown us that burgers and pizzas can lack essential 2_____ and 3_____, which are important for health and growth, while simultaneously containing large amount of 4 _____ and 5 _____ which can result in obesity and health problems. Many children end up suffering from, 6_____ since they eat too much of the wrong sort of food. Dieticians tell us that we must eat a 7 _____ as it is essential we consume sufficient quantities of the different food groups. They tell us that we should all eat more fiber and fewer foods which are high in 8_____, as it can block the walls of arteries and lead to heart problems.

Many of the ready-prepared foods we buy from supermarkets are high in 9_____. 10 _____ foods are appearing on our supermarket shelves, even though nobody is really sure if altering the composition of food cells is safe.

Task 9. Open the brackets. Use Present Simple.
1. A healthy lifestyle_____ (help) to keep a healthy body, mind and spirit.
2. A diet _____ (influence) your health.
3. A wide variety of different sorts of food _____ (provide) the right mixture of carbohydrates, fats and proteins.
4. Dietary problems _____ (come) from eating too many calories and not enough fibre.
5. Those people who _____ (eat) a high-fat, low-fibre diet have a much greater risk of heart disease.
6. The body's metabolism _____ (work) more efficiently with a regular supply of nutrients.
7. Taking any form of exercise three times a week _____ (improve) your overall fitness.
8. The human body _____ (have) millions of cells that require nutrients and energy.

Task 10. Read the text and put questions to the underlined words.
Food we eat also influences our health. Nowadays people are very busy and they often eat in fast food restaurants as they don't have time to cook. Fast food is unhealthy. It is very rich in calories and has a lot of additives. This food gives a lot of energy. But if you don't work it out, it becomes fat in your body. The same is with chocolates, cakes and sweets. They have much fat and sugar.

People should get rid of a habit of eating fast food and get into a habit of eating organic food such as fruit, vegetables and fish.

There are other bad habits, which can ruin our health. It is smoking, drinking alcohol and using drugs.