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МИНИСТЕРСТВО СЕЛЬСКОГО ХОЗЯЙСТВА РОССИЙСКОЙ ФЕДЕРАЦИИ
ДЕПАРТАМЕНТ ОБРАЗОВАНИЯ, НАУЧНО-ТЕХНОЛОГИЧЕСКОЙ ПОЛИТИКИ И РЫБОХОЗЯЙСТВЕННОГО КОМПЛЕКСА
ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ БЮДЖЕТНОЕ ОБРАЗОВАТЕЛЬНОЕ УЧРЕЖДЕНИЕ ВЫСШЕГО ОБРАЗОВАНИЯ
«ДОНСКОЙ ГОСУДАРСТВЕННЫЙ АГРАРНЫЙ УНИВЕРСИТЕТ»
(ФГБОУ ВО Донской ГАУ)

К.З. Островская

АНГЛИЙСКИЙ ЯЗЫК В СФЕРЕ ПРОФЕССИОНАЛЬНОЙ ДЕЯТЕЛЬНОСТИ : ВЕТЕРИНАРИЯ

Практикум



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Практикум

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О 77

Рецензенты

Болотина А.А., *старший преподаватель кафедры иностранных языков ФГБОУ ВО «Донской ГАУ»*

Мальцева Илона Анатольевна, *старший преподаватель кафедры иностранных языков ФГБОУ ВО «Донской ГАУ»*

Островская, К. З.

О 77 Английский язык в сфере профессиональной деятельности : Ветеринария : практикум / К. З. Островская ; Донской ГАУ. – Персиановский : Донской ГАУ, 2022. – 99 с.

Практикум адресован обучающимся по специальности 36.02.01 Ветеринария. Целью практикума является развитие навыков работы с англоязычными текстами ветеринарной направленности, совершенствование навыков чтения, перевода и устной речи. Текстовый материал и задания высокого научно-методического уровня формируют базу для взаимосвязанного развития навыков и умений основных видов речевой деятельности, развивают иноязычную речевую лексическую компетенцию будущего специалиста, формируют положительную мотивацию к изучению представленных тем и предмета в целом.

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INTRODUCTION

Данный практикум подготовлен в соответствии с рабочей программой дисциплины «Иностранный язык в сфере профессиональной деятельности», разработанной обучающихся по специальности 36.02.01 Ветеринария.

Практикум состоит из семи разделов, охватывает основные темы, представленные в рабочей программе дисциплины «Иностранный язык в сфере профессиональной деятельности»: 1. Ветеринарная медицина; 2. Ветеринары и специалисты в ветеринарной сфере; 3. Таксономия животных; 4. Поведение животных; 5. Виды животных: дикие и домашние животные, питомцы; 6. Системы органов; 7. Болезни животных.

Представленные в практикуме разнообразные по форме и содержанию задания основаны на активных технологиях обучения, направлены на формирование иноязычной речевой лексической компетенции будущего специалиста, способствуют формированию положительной мотивации к изучению представленных тем и предмета в целом.

Цель практикума - развитие навыков работы с англоязычными текстами ветеринарной направленности, совершенствование навыков чтения, перевода и устной речи. Предлагаемый в практикуме материал способствует формированию профессиональной направленности в обучении.

Практикум рекомендуется к использованию для аудиторной работы обучающихся по специальности 36.02.01 Ветеринария.

UNIT 1. VETERINARY MEDICINE



1. Find the Russian equivalents of the following words and word combinations. Learn the given vocabulary by heart.

ACTIVE VOCABULARY LIST

treatment _____
prevention _____
health _____
disease _____
disorder _____
injury _____
condition _____
animal species _____
human health _____
food safety _____
the scope of... _____
veterinary physician _____
veterinary surgeon _____
veterinary nurse _____
veterinary technician _____
paraprofessional (n.) _____
affect _____
deal with ... _____
is led by ... _____
keep animals _____
transmit from ... to ... _____
maintain _____
collaborate with ... _____
depend on ... _____
look after ... _____
be obligated to do smth. _____

can be augmented _____

healthy _____

long living _____

2. Match the words with their definitions. Then translate them.

1. health	a. the condition of being protected from hurt, injury, or loss
2. species	b. an illness that affects a person, animal, or plant
3. disease	c. farm animals (such as cows, horses, and pigs) that are kept, raised, and used by people
4. treatment	d. the condition of being well or free from disease
5. paraprofessional	e. a set of animals or plants in which the members have similar characteristics
6. safety	f. the combating of a disease or disorder; called also therapy
7. livestock	g. a person whose job is to help a professional person

3. Read the article.

VETERINARY MEDICINE

Veterinary medicine is the branch of medicine that deals with the prevention, diagnosis and treatment of disease, disorder and injury in animals. The scope of veterinary medicine is wide, covering all animal species, both domesticated and wild, with a wide range of conditions which can affect different species.

Veterinary medicine is widely practiced, both with and without professional supervision. Professional care is most often led by a veterinary physician also known as a vet, a veterinary surgeon or a veterinarian. Professional care can be also led by workers such as veterinary nurses or technicians. This can be augmented by other paraprofessionals with specific specializations such as animal physiotherapy or dentistry. Veterinary science helps human health through the monitoring and control of zoonotic diseases which are infectious diseases transmitted from animals to humans. Veterinary science also controls food safety. Besides, it helps to maintain food supply through livestock health monitoring and treatment, and mental health by keeping animals healthy and long living. Veterinary scientists often collaborate with epidemiologists, and other health or natural scientists depending on type of work. Ethically, veterinarians are usually obliged to look after animal welfare.



4. Answer the questions.

1. What does veterinary medicine deal with?
2. What is the scope of veterinary medicine?
3. Who performs professional care in veterinary practice?
4. What is the role of veterinary science in human health?
5. What disease are called zoonotic?
6. Who do veterinary scientists collaborate with?

5. Choose the correct alternative.

1. Veterinary medicine is the branch of medicine that deals with the prevention, diagnosis and treatment of disease, disorder and injury in ***animals/humans.***
2. The scope of veterinary medicine is ***zoonotic/domesticated*** and wild animals.
3. Veterinary medicine is practiced with and without professional ***supervision/livestock.***

4. Professional care is most often led by a veterinary ***disease/physician***.
5. Professional care can be led by paraprofessionals with specific specializations such as animal ***injury/physiotherapy*** or dentistry.
6. Veterinary science helps human health through the monitoring and control of ***zoonotic/disorder*** diseases.
7. Veterinary science controls ***natural scientists/food safety***.
8. Veterinary science helps to maintain food supply through ***livestock/collaborate*** health monitoring and treatment.
9. Mental health is maintained by keeping animals ***ethically/healthy*** and long living.
10. Veterinary scientists often collaborate with epidemiologists, and other health or natural ***scientists/treatment.***

6. Complete the sentences with the following words: *transmitted, collaborate, deals, affect, maintain, control.*

1. Zoonoses are infectious diseases of animals that can be naturally _____ to humans.
2. 75 percent of recently emerging infectious diseases that _____ humans are diseases of animal origin.
3. Veterinary science_____ with the health and wellbeing of animals.
4. If farmers want to prevent the spread of disease between animals, they should _____ clean and healthy living conditions of livestock.
5. Foot rot can be one of the most difficult diseases to _____
6. Veterinarians _____ with physicians and public health agencies to prevent and control diseases transmitted from animals to people.

7. Read the text. Fill in the gaps with the proper words:

treatment
cause
harmful
eliminate

suffer
sanitary
domestication
infectious
prevention
intercommunicable
immunization
domestic
fever
symptoms
spread

Veterinary was founded many thousand years ago in relation with man's requirements. The word "veterinarius" is a Latin word. It means taking care of animals and_____ of livestock. The development of veterinary is connected with _____ of wild animals.

Veterinary Science is also called veterinary medicine and includes the_____, diagnosis, and treatment of the diseases of _____ animals and the management of other animal disorders. The field also deals with those diseases that are _____ between animals and humans. Farm animals are susceptible to various infectious diseases and may _____ from viruses and _____ bacteria, so animals should be examined by veterinary surgeons regularly in order to notice disease _____ in time and take the necessary preventive and control measures. Such common animal diseases as mastitis, brucellosis, swine _____, anthrax, and leptospirosis can quickly spread and _____ major losses among stock animals, so they must be controlled or prevented by veterinary surgeons.

Vaccination and _____, _____ measures, and the severe segregation, or quarantine of sick animals should be used by farmers and veterinary surgeons to prevent the _____ of_____ diseases such as anthrax, bovine tuberculosis, brucellosis, canine distemper, and rabies. Sanitary control of animal housing and proper pasture management are to _____ any carriers of animal infectious diseases which can be easily transmitted by water and soil

8. Translate the text with a dictionary.

Ветеринария – область науки и практическая деятельность человека, направленная на предупреждение и лечение болезней животных, на производство полноценных в ветеринарно-санитарном отношении продуктов животноводства и на защиту населения от болезней, общих для человека и животных.

Основные направления современной ветеринарии – разработка новейших методов защиты животных от возбудителей болезней, в первую очередь, от вирусных и гельминтозов, и своевременное ветеринарное обслуживание животных в животноводческих комплекса.

9. Learn more about veterinary medicine. Find some information on the history of veterinary science.

10. How can you describe the role of veterinary medicine? Speak about veterinary science and its main tasks.

UNIT 2. VETERINARIANS AND VETERINARY SPECIALISTS



1. Find the Russian equivalents of the following words and word combinations. Learn the given vocabulary by heart.

ACTIVE VOCABULARY LIST

be responsible for … _____

tooth extraction _____

perform laboratory tests _____

prepare tissue samples _____

take into account _____

nutritional and physical needs _____

balanced rations of food _____

medical and surgical treatment _____

prescribe medicines _____

perform surgery _____

control animal welfare _____

conduct research _____

improve animal health _____

inspect smth for … _____

reduce death rate in animals _____

well-being of animals _____

sick animals _____

increase animal productivity _____

2. What are the duties of the following specialists? Match and discuss.

Veterinary surgeons	*are responsible for the oral health of animals. They job duties include: examination and cleaning teeth of animals, fillings and tooth extraction, oral surgery, treating paradontosis disease in animals.*
Food safety and inspection veterinarians	*performs many of the same duties for a veterinarian that a nurse does for a physician, e. g. laboratory and clinical procedures They often perform various medical tests, treat and diagnose medical conditions or diseases in animals. For example, they may perform laboratory tests such as urinalysis and blood counts, assist with dental prophylaxis, prepare tissue samples, take blood samples, or assist veterinarians in a variety of tests and analyses.*
Veterinary dentists	*take into account the nutritional and physical needs of an animal and formulates balanced rations of food for them.*
Animal nutritionists	*are responsible for the medical and surgical treatment of a range of animals, including domestic, zoo and farm animals. They also work to prevent disease in animals and the spread of disease. They*

	combine their knowledge of animal physiology, nutrition and medicine with practical skills to diagnose illnesses, prescribe medicines and perform surgery. They also manage anesthesia during procedures.
Veterinary technologists and technicians	*inspect and test livestock and animal products for major animal diseases, provide vaccines to treat animals, control animal welfare, conduct research to improve animal health, and enforce government food safety regulations.* *They design and administer animal and public health programs for the prevention and control of diseases transmissible among animals and between animals and people.* *They inspect food designed for human consumption*

3. Read the text. Identify the key-words and write them out. Suggest a headline to each paragraph.

VETERINARIANS



1. Veterinarians diagnose and treat diseases of animals. They care for the health of pets, livestock, and animals in zoos and laboratories. Some vet doctors protect humans against dis- eases carried by animals. Other vets work in basic research, broadening the knowledge of animals and medical science. Vets diagnose animal health problems, vaccinate against diseases, medicate animals from infections or illnesses, perform surgery.

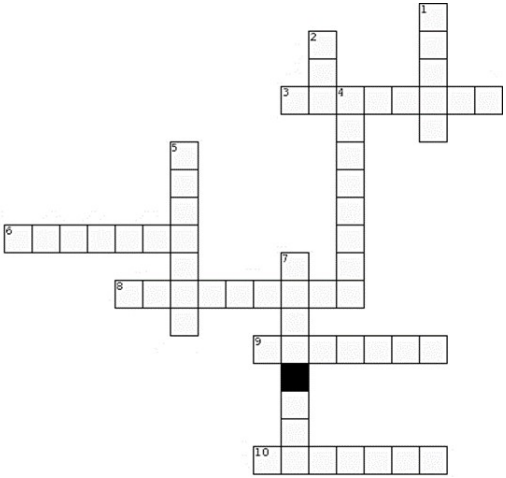
2. Most vets treat pets, they usually care for dogs and cats but also treat birds, reptiles, rabbits, and other animals. Some veterinarians work in private mixed and food animal practices, where they see pigs, goats, cattle, sheep, and some wild animals.

3. Veterinarians who work with food animals usually provide veterinary services for herds or individual animals. These veterinarians test for and vaccinate against diseases and consult the farmers. They also treat and perform surgery. Other veterinarians care for zoos, aquariums, or with laboratory animals.

4. Veterinarians who treat animals use medical equipment such as stethoscopes, surgical instruments, and diagnostic equipment, including radiographic and ultrasound equipment. Veterinarians working in research use a lot of modern laboratory equipment.

4. Complete the crossword with the English equivalents of the verbs below:

1. лечить
2. использовать
3. лечить лекарственными средствами
4. ставить диагноз
5. защищать
6. консультировать
7. заботиться, осуществлять уход
8. вакцинировать
9. выполнять
10. обеспечивать



5. Translate the following words and phrases into Russian.

in spite of; branches of science; to provide the population with food; the raw materials; consumer goods; to feed better; the production of pork, beef, eggs and milk; the task; to increase; to reduce death rate in animals; to prevent the spreading of infectious diseases; harmful environmental conditions; is paid to; well-being of animals; to treat sick animals; to control the quality of meat.

6. Read and translate the text.

VETERINARY SERVICE



Agriculture plays an important role in the development of our country. Agriculture remains the main source of providing the population with food. It supplies the necessary raw materials for the food and light industries which produce large quantities of consumer goods.

Intensification of animal husbandry is better feeding and selection, introduction of the achievements of science and advanced method, great mechanization. It ensures an in- crease in the output of animal products.

Specialization and concentration are increasing in animal husbandry. Farms for fattening of cattle, pig and poultry are set up. Large industrialized farms for the production of pork, beef, eggs and milk have been established.

The tasks set for the veterinary science today are to increase animal productivity, to reduce death rate in animals, to make prophylaxes of animal diseases.

Veterinary service should pay particular attention to the organization of veterinary work on industrial livestock and poultry farms to prevent the spreading of infectious diseases.

The foremost attention is paid to the veterinary sanitation and hygiene. They are the foundation of human health, well-being of animals, good quality of animal production and high culture of cattle-breeding.

The duty of the veterinary doctor is to prevent infectious and non-contagious diseases, to treat sick animals, to control the quality of meat, milk and eggs delivered by farms. Animal diseases cause great damage to the herds of cattle. The success of the struggle and preventive treatment against these diseases depend upon the arrangement of the veterinary service. Vaccination of animals against infectious diseases is a specialized type of work in which veterinarians may be engaged.

Biological industry has produced various drugs and preparations promoting resistance of animal body to harmful environmental conditions.

7. Complete the following sentences. Choose the ending ac-

cording to the text.

1. Agriculture remains…
2. The foremost attention is paid…
3. The tasks of the veterinary science are…
4. Intensification of animal husbandry…
5. Animal diseases cause...
6. Veterinary service should pay particular attention…
7. The duty of the veterinary doctor is…

a) is better feeding and selection, introduction of the achievements of science and advanced methods, great mechanization; b) to the veterinary sanitation and hygiene; c) to the organization of veterinary work to prevent the spreading of infectious diseases; d) to prevent infectious and non-contagious diseases, to treat sick animals; e) the main source of providing the population with food; f) to increase animal productivity, to reduce death rate in animals; g) great damage to the herds of cattle.

8. Translate the following sentences into English.

1. Задача ветеринарной службы — предотвращать распространение инфекционных болезней животных.
2. Ветеринарная служба уделяет особое внимание организации ветеринарной работы на животноводческих и птицеводческих фермах.
3. В первую очередь ветеринарная служба уделяет внимание ветеринарной санитарии и гигиене, являющимися основой здоровья животных.
4. Сегодня ветеринарному врачу отводится очень важная роль.
5. Ветеринарные врачи — это люди, любящие животных и свою профессию.
6. Ветеринарные врачи борются за здоровье и жизнь каждого животного.

9. Use the following questions in your group to talk about veterinary service.

1. What is the role of agriculture?
2. What ensures an increase in the output of animal products?

3. What tasks are set for the veterinary science today?
4. What should veterinary service pay particular attention to?
5. The veterinary sanitation and hygiene are important in animal husbandry, aren't they?
6. What is the duty of the veterinary doctor?

10. How can you describe the tasks of veterinary service or a veterinarian? Write a short text.

11. Entitle the text. Make up questions to it. Be ready to answer these questions.

Today owners of pets and other animals expect veterinary care. To provide this service, veterinarians in the USA use the skills of veterinary technologists and technicians, who perform many of the same duties for a veterinarian that a nurse does for a physician, e. g. laboratory and clinical procedures. Although specific job duties are varied by employer, there is little difference between the tasks carried out by technicians and by technologists, despite some differences in formal education and training. As a result, most workers in this occupation are called technicians.

Veterinary technologists and technicians typically conduct clinical work in a private practice under the supervision of a licensed veterinarian. They often perform various medical tests, treat and diagnose medical conditions or diseases in animals. For example, they may perform laboratory tests such as urinalysis and blood counts, assist with dental prophylaxis, prepare tissue samples, take blood samples, or assist veterinarians in a variety of tests and analyses. In addition, experienced veterinary technicians may discuss a pet's condition with its owners and train new clinic personnel. Veterinary technologists and technicians usually care for companion animals, such as cats and dogs, but can perform a variety of duties with mice, rats, sheep, pigs, cattle, monkeys, birds, fish, and frogs. Very few veterinary technologists work in mixed animal practices where they care for both small companion animals and larger, non-domestic animals.

Besides working in private clinics and animal hospitals, veterinary technologists and technicians may work in re- search facilities, where they prepare samples for laboratory examinations, and record information on an animal's genealogy, diet, weight, medications, food

intake, and clinical signs of pain. At research facilities, veterinary technologists typically work under the guidance of veterinarians or physicians. Some veterinary technologists vaccinate newly admit- ted animals and occasionally have to euthanize seriously ill, severely injured, or unwanted animals.

12. Make up sentences. Translate them in Russian.

1. pets / owners / of / veterinary / care / expect.
2. technologists / technicians / veterinary / and / conduct / private / work / in / a / clinical / practice.
3. some / vaccinate / newly veterinary / admitted / technologists / animals.
4. perform / dental / tests / they / and / with /assist / prophylaxis / laboratory.
5. treat / medical / perform / diseases / they / various / tests/ and / in / animals.
6. veterinary/animal/and/usually/cats/technicians/care/ companion/such as/and/dogs/for/technologists.

13. Translate the following sentences into English.

1. Ветеринар — это врач, лечащий животных.
2. Все владельцы животных понимают, как важно найти хорошего ветеринарного врача, которому можно доверить здоровье и жизнь своего питомца.
3. Сегодня всем домашним животным может быть оказана ветеринарная помощь.
4. Владельцы домашних животных могут получить от ветеринарного врача квалифицированный совет по кормлению и содержанию своих питомцев.
5. Ветеринарный врач может не только дать квалифицированный совет, касающийся лечения и профилактики болезней домашних животных, но и провести своевременную вакцинацию, выполнить различные медицинские тесты, а также исследовать анализы крови и мочи животного.

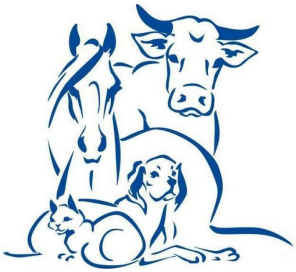
14. Develop the idea.

a) Veterinary service is responsible for …
b) Preventive measures …
c) A veterinarian is a person who …
d) At a vet clinic …

15. Make a presentation on the theme: "My future vet clinic".

Plan

1) Location
2) Building
3) Rooms and interior
4) Equipment
5) Personal staff and their duties



UNIT 3. THE WORLD OF ANIMALS



1. Find the Russian equivalents of the following words and word combinations. Learn the given vocabulary by heart.

ACTIVE VOCABULARY LIST

animal kingdom _____
plants _____
fungi _____
bacteria _____
single-celled organisms _____
phyla _____
main features _____
Invertebrate _____
Vertebrate _____
Arthropods _____
Molluscs _____

Echinoderms _____

Mammals _____

Bony Fish _____

Cartilaginous Fish _____

Amphibians _____

order _____

Carnivores _____

Primates _____

Artiodactyl _____

Rodents _____

genus _____

eukaryotic multicellular _____

heterotrophic organisms _____

backbone _____

dorsal nerve cord _____

skull _____

kidneys _____

endocrine glands _____

two chambered heart _____

gills _____

dry scaly skin _____

cold blooded _____

warm blooded _____

feathers _____

lay eggs _____

waterproof coats _____

alter the area _____

mammary glands _____

ovoviviparous _____

viviparous _____

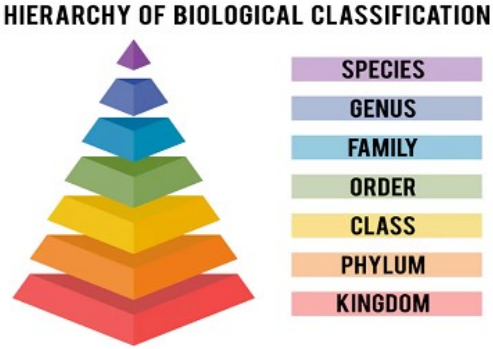
monotremes marsupials and placental mammals _____

2. Match.

1. Kingdom	a. Царство
2. Order	b. Тип
3. Class	c. Класс
4. Family	d. Семейство
5. Phylum	e. Род
6. Species	f. Вид
7. Genus	g. Отряд

3. Complete the paragraphs with the correct titles: Phylum, Order, Kingdom, Genus, Species, Class, Family.

ANIMAL TAXONOMY



In order to understand how all living organisms are related, they are arranged into different groups. Animals belong to a number of different groups, starting with the animal kingdom.

1. _____. All living organisms are first placed into different kingdoms. There are five different kingdoms to classify life on Earth: Animals, Plants, Fungi, Bacteria, and Single-celled organisms.
2. _____. The animal kingdom is divided into 40 smaller groups, known as phyla. Here, animals are grouped by their main features. Animals usually fall into one of five different phyla: Invertebrates, Vertebrates, Arthropods, Molluscs and Echinoderms.
3. _____. The phylum group is then divided into even smaller groups, known as classes. The Vertebrates phylum splits into Mammals, Bony Fish, Cartilaginous Fish, Birds, Amphibians and Reptiles.

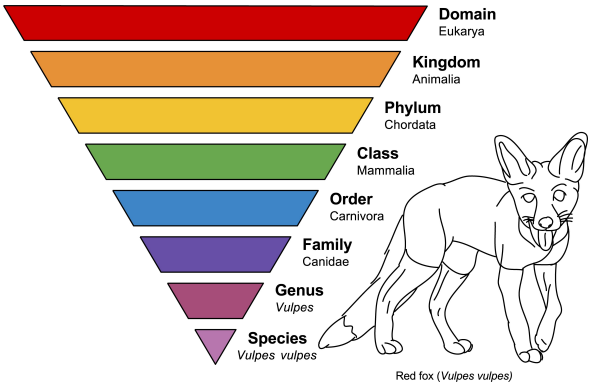
4. _____. Each class is divided into small groups again, known as orders. The class Mammals splits into different groups including Carnivores, Primates, Artiodactyl and Rodents.
5. _____. In every order, there are different families of animals which all have very similar features. Carnivores order breaks into families that include Cats (Felidae), Dogs (Canidae), Bears (Ursidae) and Weasels (Mustelidae).
6. _____. Every animal family is then divided into small groups known as genus. Each genus contains animals that have very similar features and are closely related. For example, Cat family contains genus including Felis (small Cats and domestic Cats), Panthera (Tigers, Leopards, Jaguars and Lions) and Puma (Panthers and Cougars).
7. _____. Each individual species within the genus is named after its individual features and characteristics. The names of animals are in Latin so they can be understood worldwide and consist of two words. The first word in the name of an animal will be the genus, and the second name indicates the specific species.

4. Match the halves of the sentences.

1. There are five different kingdoms	a. divided into classes.
2. Each class is divided	b. Mammals, Bony Fish, Cartilaginous Fish, Birds, Amphibians and Reptiles.
3. The phylum group is	c. which all have very similar features.
4. The Vertebrates phylum splits into	d. and the second name indicates the specific species.
5. Each individual species within the genus is	e. to classify life on Earth.
6. In every order, there are different families of animals	f. including Carnivores, Primates, Artiodactyl and Rodents.

7. The first word in the name of an animal will be the genus,	g. named after its individual features and characteristics.
8. The class Mammals, splits into different groups	h. into orders.

5. Look at the picture and tell about Red fox. Mention that the names of taxonomic ranks are given in Latin.



6. Read the text below and give a summary in English. Read your summary to the class.

ANIMALS

Animals are a diverse group of eukaryotic multicellular, heterotrophic organisms. This diverse group is often divided into two subgroups: the invertebrates and the vertebrates. The invertebrates are animals without backbones. The vertebrates are animals with a backbone that surrounds and protects the dorsal nerve cord. Three classes of vertebrates are fish; four are tetrapods. In addition to having vertebral column, vertebrates have distinct heads with skulls that houses their brains. They have closed circulatory systems and a heart to pump the blood. Most vertebrates have kidneys and endocrine glands. Vertebrates make

a diverse group consisting of animals adapted to life in the sea, on land and in the air.

The vast majority of fishes are bony fishes. Along with having bony internal skeletons these fishes have thin bony platelike scales. Fishes have two chambered hearts that pump blood to the gills. From the gills the blood moves to the rest of the body. The amphibians live both in water and on land. The young of frogs and toads undergo change from larval to adult forms during development. The amphibians have a three chambered heart.

Reptiles are better adapted to life on land than the amphibians, because of their dry scaly skin that retards water loss and their shelled eggs. Fishes amphibians and reptiles are ectothermic animals, they regulate their body temperature by taking in heat from the environment. Ectothermic animals are often called "cold blooded", though they often maintain body temperatures much warmer than their surroundings.

Birds are winged vertebrates that are covered with feathers and are adapted to flight. They lay eggs like the reptiles but have a four chambered heart like the mammals. Birds like mammals and unlike reptiles, amphibians and fishes are endothermic, that is they regulate body temperature internally. Several types of feathers form the body covering of birds, including contour feathers, and down feathers. Birds can alter the area and shape of their wings by altering the position of their feathers. Feathers provide birds with waterproof coats and play an important role in insulating birds against temperature changes.

There are about 4500 species of living mammals, including humans. Mammals are endothermic vertebrates. Mammals have hair and their females secrete milk from mammary glands to feed the young. Mammary glands are functional in female mammals and are present but non-functional in males. The milk that they produce contains water, carbohydrates, fat, protein, minerals and antibodies. Mammals have a four chambered heart with circulation to the lungs and separate circulation to the body.

Like the plants, fungi and protists, animals are eukaryotic organisms having a distinct nucleus and a cellular structure different from the prokaryotic structure of bacteria. Also, like the plants, most fungi and some protists animals are multicellular. No single celled animals exist.

7. Complete the sentences according to the text.

1. This diverse group of animals is often divided into two subgroups: ...
2. The vertebrates are animals with ...
3. In addition to having vertebral column, vertebrates have distinct ...
4. Fishes have two chambered ...
5. Reptiles are better adapted to life on land than ...
6. Birds are endothermic, that is they regulate body ...
7. Ectothermic animals are often called ...
8. Mammals have hair and their females secrete …

8. True or false?

1. Reptiles are endothermic animals.
2. The invertebrates are animals without backbones.
3. Birds can not alter the area and shape of their wings.
4. Mammary glands are functional in female mammals and are present but nonfunctional in males.
5. Ectothermic animals are often called “warm blooded”.
6. No single celled animals exist.
8. Mammals have a four chambered heart with circulation to the lungs and separate circulation to the body

9. Read the following text for comprehension. Render the text.



Amphibians

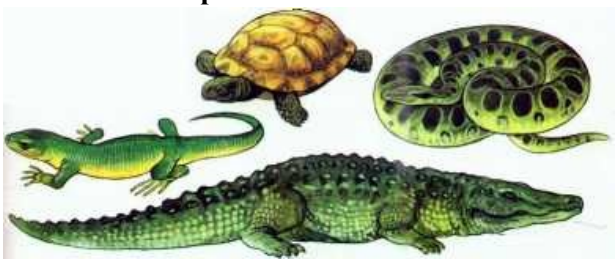
The word “amphibian” means two lives and refers both to the aquatic and terrestrial existence of this class of animals. Amphibians depend on water during their early stages of development. Many amphibians live in moist places like swamps and in tropical areas even when they are mature, which lessens the loss of water through their skin. Most frogs and toads fertilize their eggs externally. Most salamanders use the internal fertilization but are still oviparous (lay their eggs). Because amphibian eggs have no shells or membranes to keep them from

drying out, amphibians lay their eggs directly in water or in moist places. Some amphibians protect their eggs by incubating them in their mouths, on their backs, or even in their stomachs. A few amphibian species ovoviviparous and incubate their eggs within their reproductive organs until they hatch, and a few are viviparous.

10. Read the text below and answer the question. Write down the names of animals into your vocabulary, supply translation. Learn these words.

How do reptiles protect themselves from cold or heat?

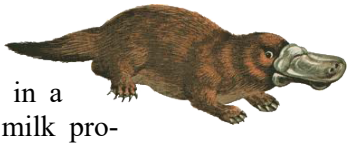
Reptiles



How do **reptiles** protect themselves from cold or heat? Reptiles The three major orders of reptiles are the crocodiles and alligators, the turtles and tortoises, and the lizards and snakes. Reptiles have dry skins covered with scales that help retard water loss. As a result reptiles can live in a wider variety of environments on land than amphibians can, but the crocodiles, alligators and turtles are aquatic organisms. Reptiles are ectothermic. Interestingly, fishes, certain lizards, invertebrates and plants produce their own internal antifreeze – chemical compounds that lower the freezing temperature of the body fluids of the organism. Along with such physiologycal adaptations, ectothermic animals protect themselves against the cold in behavioral ways. Frogs help protect themselves against freezing by spending the winter buried in the soil or in the mud at the bottom of ponds. Ectothermic animals also protect themselves from high heat by burrowing under rocks or remaining in shady, somewhat cooler areas. Reptiles often bask in the sun, which raises their body temperature, and their metabolic rate. When cold - blooded animals are cold, the metabolic rate slows down, and they are unable to hunt for food or move about very quickly.

11. Read the passage, suggest your title. Subdivide this passage into paragraphs. Make up a plan of this passage.

There are three subclasses of mammals: monotremes, marsupials and placental mammals.

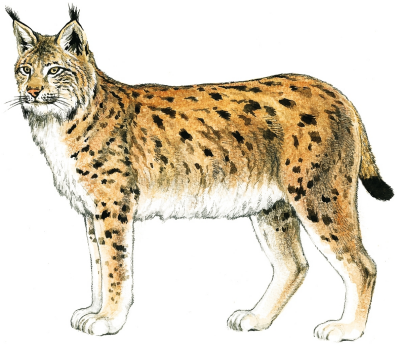


Monotremes lay eggs with leatherly shells similar to those of reptiles. The platipus generally lays one egg and incubates it in a nest. When the young hatch, they feed on milk produced by specialized sweat glands of the mother.

Marsupials are mammals in which the young are born early in their development and are retained in a pouch. After birth the embrios crawl to the pouch and nurse there until they are mature. The kangaroo and koala are familiar examples of marsupials. In placental mammals, the young develop to maturity within the mother.



Placental mammals are extraordinary diverse. The primates are the order that includes monkeys, apes, and humans. Mammals are warm - blooded and the most important distinction between mammals and other vertebrates is that all mammals and only mammals produce milk to feed their young. Only mammals possess true hair. The teeth of mammals are typically differentiated and specialized.



Certainly, the most important single factor which gives mammals their supe riority over other animals is the development of their brain. The ability to maintain the complex activities of the cerebral cortex in the higher mammals and to store memories is very largerly dependent on the ability to maintain a constant body temperature.

12. Speak about classes of animals. Give brief description of :

- Mammals;

- Bony Fish and Cartilaginous Fish;
- Birds;
- Amphibians;
- Reptiles.

UNIT 4. ANIMAL BEHAVIOR



1. Find the Russian equivalents of the following words and word combinations. Learn the given vocabulary by heart.

ACTIVE VOCABULARY LIST

interact with _____
innate behavior _____
learned behavior _____
is imprinted toward smb… _____
experience _____
is modified by smth … _____
solve new problems _____
social behavior _____
forceful behavior _____
defend ones territories _____
cyclic behavior _____
repeating pattern _____
internal or external stimulus _____
automatic response _____
animals with more complex brains _____
respond to changing situations _____
survive _____
connect smth with smth… _____
perform an action _____
without conscious thought _____

in response to certain stimuli _____

genetically hardwired in an organism _____

short life spans _____

long life spans _____

instinctive ritual behaviors _____

courtship _____

mating _____

caring for the young _____

claiming territories _____

diurnal _____

nocturnal _____

hibernation _____

estivation _____

2. What are the Russian equivalents for the underlined terms? Translate the sentences.

1. ***Behavior*** is the way an organism interacts with other organisms and its environment.

2. A behavior that an organism is born with is called an ***innate behavior.***

The simplest innate behaviors are ***reflex actions.***

An ***instinct*** is a complex pattern of innate behavior.

3. ***Learned behavior*** develops during an animal's lifetime.

Learned behavior includes ***imprinting, trial*** and ***error, conditioning***, and ***insight.***

Animals that become ***imprinted*** toward animals of another species have difficulty recognizing members of their own species.

Behavior that is modified by experience is called ***trial-and-error learning.***

In ***conditioning***, behavior is modified so that a response to one stimulus becomes associated with a different stimulus.

Insight is a form of reasoning that allows animals to use past experiences to solve new problems.

4. Interactions among organisms of the same species are examples of ***social behavior*.**
Social behaviors include ***courtship*** and ***mating, caring for the young, claiming territories, protecting each other,*** and ***getting food.***

5. ***Aggression*** is a ***forceful behavior*** used to dominate or control another animal.
Fighting and threatening are ***aggressive behaviors*** animals use to defend their territories, protect their young, or to get food.
To avoid being attacked and injured by an individual of its own species, an animal shows ***submission.***

6. A ***cyclic behavior*** is innate behavior that occurs in a repeating pattern.
Hibernation is a cyclic response to cold temperatures and limited food supplies.
Instead of hibernating, many animals move to new locations when the seasons change. This ***instinctive seasonal movement*** of animals is called ***migration.***

3. Read the text about the types of behavior. Summarize the text in three paragraphs.

TYPES OF BEHAVIOR

Animals are different from one another in their behavior. They are born with certain behaviors, and they learn others. Behavior is the way an organism interacts with other organisms and its environment. Anything in the environment that causes a reaction is called a stimulus. A stimulus can be external, such as a rival male entering another male's territory; or internal, such as hunger or thirst.

Innate Behavior

A behavior that an organism is born with is called an **innate behavior.** These types of behaviors are inherited. They don't have to be learned.

Innate behavior patterns occur the first time an animal responds to a particular internal or external stimulus. For birds like the swallows and the hummingbird building a nest is innate behavior. When it's time for the female weaverbird to lay eggs, the male weaverbird builds an elaborate nest. Although a young male's first attempt may be messy, the nest is constructed correctly.

The behavior of animals that have short life spans is mostly innate behavior. Most insects do not learn from their parents. In many cases, the parents have died or moved on by the time the young hatch. Yet every insect reacts innately to its environment. A moth will fly toward a light, and a cockroach will run away from it. They don't learn this behavior. Innate behavior allows animals to respond instantly. This quick response often means the difference between life and death

Reflexes The simplest innate behaviors are reflex actions. A reflex is an automatic response that does not involve a message from the brain.

Instincts An instinct is a complex pattern of innate behavior. Spinning a web is complicated, yet spiders spin webs correctly on the first try. Unlike reflexes, instinctive behaviors can take weeks to complete. Instinctive behavior begins when the animal recognizes a stimulus and continues until all parts of the behavior have been performed.

Learned Behavior

All animals have innate and learned behaviors. Learned behavior develops during an animal's lifetime. Animals with more complex brains exhibit more behaviors that are the result of learning. However, the behavior of insects, spiders, and other arthropods is mostly instinctive behavior. Fish, reptiles, amphibians, birds, and mammals all learn. Learning is the result of experience or practice.

Learning is important for animals because it allows them to respond to changing situations. In changing environments, animals that have the ability to learn a new behavior are more likely to survive. This is especially important for animals with long life spans.

Learned behavior includes imprinting, trial and error, conditioning, and insight.

Imprinting Konrad Lorenz, an Austrian naturalist, developed the concept of imprinting. Working with geese, he discovered that a

gosling follows the first moving object it sees after hatching. The moving object, whatever it is, is imprinted as its parent. This behavior works well when the first moving object a gosling sees is an adult female goose. But goslings hatched in an incubator might see a human first and become imprinted on that human. Animals that become imprinted toward animals of another species have difficulty recognizing members of their own species.

Trial and Error Behavior that is modified by experience is called trial-and-error learning. Many animals learn by trial and error. When baby chicks first try to feed themselves, they peck at many stones before they get any food. As a result of trial and error, they learn to peck only at food particles.

Conditioning Animals often learn new behaviors by conditioning. In conditioning, behavior is modified so that a response to one stimulus becomes associated with a different stimulus. There are two types of conditioning. One type introduces a new stimulus before the usual stimulus. Russian scientist Ivan P. Pavlov performed experiments using this type of conditioning. He knew that the sight and smell of food made hungry dogs secrete saliva. Pavlov added another stimulus. He rang a bell before he fed the dogs. The dogs began to connect the sound of the bell with food. Then Pavlov rang the bell without giving the dogs food. They salivated when the bell was rung even though he did not give them food. The dogs were conditioned to respond to the bell.

In the second type of conditioning, the new stimulus is given after the affected behavior. Getting an allowance for doing chores is an example of this type of conditioning. You do your chores because you want to receive your allowance. You have been conditioned to perform an activity that you may not have done if you had not been offered a reward.

Insight It is a form of reasoning that allows animals to use past experiences to solve new problems. In experiments with chimpanzees bananas were placed out of the chimpanzees' reach. Instead of giving up, they piled up boxes found in the room, climbed them, and reached the bananas. At some time in their lives, the chimpanzees must have solved a similar problem. The chimpanzees demonstrated insight during the experiment.

4. Explain what is meant by:

1) an action that is performed without conscious thought as a response to a stimulus

2) an innate, typically fixed pattern of behavior in animals in response to certain stimuli

3) behavior that's genetically hardwired in an organism and can be performed in response to a cue without prior experience

4) behavior that an organism develops as a result of experience

5) rapid learning that occurs during a brief receptive period, typically soon after birth or hatching, and establishes a long-lasting behavioral response to a specific individual or object, as attachment to parent, offspring, or site

6) learning in which an animal comes to associate particular behaviors with the consequences they produce

7) learning based on a stimulus (a change in the environment) producing a response from the animal

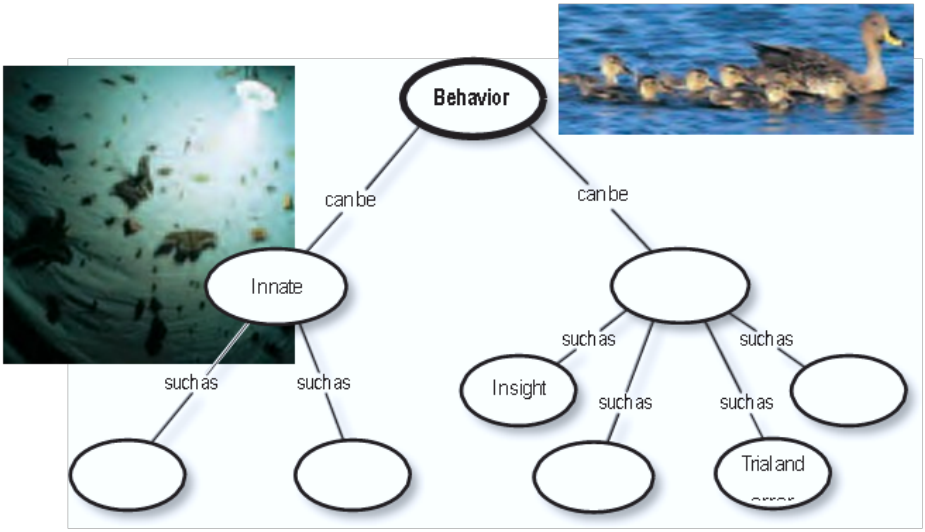
8) a form of learning in which an animal responds to new situations by adapting experiences gained in other contexts.

5. Read the main ideas of the text given above and visualize them using the scheme

1. Behavior that an animal has when it's born is innate behavior. Other animal behaviors are learned through experience

2. Reflexes are simple innate behaviors. An instinct is a complex pattern of innate behavior.

Visualizing Main Ideas



3. Learned behavior includes imprinting, in which an animal forms a social attachment immediately after birth.

4. Behavior modified by experience is learning by trial and error.

5. Conditioning occurs when the response to one stimulus becomes associated with another. Insight is the ability to use past experiences to solve new problems.

6. Test yourself.

Explain the differences between the pairs of vocabulary words given below. Then explain how the words are related.

1. conditioning — imprinting
2. insight — instinct
3. instinct — reflex
4. behavior — reflex

Choose the word or phrase that best answers the question.

5. What is an instinct an example of?
   A) innate behavior
   B) learned behavior
   C) imprinting
   D) conditioning

6. Which animals depend least on instinct and most on learning?
   A) birds C) mammals
   B) fish D) amphibians

7. What is a spider spinning a web an example of?
   A) conditioning C) learned behavior
   B) imprinting D) an instinct

8. Which of the following is true about innate behaviors?
   A. They are learned behaviors.
   B. They are observed in only some animals.
   C. They are the result of conscious thought.
   D. They include reflexes.

9. The illustration describes what kind of learned behavior?

   A. conditioning
   B. trial and error
   C. imprinting
   D. insight



10. Give an example of an innate behavior in a hummingbird.

11. Which is simpler and more automatic, instincts or reflexes?

12. What type of learning is shown?



13. What is required in order for an animal to use this type of learning to solve a problem?

14. Compare and contrast the innate behaviors of animals with short life spans and animals with long life spans.

7. Read a short text about behavioral interactions. Explain why social behavior among animals is important.

BEHAVIORAL ADAPTATIONS

Complex interactions of innate behaviors between organisms result in many types of animal behavior. For example, courtship and mating within most animal groups are instinctive ritual behaviors that help animals recognize possible mates. Animals also protect themselves and their food sources by defending their territories. Instinctive behavior, just like natural hair color, is inherited.

Social Behavior

Interactions among organisms of the same species are examples of social behavior. Social behaviors include courtship and mating, caring for the young, claiming territories, protecting each other, and getting food. These inherited behaviors provide advantages that promote survival of the species.

Cyclic Behavior

A cyclic behavior is innate behavior that occurs in a repeating pattern. It often is repeated in response to changes in the environment. Behavior that is based on a 24-hour cycle is called a circadian rhythm. Most animals come close to this 24-hour cycle of sleeping and wakefulness.

Animals that are active during the day are diurnal. Animals that are active at night are nocturnal.

Both hibernation and migration are cyclic behaviors.

8. Test yourself

Explain the differences between the pairs of vocabulary words given below. Then explain how the words are related.

1. innate behavior — social behavior
2. social behavior — society
3. hibernation — migration
4. courtship behavior — pheromone
5. cyclic behavior — migration
6. aggression — social behavior

Choose the word or phrase that best answers the question.

7. What is an area that an animal defends from other members of the same species called?

A) society C) migration

B) territory D) aggression

8. What is a forceful act used to dominate or control another called?

A) courtship C) aggression

B) reflex D) hibernation

9. What is an organized group of animals doing specific jobs called?

A) community C) society

B) territory D) circadianrhythm

10. What is the response of inactivity and slowed metabolism that occurs during cold conditions?

A) hibernation C) migration

B) imprinting D) circadian rhythm

11. Which of the following is an example of territorial behavior?

A. A honeybee performs a waggle dance when it returns to the hive.

B. A peacock fans his tail while approaching a peahen.

C. A mountain goat charges and attacks an unfamiliar mountain goat.

D. A group of bats remain in hibernation for the winter

12. The male wolf lying on its back is displaying. What kind of behavior to the other male wolf?
A. aggressive behavior
B. submissive behavior
C. cyclic behavior
D. courtship behavior

13. Describe the advantages and disadvantages of migration as a means of survival.

14. Give three examples of social behaviors.

15. Explain the difference between a diurnal animal and a nocturnal animal. Give an example of each.

16. Compare and contrast hibernation and estivation.

9. Speak about the types of animal behavior.

10. Choose any animal and make a report about behavioural pattern it has. Find some interesting facts and discuss them in your group.

For example,



Cows exhibit a definite social standing in a group, a phenomenon most noticeable in dairy herds. The so-called "boss cow" in almost every herd is a commonly accepted fact, but below her every single cow takes a place on the social ladder, and cows will fight for their social position.

When a new animal is added to an established group, the boss cow generally will approach the new animal with head lowered, threatening to bunt. If the newcomer accepts the challenge, physical fighting occurs, generally with head pushing against head in a battle of strength. Once an animal gains advantage, it will then attempt to dominate com-

pletely its opponent. Sometimes a win occurs in just one encounter. Other times there may be a series of encounters lasting several days. Once a cow retreats, either from a threat or after a physical encounter, she becomes submissive to the other cow and ranks below her on the social scale.

Next to the "boss cow" there is another interesting personality in a dairy herd, the "public servant." Such a servant is found in almost every group of cows. Any animal in the herd, regardless of social standing, can come to this cow for grooming.

When the calves are too young to accompany their mothers, the cows solve the problem by forming cooperatives of 7 to 11 cows. They then left all the calves in one spot with one mother staying behind to tend them while the others grazed. This nursemaid would never leave the calves, even for a drink of water. She would not allow her own calf to nurse during the day. This would be unfair to the others in the group. The next day a different cow would be on duty. There appeared to be a remarkable dedication to the duty schedule, regardless of social rank.

UNIT 5. TYPES OF ANIMALS: WILD, DOMESTIC, PETS



1. Find the Russian equivalents of the following words and word combinations. Learn the given vocabulary by heart.

ACTIVE VOCABULARY LIST

are disobedient to human _____
capture _____
tamed to do smth … _____
for economic purposes _____
supply many products _____
are kept for companionship _____
breeding _____
develop traits _____
ancient _____
benefit _____

keeping livestock _____

raising domesticated livestock _____

manure for fertilizing _____

wild ancestor _____

ungulate _____

leather _____

dung _____

breed _____

dual-purpose breeds _____

beef _____

pork _____

domesticated fowl _____

gregarious birds _____

flock _____

waterfowl family _____

male _____

female _____

birth _____

own _____

pedigree _____

captive animal _____

ensure good welfare _____

in the wild _____

captivity _____

Animal Welfare Act _____

behavioural problems _____

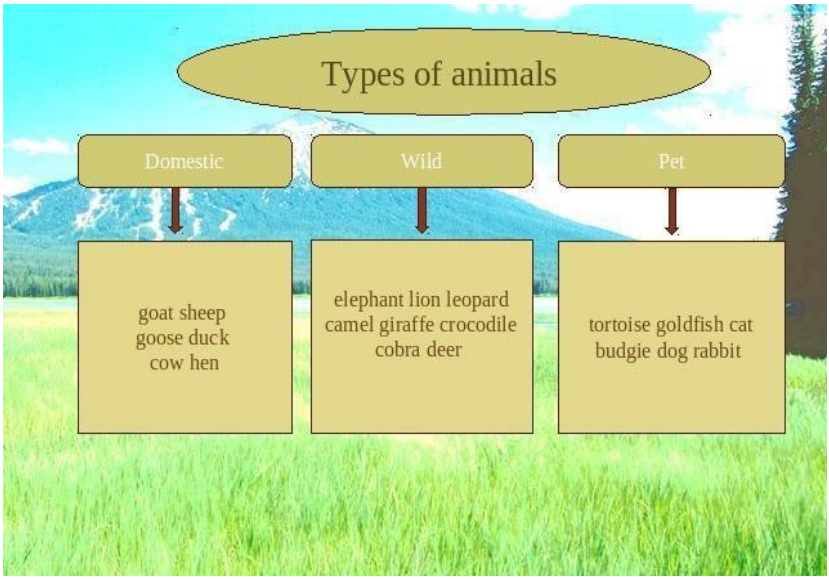
improper environment _____

2. Comment the Scheme. Use the phrases:

According to the scheme all animals can be classified into …

As for domestic animals (wild animals / pets) they …

The example(s) is (are) …
The next type is ...



3. Read the information below. As you read the text look for the answer to the question *What is the difference between domestic animals, wild animals and pets?*

Humans have, for so many years, been living with pets and domestic animals for different purposes. The difference between domestic animals and pets is not that explicit because the phrase "domestic animals" also covers pets. The only apparent difference is between wild animals and domestic animals or pets, as wild animals are disobedient to human beings and live in the wild.

In a nutshell, domestic animals are the animals captured and tamed to live with humans for economic purposes. They supply many products such as meat, dairy products, wools, leather. Pets, on the other hand, are the animals solely kept for companionship in the household.

(http://www.differencebetween.net/science/nature/difference-between-pet-and-domestic-animals/**)**

4. Scan the text.

DOMESTICATION OF ANIMALS

Some of our earliest evidence of man (and art) is tied to animals. Cave illustrations depict bison and deer. Obviously, animals have played a large part in the lives of humans throughout our history, becoming integral to our survival, our history and our very identity.

From archeological evidence such as fossils, historians have learned a lot about man's domestication of animals. In general animals have been domesticated for the following three purposes: as a source of food, clothing, as assistants used in various human activities, or as pets. The origin of domestication is unknown. Animal domestication is partly tied to human domestication or the human shift from hunter-gatherer to farmer. Domestication involves more than simply taming.

Animals are considered to be domesticated when:

- they are kept for a distinct purpose
- humans control their breeding
- their survival depends on humans
- they develop traits that are not found in the wild.

The dog is likely to be the most widely distributed and variably used domesticated animal.

Cattle are the most important of the animals domesticated by man and, next to the dog, the most ancient. Though hunter-gatherers worked with domesticated dogs long before human domestication, later on, farmers saw the benefit of keeping livestock. As some people became farmers and started to settle in one place, raising domesticated livestock offered them the convenience of fresh meat as well as manure for fertilizing crops.

More than one million species of animals have been identified so far, and it is thought that many more species remain to be discovered and some possibilities for domestication still exist. So, domestication of animals plays a very important role in human’s progress.

5. Correct the plan to the text.

Plan

1) Role of domestication
2) Animals in human life
3) Purposes of domestication
4) Characteristics of domestication
5) The most important domesticated animals

6. In the text, find and translate the sentence(s), which

a) prove(s) the idea that dog, was domesticated earlier than cattle;
b) describe(s) the main characteristics of domestication.

7. Study the table.
Domestication of animals

Species and sub-species	Wild ancestor	Date	Location of origin	Purpose
Dog	Pleistocene population of extinct Gray wolf	13000 BC	Europe	Pets, hunting, herding, guarders, pest control, transportation, show, racing sports, rescuing, guiding, servicing, fighting, meat, research, fiber
Sheep	Mouflon	9000 BC	Anatolia, Zagros mountains	Fiber, meat, milk, leather, pelt, research, vellum (пергамент)
Cattle	Aurochs [ˈɔːrɔks] (зубр)	8000 BC	India, Middle East, North Africa	Meat, milk, leather, hides, draft power, vellum, transportation, blood, fertilization, research

Cat	African wild cat	8000 BC	Near East	Pets, pest control, show, research
Chicken	Red jungle fowl	6000 BC	India, south-east Asia	Meat, eggs, feather, ornamental, fighting, pets
Horse	Wild horse	3500 BC	Kazakhstan	Transportation, milk, meat, working, hunting, racing, raft, pets, show

8. Using the information in the table act out a monolog.

Model:

I'm awfully interested in cats. They are my favourites. They are cute and funny. No doubt, they are the most graceful animals with their own character. They originated from African wildcat and came from Near East. According to the historical data, they were found 8000 BC. They were domesticated as pets. The other reasons are pest control, research and show.

9. Read and translate the text.

TYPES OF FARM ANIMALS

There are different types of animals on a farm and one can select the best pair according to the space available to raise an animal farm. Raising an animal farm requires tedious work and a complete planned structure. Most of the animals in the farm offer benefits in the long period. Milk, transportation, meat and companionship are the major benefits associated with raising different animals on a farm. Every animal has a specific benefit and serves a different purpose.

Cow. Cattle are the most common type of large domesticated ungulates. They are a prominent modern member of the subfamily Bovinae. Cattle are raised as livestock for meat (beef and veal), as dairy animals for milk and other dairy products, and as draft animals (oxen or bullocks that pull carts, plows and other implements). Other prod-

ucts include leather and dung for manure or fuel. In some regions, such as parts of India, cattle have significant religious meaning. There are many cattle breeds in the USA. In the Northern areas of the USA the Holstein is the leading dairy breed. In the Southern states the Jersey is more popular than other dairy breeds raised there. As to beef breeds there are many of them. They are bred throughout the country. Most farmers raise the Shorthorn and Hereford beef breeds of cattle. There are also dual-purpose breeds kept for the production of both milk and meat. Two of them, the Red Polled and Milking Shorthorn are known to be the best dual-purpose breeds of cattle in this country.

Pig. A pig is any of the animals in the genus Sus, within the even-toed ungulate family Suidae. Pigs include the domestic pig and its ancestor, the common Eurasian wild boar (Sus scrofa Pigs), like all suids, are native to the Eurasian and African continents. Pigs are highly social and intelligent animals. Domesticated pigs called swine, are raised commercially for meat (generally called pork, hams, gammon or bacon), as well as for leather. Their bristly hairs are also used for brushes. Due to their common use as livestock, adult swine have gender specific names: the males are boars and the females are sows. In Britain, the word hog can refer to a castrated adult male pig. Young swine are called piglets or pigs. Pork is one of the most popular forms of meat for human consumption, accounting for 38% of worldwide meat production.

Chicken. The chicken (Gallus gallus domesticus) is a type of domesticated fowl, a subspecies of the red junglefowl. It is one of the most common and widespread domestic animals, with a total population of more than 19 billion as of 2011. Chickens are omnivores. In the wild, they often scratch at the soil to search for seeds, insects and even animals as large as lizards, small snakes or young mice. Chickens may live for five to ten years, depending on the breed. Chickens are gregarious birds and live together in flocks. They have a communal approach to the incubation of eggs and raising of young.

Duck. Duck is the common name for a large number of species in the waterfowl family Anatidae, which also includes swans and geese. Duck also plays a vital role like the best different types of animal on a farm. It provides the ability in production of meat and eggs. Of course, this is useful when there is a demand in the region for duck meat and eggs. Animal farms can also look at exports to other coun-

tries where there is good demand for quality duck meat and its eggs.

Horse. It is another important animal not only on a farm. It is useful in transportation. The animal possesses immense strength in carrying numerous loads on a cart. The speed at which it travels is amazing and proving to the best animal in terms of companionship. Horses are able to sleep both standing up and lying down. Female horses, called mares, carry their young for approximately 11 months, and a young horse, called a foal, can stand and run shortly following birth. They reach full adult development by age five, and have an average lifespan of between 25 and 30 years. Horses and humans interact in a wide variety of sport competitions and non-competitive recreational pursuits, as well as in working activities such as police work, agriculture, entertainment, and therapy. Many products are derived from horses, including meat, milk, hide, hair, bone. Humans provide domesticated horses with food, water and shelter, as well as attention from specialists such as veterinarians.

10. Using the text develop the idea:

1) Raising farm animals is a hard work because …
2) Cattle are raised not only for beef, but …
3) Pig-breeding provide population with a lot of products, such as …
4) Pork is one of the dominant kind of meat because …
5) The population of chickens is the biggest in the world because …
6) Chickens live together in flocks because …
7) Raising ducks depends on …
8) Horses are rather useful in other spheres than in agriculture, for example, …

11. In pairs, using the above information discuss the question: "What farm animals would you rather rear?"

Use: As for me … – Что касается меня, …; First and foremost – Прежде всего; And finally … – И наконец, …

– By the way, what farm animals would you rather rear?
– As for me, I prefer …

12. And what about pets? What is the difference between a pet and a companion animal? Comment the point:

You *own* a pet.
You *live with* a companion animal.

13. Learn more about the socioeconomic value of companion animals.

- Being attached to a pet is related to positive emotional functioning
- Both social as well as cognitive development can be enhanced by owning a pet
- Positive self-esteem of children is enhanced by owning a pet
- Pets provide social support to children

14. Read the description of a pet dog. Translate the text from English into Russian. Make up a plan. Using the plan write about your pet.

I have a pet. It's a dog. I call my dog Benny.
Benny is three years old now.
I got Benny when he was just a puppy.
My mother knew about a litter being born nearby and bought one for me. I went with my mother to choose Benny from the litter.
Benny is a labrador and a pedigree. I have a certificate to prove it.
My Mother chose a labrador because she has a job working with people who are blind and she could see how labradors are great dogs for people with difficult circumstances as well as making great family pets with children.
I make regular visits with Benny to the Vet to keep up with his innoculations.
Labradors are intelligent, caring dogs who were first introduced to Europe from the Labrador region of Canada over a hundred years ago.

They are actually retriever gun-dogs, my Mother says, and they can be coloured cream, chocolate brown or black. Benny is cream and he has grown very quickly since he was a puppy.



Now, he weighs about 30kg and stands about 50cm in height. Benny wears a red collar around his neck with his name written on it and an attached bell.

Dogs like to go 'walkies' and it is my job, even in the most inclement of weathers, to take Benny for a walk in the morning before school and later in the afternoon or evening.

Benny sleeps in a big round basket located in the purpose-built kennel (built by my father and I) which has an old cushion for his comfort adapted from an old sofa which has long been discarded.

Benny is allowed to come inside the house during the day and he is very much part of the family. He is too big to sit on my lap but he lies down on the mat in front of the sofa and even has his favourite television programmes and selection of music.

He often comes with us in the car where he has his own exclusive 'back space' but of course, he is not allowed inside public buildings like school, hospital, library, bank or restaurant.

At least a couple of times each week, I take Benny to the local public park where I can release him from his leash and he can run and exercise with total freedom.

He loves to meet up with other dogs and frollick around (резвиться) but he never causes any trouble and is well trained and obedient.

Whenever I take Benny out, I take a 'Pooper Scooper'[1] because it is a violation of the law to leave dog droppings in public places.

One of the things I like doing is giving Benny a dog bath with

[1] a device used to pick up animal feces from public places and yards

lots of shampoo. He absolutely loves it and wags his tail wildly when he knows I am preparing for it.

Like all dogs, Benny likes treats. Things like a meatbone, biscuits or special stuff I can pick up from the pet shop.

I am very proud of Benny and I like to show him off (хвастаться им) whenever I can. I put pictures of them on my social media webpages and one special picture of him is displayed as a screensaver on my smartphone.

Once a year, I show him off at the regional annual Dog Show which is filmed and shown on local television. Benny has cult celebrity status.

A dog is regarded by many as a mans best friend and for me that is certainly true. I dread the day when we must part and he enters the canine world equivalent of heaven but that is still a long way off yet.

Benny undoubtedly brings a lot of fun, joy and happiness to my life and that of my family.

(https://thenativeenglishteacher.wordpress.com/2016/03/19/describe-my-pet-dog/**)**

15. And what about wild animals? It's one thing when they live in the wild and quite another thing is life in captivity. Read the text and answer the questions:

What animals are held in captivity?

How does captivity affect animals mental health?

WILD ANIMALS IN CAPTIVITY

Caring for a captive animal takes time, money and knowledge to provide everything the animal needs, such as food, water and the correct environment, to prevent suffering and ensure good welfare. Anyone keeping an animal in captivity in England and Wales has a legal obligation to meet that animal's needs under the Animal Welfare Act.

Wild animals are kept for a variety of reasons and in a range of environments, including zoos, circuses, other performing environments and as pets in homes (known as 'exotic pets').

Giving wild animals what they need in captivity can prove challenging! The best captive environment mimics elements of an animal's natural surroundings in the wild.



Breeding animals for a few generations doesn't wipe out thousands of years of evolution; essentially a tiger born in a circus has the same needs as a tiger born in the wild.

We're not saying that the wild is an idyllic place free from problems - it's not! But animals have evolved over thousands of years, adapting to live in certain types of natural environments.

Placing an animal in surroundings that are unsuitable for the species can cause stress and behavioural problems. Animals kept in an improper environment or fed the wrong diet can suffer, resulting in illness or death.

In some environments, we believe it's best not to keep certain wild animals at all, as their needs cannot be met - particularly if the animal is there for entertainment. Examples are;

- Primates as pets,
- Elephants in zoos,
- Whales and dolphins in dolphinaria,
- Wild animals in circuses.

If you cannot meet the needs of an animal then you should not keep that animal.

(https://www.rspca.org.uk/adviceandwelfare/wildlife/captivity**)**

16. Think about pros and cons of keeping animals in captivity. Fill in the table:

pros	cons
1. Zoos may protect animals from poaching	**1. Animals may develop mental issues**
2. …	**2. …**
3. …	**3. …**

UNIT 6. SYSTEMS OF ORGANS



1. Find the Russian equivalents of the following words and word combinations. Learn the given vocabulary by heart.

ACTIVE VOCABULARY LIST

cell _____
tissue _____
spinal cord _____
brain _____
somatic nerves _____
automatic nerves _____
smooth muscle _____
cardiac muscle _____
skeletal muscle _____
voluntary muscles _____
pituitary gland _____
thyroid gland _____
parathyroid glands _____
adrenal glands _____
pancreas _____
gonads _____
placenta _____
G-I tract _____
kidneys _____
urinary bladder _____
ureters _____
urethra _____
nasal cavity _____
nasopharynx _____
larynx _____

trachea _____

bronchi _____

bronchioles _____

alveoli _____

epithelium tissue _____

muscular tissue _____

connective tissue _____

nervous tissue _____

viscera _____

blood vessels _____

secretory cells _____

metabolite exchange _____

energy storage _____

red cells/white cells _____

platelets _____

blood clotting _____

bone marrow _____

electrical impulses _____

oral cavity _____

esophagus _____

stomach (gastro) _____

small intestines _____

large intestines _____

lymph _____

lymphatic vessels _____

lymphatic structures _____

lymph nodes _____

tonsils _____

thymus _____

spleen _____

heart _____

elastic arteries _____

muscular arteries _____

arterioles _____

capillaries _____

venules _____

veins _____

long bones _____

short bones _____

flat bones _____

irregular bones _____

joints _____

cartilage _____

ligaments _____

tendons _____

skin _____

fat _____

sebaceous glands _____

sweat glands _____

2. Match.

cell	is the main female hormone-responsive, secondary sex organ of the reproductive system in humans and most other mammals
tissue	is a group of similar cells specialized for the performance of a common function
skin	are organs of the vertebrate muscular system that are mostly attached by tendons to bones of the skeleton
brain	is a functional unit of all living organisms in which all the chemical reactions necessary for the maintenance and reproduction of life take place
thyroid	is an organ found in all vertebrates. It acts primarily as a

	blood filter. It plays very important roles in regard to red blood cells (erythrocytes) and the immune system.
spleen	is a muscular organ in most animals, which pumps blood through the blood vessels of the circulatory system
heart	are two reddish-brown bean-shaped organs found in vertebrates. It participates in the control of the volume of various body fluids, fluid osmolality, acid–base balance, various electrolyte concentrations, and removal of toxins
lungs	is the male reproductive gland or gonad in all animals, including humans. It is homologous to the female ovary. The functions are to produce both sperm and androgens, primarily testosterone
stomach	is rigid tissue that constitutes part of the skeleton in most vertebrate animals. They protect the various organs of the body, produce red and white blood cells, store minerals, provide structure and support for the body, and enable mobility
kidneys	is the layer of usually soft, flexible outer tissue covering the body of a vertebrate animal, with three main functions: protection, regulation, and sensation
uterus	is an endocrine gland in all vertebrates. It secretes hormones which influence the metabolic rate and protein synthesis
testis	are the primary organs of the respiratory system in humans and most animals including a few fish, and some snails
muscles	is an organ that serves as the center of the nervous system in all vertebrate and most invertebrate animals
bones	is a muscular, hollow organ in the gastrointestinal tract of humans and many other animals, including several invertebrates

3. Read the text.

SYSTEMS OF ORGANS

The structure of animal body is arranged into particular systems that have their specific functions. The basic and smallest elements sharing certain characteristics are called cells. According to the function we distinguish nerve cells, fat cells or liver cells, etc. The majority of cells contain a nucleus which carries genetic material. Cells together form tissues which are grouped to form organs.

The body is composed of combination of the four types of tissue (epithelial, connective, muscular, nervous), assembled in various ways. These tissues form the organs of the body. Each organ contains several different types of tissue coordinated to form the structure of the organ and to perform its function. The many organs working together to carry out the principal activities of the body are traditionally grouped together as organ systems.

An organ system is a group of organs that function together to carry out the principal activities of the body. The organ systems interact with one another to keep the organism alive and well.

The skeletal system supports and protects the body. The skeletal system is moved by the large voluntary muscles of the muscular system. Other muscles of this system help in moving internal fluids throughout the body.

The nervous system regulates most of the organ systems. It can sense conditions in both internal and external environments of the body, and helps to respond to this environmental information.

The organs of **the endocrine system** secrete chemicals called hormones that also regulate body processes and functions.

The circulatory system is the transportation system of the body. It brings nutrients and oxygen to all cells and removes the waste products of metabolism. Along with the i**mmune and the integumentary (skin) systems**, it also helps defend the body against infection and disease.

The respiratory system works hand in hand with the circulatory system, supplying the blood with the oxygen and riding it of carbon dioxide.

The food the animal eat is broken down by **the digestive system** and is absorbed through the intestinal wall into the bloodstream. Solid wastes are also eliminated from the body by this organ system. Liquid

wastes are eliminated by **the urinary system** after it collects waste materials and excess water from the bloodstream. And to ensure the continuance of the animal kind **the reproductive system** produces sex cells that can join in the process of fertilization to produce the first cell of the individual.

The major organ systems of vertebrates are: 1. Digestive system 2. Respiratory System 3. Circulatory system 4. Endocrine and immune systems 5. Urinary system 6. Nervous system 7. Skeletal and integumentary systems 8. Muscular system 9. Reproductive system

The state of wellness is called homeostasis. Homeostasis is a maintenance of a stable internal environment despite what may be a very different external environment. To maintain this, internal equilibrium, all the molecules, cells tissues, organs and organ systems must work together, maintaining a steady state. The body maintains a steady state by means of feedback systems, or feedback loops. Feedback loops are mechanisms by which information regarding the status of a physiological situation or system is fed back. Homeostasis is maintained by negative feedback loops, regulatory mechanisms that slow down or shut down output systems when they reach certain levels. For example, a high internal body temperature triggers mechanisms that lower the temperature.

4. Form the verbs from the nouns.

Combination, coordination, work, activity, interaction, support, protection, movement, help, waste, secretion, transportation, removal, product, infection, respiration, supply, digestion, wastes, continuance, reproduction, circulation, regulation.

5. Give the Russian equivalents.

Organ systems, body surface, organ structure, body activities, system function, waste gas, body fluid, body processes, transportation system, waste materials, sex cells, animal kind, immune system, feedback system, feedback loops, body temperature.

6. True or false?

1. Several different tissues grouped together in a structural and functional unit make up an organ.
2. Organs that work together to carry out particular body activities are called organ systems.
3. There are ten major classes of tissues that form the organs of the body.
4. Homeostasis is a maintenance of a stable internal environment in the mouth.
5. The food we eat is broken down by the respiratory system.
6. The food is absorbed in the digestive system.
7. The organs of the endocrine system secrete chemicals called hormones.
8. The circulatory system is not a transportation system.
9. The exchange of gases between the blood and the alveoli is known as external respiration.

7. Complete the sentences according to the text.

1. The body is composed of …
2. The tissues form the organs …
3. An organ system is a group of organs that …
4. The skeletal system supports and…
5. The nervous system regulates the most of …
6. The circulatory system is the …
7. The respiratory system works hand in hand with …
8. The urinary system collects wastes and excess water from **…**

8. Answer the following questions.

1. What is the difference between cells, tissues, organs and organ systems?
2. What are the four basic types of tissue in an animal body? Give your examples.
3. What organs in the animal body do you know?
4. What systems do you know in the animal body? Do they differ from the human

ones?

5. What is homeostasis? How is it achieved?

6. What system provides the body with a means of rapid communication?
7. What system breaks down the nutrients?
8. What functions does the skeletal system perform?
9. Which system deals with animal reproduction?
10. Which system eliminates liquid wastes from the body?
11. Do all organ systems work separately within the body?

9. Read the following and express the general idea of each paragraph as briefly as you can. Guess what organ system is described.

1. Consists of the teeth, mouth, gullet (esophagus), stomach, liver, intestine, pancreas, and rectum.

Digestion begins in the mouth where feed is broken down into small pieces by the teeth and mixed with saliva before being swallowed.

In the stomach feed is mixed with the juices to form a soft paste. This then passes into the intestine where bile from the liver and juices from the pancreas are added. The action of these juices is to break down the feed and allow the nourishment it contains to be absorbed by the blood in the walls of the intestine. Waste matter collects in the rectum and passes out of the body through the anus (or cloaca in birds).

2. Lymph is a colourless fluid which passes out of the blood into a network of fine tubes called the _____. It passes through the lymph nodes, where germs are filtered out and killed, before it is returned to the veins. The lymph nodes and spleen also produce special blood cells which protect the body against disease. Sometimes when an animal is infected the lymph nodes become swollen and can be felt beneath the skin.

3. It serves as an enclosing barrier to invasion by infectious organisms, protects the body internal parts from damage and dehydration, regulates temperature, produces pigment, vitamin D, stores nutrients and provides sensory perception. The integument of the animals is formed of three main parts: epidermis, dermis and hypodermis. The biggest portion of the _____ in animals is represented by hide. Among the skin related structures we can include hair, glands, claws and declaws, hooves and horns. The main types of hairs are guard hairs (primary hairs), wool-type hairs (secondary hairs), tactile hairs (concerning the sense of touch) and whiskers. An important part of

_____ is formed by sebaceous glands located in dermis. They produce an oily matter called sebum which helps keep the skin of animals soft and hydrated. The second type of glands are sweat glands being a part of thermoregulatory system. Their primary function is to cool the organism; to a high degree in horses and to a lesser degree in swine, sheep or goats. External covering of distal digits is represented by claws. The remains of digits or hooves are called dewclaws. In some species as in the cattle the size of dewclaws is much smaller than the size of hoofs and so they never touch the ground, however e.g. in pigs they are only a little smaller than hoofs, and can reach the soft ground or when jumping. Finally, some hoofed animals as horses have no dewclaws.

4. The organs of the _____ are the heart and the blood vessels (tubes). The heart is found in the chest cavity. It is a muscular pump which sends blood around the body.

The blood vessels which carry blood away from the heart are called arteries. Blood returns to the heart in veins. Joining the arteries and veins is a fine network of small tubes called capillaries. The capillaries pass through every part of the body.

When the heart beats its muscles contract and sends blood out through the arteries. When the heart relaxes blood flows into it from the veins.

Every time the heart beats it sends a pulse along the arteries.

5. The bones of the skull and backbone protect the soft brain and spinal cord. Fibres called nerves pass from the brain and spinal cord to all parts of the

Messages pass from the various parts of the body along the nerves to the brain. The brain sends a message back telling the different parts of the body what to do.

The brain controls the body.

6. Endocrine glands release chemical substances called hormones into the blood stream. Hormones direct many body regulatory processes as growth and energy production. The main endocrine glands are pituitary, thyroid, parathyroid, thymus, and suprarenal.

7. This system consists of the bones and the muscles (meat).The bones form the skeleton which is the framework within the body. It carries weight and supports the body.

Bones are connected together so they can move. The places where this happens are called joints. The bones are held together at the joints by elastic strands called ligaments. Between the bones is a softer material called cartilage (gristle) which cushions the bones at the joints when the body moves. Bones are very hard and contain minerals. Each bone has a name such as the scapula (shoulder blade) and skull (head). There are about 200 bones in the body.

Muscles are joined at both ends to the bones. The muscles are the meat of the body and when they contract (shorten) or relax (lengthen) they make the bones move.

8. The main organs are the two kidneys, which lie against the backbone, and the bladder.

Waste materials and water are taken out of the blood in the kidneys. This forms urine. Urine collects in the bladder then passes out of the body.

9. The male reproductive organs, the testicles, lie in the scrotum behind the penis. The testicles produce sperm which are contained in the fluid semen. A tube passes from each testicle and joins to form a tube which runs down the centre of the penis.

In the bird the testicles are inside the body.

The female reproductive organ consist of two ovaries, one in each side of the lower abdomen. The ovaries produce eggs which pass into the uterus (or womb). Below the uterus is the vagina which opens to the outside surrounded by the vulva. After birth the young are fed on milk produced by the udder.

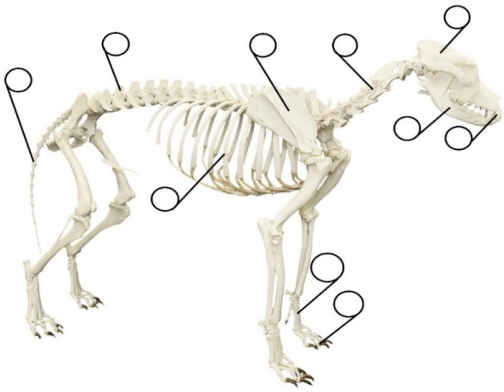
During mating (mounting) sperm passes from the male into the uterus and joins with the eggs there. When the sperm joins the egg it forms the embryo which develops into the young animal inside the uterus.

10. Respiration (breathing) consists of inspiration (breathing in) and expiration (breathing out).

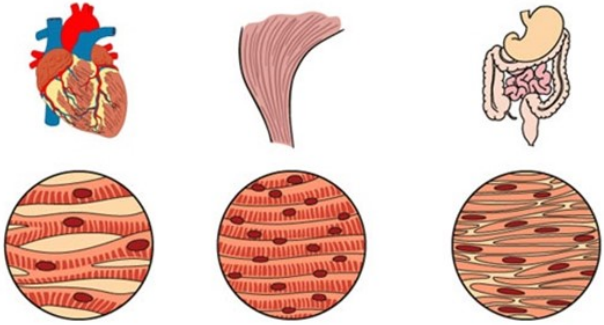
There are two lungs which are found in the chest protected by the bony cage of the ribs. The windpipe carries air from the nostrils to the lungs which are spongy because of air spaces in them. As the animal breathes, air moves in and out of the lungs. Inside the lungs oxygen needed by the body passes into the blood in the walls of the lungs and water and carbon dioxide pass out of the blood into the air which is then breathed out.

Exercise 10. Sign the body parts with numbers using these words:

1. Vertebra
2. Tail
3. Paw
4. Edge
5. Claws
6. Neck
7. Teeth
8. Cranium
9. Jaw
10. Blade



11. Look at the picture and determine the type of muscles (smooth muscles, cardiac muscles and skeletal muscles). Read the text below. What type of muscles is it going about?



1._____

… are the simplest and were the earliest of the three types to evolve. This muscle type is under the control of the autonomic (involuntary) nervous system. … tend not to fatigue and their contractions are slow and sustained. The unitary (visceral) … muscle contracts slowly and spontaneously and is usually initiated by the stretching of the muscle fibers. These contractions are myogenic but their rate and force are

modulated by nerves. Such fibers are found in the wall of the gastrointestinal tract, the uterus and the urinary ducts. The multiunit … muscles contract only when stimulated by a nerve (neurogenic) or a hormone, resulting in contraction of many fibers slowly and simultaneously. Multiunit fibers are found in the iris of the eye, walls of many blood vessels and wall of the sperm ducts. The proteins actin, myosin, and tropomyosin are present as mycrofibrils but are not in regular patterns as is the case in striated muscles (cardiac and skeletal) in which myofilaments overlap and are arranged to form the striated appearance of the fibers.

2._____

The bulk of vertebrate muscle is … and involved in movement. These movements are voluntary and under the control of the somatic nervous system, although several muscle contractions needed for each activity are controlled by the nervous system subconsciously. Each … muscle fiber is a syncytium (hollow cell or vessel) containing hundreds of nuclei that are the result of end-to-end fusion of many myoblasts during embryonic development. The vertebrate … muscle system can attain efficiencies (conversion of chemical bond energy held in carbohydrates, fats, and proteins into mechanical work) of about 25%.

3._____

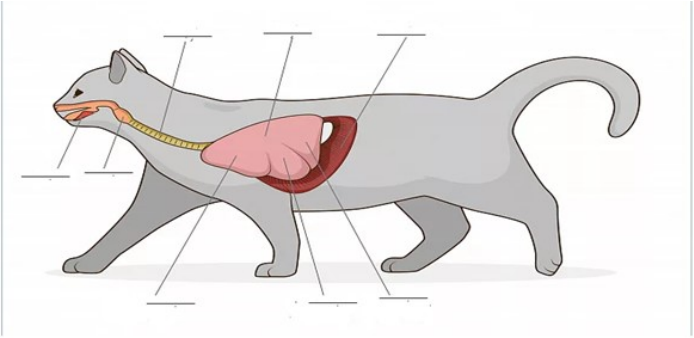
… muscle is found in the heart of vertebrates and combines the characteristics of both … and … muscles. … muscle contractions are myogenic and involuntary. These contractions have greater force and speed than … muscles due to the arrangement of myofilaments in … muscle fibers that maximizes their overlap. Contraction of any part of the … muscle is almost simultaneous and proceeds from one end to the other, pumping blood out of each chamber. This synchrony is due to the presence of … muscle fibers that communicate with each other through gap junctions. … muscle does not fatigue.

12. Speak about the digestive system. Using the picture below (p.62) describe the ruminant digestive system. Complete the sentences that may help you.

1. Digestion in ruminants occurs …
2. Cattle have one stomach with four … .

3. The rumen is the largest …
4. Plant material is initially taken into the rumen, where …
5. The reticulum is known as the “honey comb” because …
6. The reticulum allows the animal to …
7. The omasum’s main function is to …
8. More finely-divided food is then passed to the omasum, for further …
9. The abomasum is called “true stomach” and is like …
10. In abomasum the digestive enzyme breaks down the …

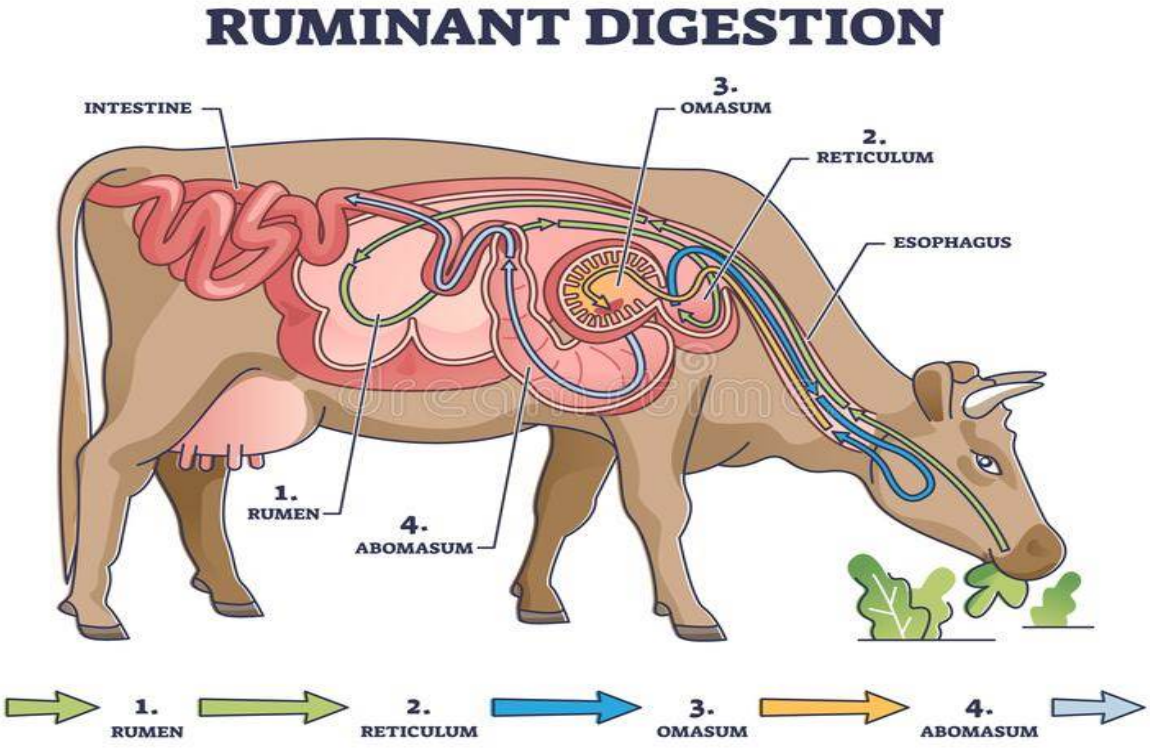
13. Sign the organs of the respiratory system. Describe the process of respiration.



14. What are the sentences about?

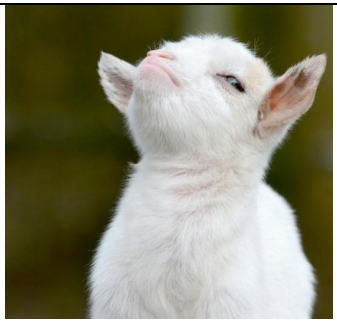
a) The urinary system
b) The reproductive system

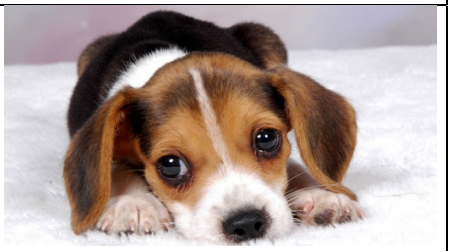
Reproductive (2), kidney (2), testes, nephron, female (2), ovaries, urinary bladder


RUMINANT DIGESTION
INTESTINE
3.
OMASUM
2.
RETICULUM
ESOPHAGUS
1.
RUMEN
4.
ABOMASUM
1.
RUMEN
2.
RETICULUM
3.
OMASUM
4.
ABOMASUM

1) _____ system consists of several parts: gonads, ducts, vesicles and reproductive organs.
2) The _____ of mammals are round or bean-shaped organs. They are located outside of the peritoneum the membrane that encloses the organs of the abdominal cavity.
3) The _____ _____ is a sac for the temporary storage of urine. It is located in the pelvic cavity.
4) _____ are oval structures suspended inside a bag of tissue known as scrotum, located outside the abdominal cavity.
5) _____ also synthesize and release female hormones like progesterone and estrogen.
6) The _____ can be divided into two distinct regions the outer cortex and the inner medulla. The cortex is where blood is actually filtered through small structures called 'glomeruli'. The medulla is where the urine is concentrated through a complex system of tubules.
7) _____ _____ system produces oocytes, _____ gametes.
8) The _____ are the actual filtration elements of the kidneys.

15. Insert the missing words.

FEMALE	MALE	BABY ANIMAL
_____	**GOAT**	 _____

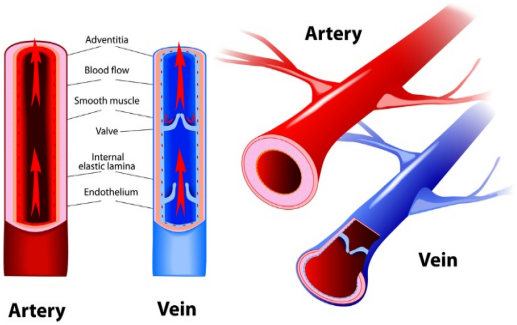
SOW	_____	 _____
_____	**DOG**	 _____
_____	**BULL**	 _____

DOE	_____	 _____
_____	**CAT**	 _____
MARE	_____	 _____

_____	**ROOSTER**	 _____

16. Fill in the gaps with the words:

1) epithelial cells
2)veins
3)arteries
4)blood vessels
5)from the heart
6)towards the heart



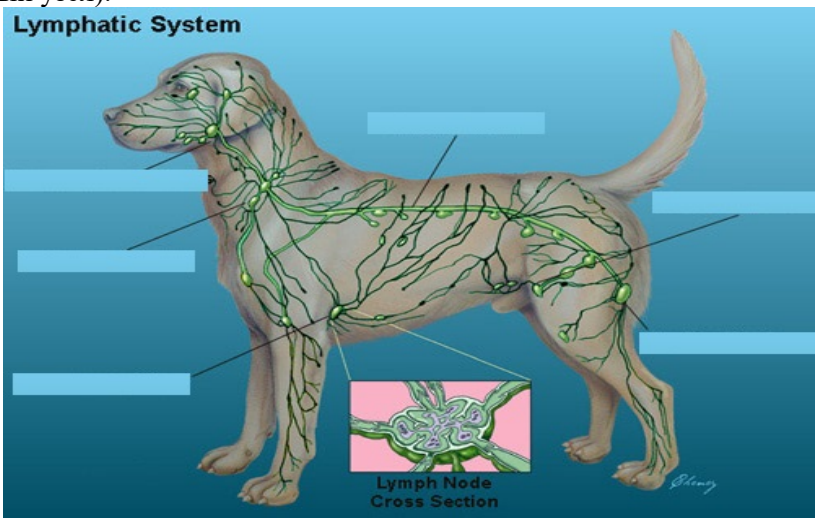
Blood Vessels

There are two major types of ___A___ – those that bring blood ___B__ are called ___C___ and those that carry blood ___D__ towards other tissues and organs are called __E__. Arteries and veins undergo repeated branching to produce arterioles and venules. The thinnest blood vessels are capillaries, made of a single layer of squamous. ___F__- These thin tubular structures are the primary site for the exchange of materials between the circulatory system and tissues.

17. Study the picture and learn the nodes of the lymphatic system:

thoracic duct (грудной проток), submandibular nodes (подчелюстные узлы), cervical nodes (шейные узлы), axillary node (под-

мышечный узел), inguinal node (паховый узел), popliteal node (подколенный узел):



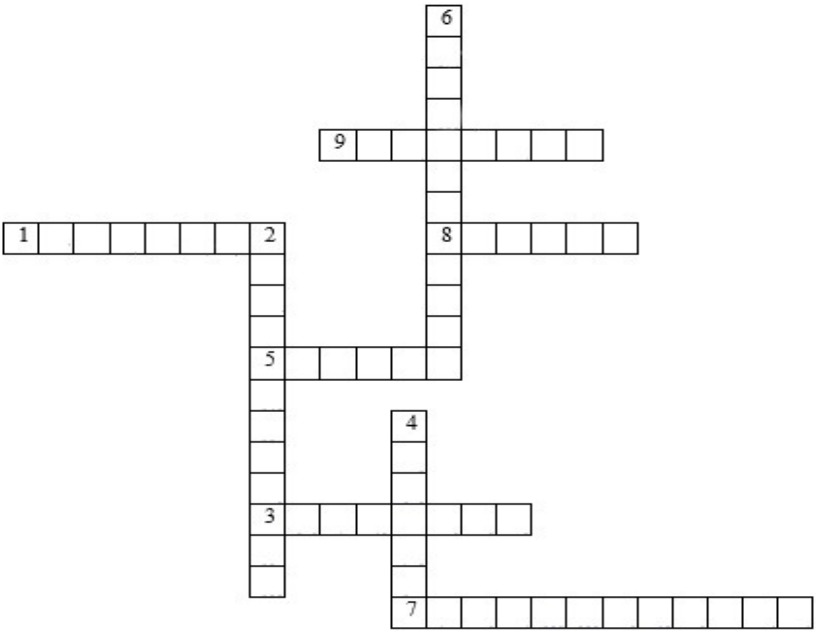
18. Put words into sentences: ***lymphatic organs, macrophages, spleen, lymph, lymphocytes, thymus, lymphatic nodes.***

1. The spleen, thymus, and lymphatic nodes are…
2. … flows through the lymphatic vessels and accumulates in the lymph nodes.
3. A large number of … ,lymphocytes and reticular cells are produced by the spleen.
4. … immune cells have a rounded shape, which is almost completely round core of dark blue color.
5. Performs hematopoietic and immune functions as well … intensively irrigated by the circulatory system.
6. Lymphatic tissue … replaced with adipose tissue.
7. … are the first protectors against pathogens.

19. Solve the crossword puzzle:

1) The glands produce…
2) The pituitary gland produces…
3) It is a mixed secretion gland.

4) This gland affects growth.
5) This gland produces thymosin.
6) The pituitary gland is a part of…
7) This part of the brain is involved in the regulation of biological rhythms.
8) The thyroid gland is located…
9) Endocrine tissue is a gland without…



20. Read the text and check whether you have solved the crossword puzzle correctly

The endocrine system encompasses a group of tissues that release hormones into circulation for travel to and action on distant targets. An endocrine tissue is typically a ductless gland (eg, pituitary, thyroid) that releases its hormones into capillaries that permeate the tissue. These glands are richly supplied with blood.

The most primitive endocrine systems seem to be those of the neurosecretory type, in which the nervous system either secretes circula-

tion or stores them in neurohemal organs, from which they are released in large amounts as needed.

The endocrine system consists of the thyroid and pancreas, thymus, and adrenal glands. Their function is to release hormones.

Pituitary gland is part of the hypothalamus of the diencephalon. Produces somatotropin, regulates the growth and development of animals through stimulation of protein synthesis.

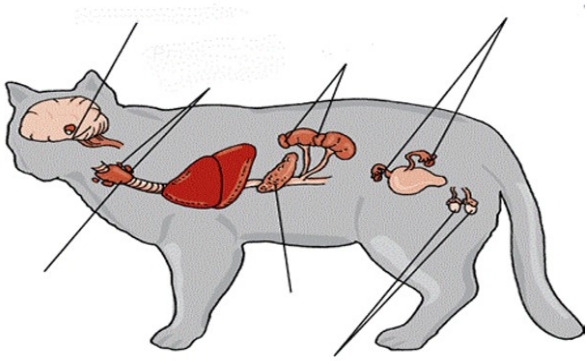
Pineal gland is part of the epithalamus of the diencephalon, produces melatonin, which regulates the maturation of the gonads and participates in the regulation of biological rhythms.

Thyroid gland located behind the larynx. Produces thyroxine, which increase the intensity of heat affect the growth and development of the skin.

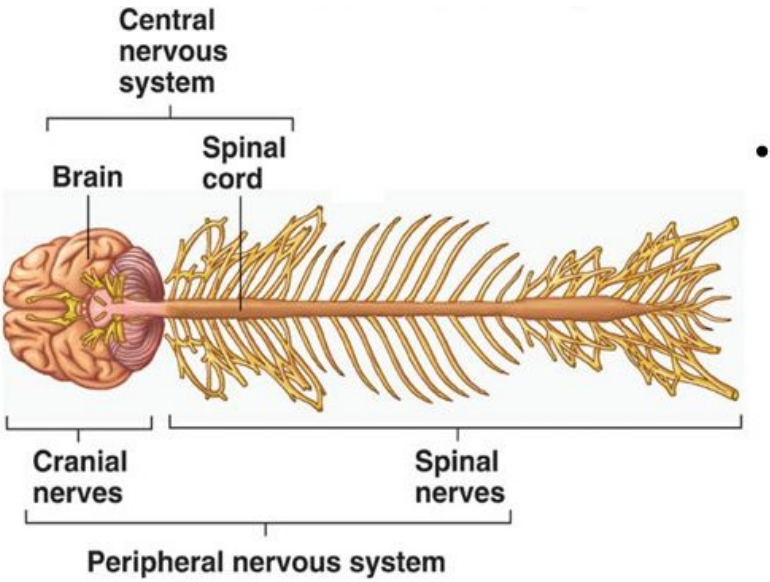
The adrenal glands are small wrong oval. They are located in the cranial end corresponding. Brain layer of the adrenal glands produce adrenaline and noradrenaline, stimulate the sympathetic nervous system.

21. Label the glands with their names:

Pineal gland, Thyroid gland, Pituitary gland, Pancreas, Hypothalamus, Thymus, Adrenal glands, testes, ovaries



22. Speak about nervous system and its two main parts using the beginning of sentences.



1. The nervous system is the control centre …
2. When we describe the nervous system of vertebrates we usually divide it into …
3. The central nervous system (CNS) consists of …
4. The peripheral nervous system (PNS) consists of the nerves that connect to ….
5. The central nervous system acts as a kind of 'telephone exchange' where …
6. The peripheral nervous system consists of nerves that are connected to the brain (cranial nerves), and nerves that …

23. Choose the right word. Translate the sentences.

1. The spinal ***cord/brain*** stem runs from the brain and down through the backbone.
2. The biggest part of the brain is the ***cerebrum/cerebellum.***
3. The ***cerebrum/cerebellum*** controls balance, coordination and movements.

4. The ***thalamus/hypothalamus*** controls many automatic processes, for instance, temperature and appetite.

5. The ***pituitary gland/hypothalamus*** is tiny but it is responsible for hormones.

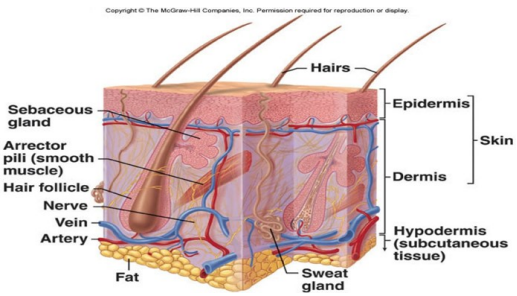
6. Nerve cells are called ***dendrites/neurons.***

6. Complete the article with the following words: hide, damage, sweat, dermis, temperature, hydrated.

24. Read the text and find the answers to the questions:
What are the functions of the integumentary system?
What is the integument of animals is formed of?
What are the main types of hairs in animals?
What do sebaceous glands produce?
What is the primary function of sweat glands?

The integumentary system is the largest organ system in animals. It serves as a barrier to invasion by infectious organisms, protects the body internal parts from damage and dehydration, regulates temperature, produces pigment, vitamin D, stores nutrients and provides sensory perception.

The integument of animals is formed of three main parts: *epidermis, dermis and hypodermis*. The biggest portion of the integumentary system in animals is represented by hide. Among the skin related structures, we can include hair, glands, claws, hooves and horns. The main types of hairs are guard hairs (primary hairs), wool-type hairs (secondary hairs), tactile hairs (concerning the sense of touch) and whiskers. An important part of the integumentary system is formed by sebaceous glands located in dermis. They produce an oily matter called sebum which helps keep the skin soft and hydrated**.** The second type of glands are sweat glands being a part of thermoregulatory system. Their primary function is to cool the organism; to a high degree in horses and to a



lesser degree in swine, sheep or goats. External covering of limbs is represented by claws. The remains of hooves are called dewclaws.

25. Translate the following groups of sentences from Russian into English.

№ 1

1. Репродуктивная система позволяет животным иметь потомство.
2. Скелет – твердая основа тела.
3. Мышцы состоят из множества удлиненных клеток - мышечных волокон, способных сокращаться под действием электрических импульсов.
4. У большинства позвоночных животных репродуктивная система имеет сходный план строения.
5. У человека, позвоночных животных, а также у некоторых беспозвоночных (членистоногие и моллюски) главный орган кровеносной системы — *сердце.*

№ 2

1. Кровеносная система отвечает за транспортировку крови по всему телу животного.
2. Эндокринная система состоит из желез. Эти железы с гормонами контролируют и влияют на различные функции организма, например, метаболизм, рост и размножение.
3. Пищеварительная система - группа органов, которые переваривают пищу, чтобы получить энергию для других процессов в организме.
4. Иммунная система - защитная система организма, противостоящая инфекциям и болезням
5. У позвоночных покровы имеют более сложную строение и представлены кожей, состоящей из эпидермиса и собственно кожи (дерма).

№ 3

1. У всех сельскохозяйственных животных и человека мочевыделительная система состоит из двух почек с их выводя-

щими протоками - мочеточниками, через которые моча поступает в мочевой пузырь.

2. Лимфа представляет собой прозрачную беловатую или желтоватую жидкость, в ее состав входят плазма и форменные элементы.
3. Все мышцы тела подразделяются на мышцы туловища, головы и конечностей.
4. Органами дыхания являются легкие, которые помещаются в грудной клетке от первого ребра до предпоследнего и снаружи покрыты плеврой.
5. У позвоночных и человека пищеварительная система представлена ротовой полостью, глоткой, пищеводом, желудком, кишечником, печенью и поджелудочной железой.

№ 4

1. Респираторная система состоит из верхних и нижних дыхательных путей. Верхняя часть состоит из носа и ротоглотки. К нижним относятся трахея, гортань, бронхи и легкие.
2. По анатомическому строению нервную систему подразделяют на центральную и периферическую. К центральной нервной системе относят спинной и головной мозг, к периферической — все нервы, которые соединяют со спинным и головным мозгом все органы и ткани.
3. У эндокринных желез нет собственных протоков, из-за чего им приходится выделять свой секрет (гормоны) в кровь, благодаря этому они имеют второе название – железы внутренней секреции.
4. К опорно-двигательной системе относят скелет и мышцы (а также, связки и сухожилия). Общее дело этой системы: - помогать в передвижении. - дать опору внутренним органам. - защитить организм.
5. Сосуды, несущие кровь от сердца, называются *артериями*, а приносящие кровь к сердцу, — *венами*. артерии распадаются на сосуды всё меньшего калибра и, наконец, переходят в артериолы, из которых кровь попадает в *капилляры*.

UNIT 7. ANIMAL DISEASES



1. Find the Russian equivalents of the following words and word combinations. Learn the given vocabulary by heart.

ACTIVE VOCABULARY LIST

disease _____
affect _____
spread _____
transferable _____
can be transmitted from one animal to another _____
modes of transmission _____
contagious _____
host _____
parasites _____
cause infection _____
virulence _____
is caused by _____
direct zoonosis _____
saliva _____
reverse zoonosis / anthroponosis. _____

can lead to disease _____
contamination _____
outbreaks _____
clinical signs _____
prevention _____
treatment _____
life cycles of parasites _____
external / internal parasites _____
worm infections _____

feces of animals _____

coprological examinations _____

haematological examinations _____

histopathological examinations _____

skin scraping _____

indirect immunofluorescence _____

tend to inhabit _____

good hygiene _____

non-communicable diseases _____

metabolic diseases _____

acute _____

chronic. _____

the disease begins rapidly _____

the disease lasts a long time _____

by poor nutrition _____

lead to smth… _____

inappropriate changes _____

inherited deficiencies in smth… _____

chemical or plant poisoning _____

bone fractures _____

2. Match the groups of diseases with their description. Insert correct words: *hereditary, congenital, acquired, disturbance, local, general, extensive, structural, alteration, functional, contagious, virus, non-contagious, spread, sporadic*

Hereditary, Congenital and Acquired Disease	A _____ disease is one in which systematic _____ receives a _____ change or is early associated with it. _____ disease is one in which_____ change is primary in some organ or part of the body. It is implied that the disease condition first involves a single organ or tissue, however, then it may be very _____ and can

	affect other organs and tissues, as in the case with skin affections.
Structural and Functional Disease	_____ disease is one which is caused due to special organism or _____ and is usually capable of transmission from one animal to another. The term specific is frequently applied to_____ diseases. _____ disease is one which is not transferable from one animal to another and is not regarded as being due to a special organism or_____. On the other hand, disease due to a specific cause often attacks an individual animal but shows no tendency to _____ to other animals. Such diseases are called _____diseases.
Contagious and Non-Contagious Disease	In the broad sense, any disease transmitted from parents to offspring is called _____. A _____ disease must be distinguished from a _____one. It is really a disease which is _____ in utero and it is appreciable at birth. An _____ disease is neither _____ nor _____ and most frequently develops after birth.
General and Local Disease	_____ disease is one in which there is appreciable _____in some organ or part of the body. _____ disease is one in which certain symptoms are shown without any appreciable change in organs of the body which can be connected with the symptoms. Some diseases are regarded as _____ simply because no change can be found in any organ. Examples of these are — palpitation of the heart, spasm of diaphragm, epilepsy etc.

3. Read and translate the text.

EPIZOOTIOLOGY

A science that deals with the origin, spread, and abatement of contagious diseases of animals and methods of preventing and controlling them is called epizootiology.

Empirical methods of preventing and controlling epizootics were developed long before the causative agents of contagious diseases were discovered. Bacteriological studies con- ducted in the late 19th century constituted the scientific foundation of epizootiology. Epizootiology flourished as a result of research by L. Pasteur, R. Koch, E. Metchnikoff, and D. I. Ivanovskii. These outstanding scientists contributed to the discovery of the causative agents of infectious animal diseases and the production of specific preparations for their diagnosis and prevention.

The main objectives of modern epizootiology include a thorough study of the epizootic process and the development and improvement of methods of preventing and controlling infectious diseases of animals, for example, foot-and-mouth disease, rinderpest, hog cholera, and Newcastle disease, as well as those that strike animals and humans, for example, rabies, anthrax, brucellosis, and tuberculosis.

Epizootiologists employ methods of clinical diagnosis, pathology, physiology, and therapy. They also develop measures of combatting disease in cooperation with specialists in hygiene, veterinary sanitation, and the administration of veterinary affairs. Epizootiology is associated with geography, rural economy, zoology, and parasitology.

4. Decide if the statements are true or false. Correct false statements.

1. Epizootiology deals with hereditary diseases.
2. First, the causative agents of contagious diseases were discovered and then empirical methods of preventing and controlling epizootics were developed.
3. Bacteriological studies conducted in the late 18th century constituted the scientific foundation of epizootiology.

4. Epizootiology developed as a result of research by L. Pasteur, R. Koch, E. Metchnikoff, and D. I. Ivanovskii.
5. Pasteur, R. Koch, E. Metchnikoff, and D. I. Ivanovskiim contributed to the discovery of the causative agents of infectious animal diseases.
6. The main objectives of modern epizootiology include a thorough study of the environmental process.
7. Rabies, anthrax, brucellosis, and tuberculosis only affect animals.
8. Epizootiologists develop measures of combatting disease in cooperation with other specialists.

5. Read and translate the text. Entitle it.

Diseases may be either infectious or noninfectious. The term infection implies an interaction between two living organisms, called the host and the parasite. Infection is a type of parasitism, which may be defined as the state of existence of one organism (the parasite) at the expense of another (the host). Agents (e.g., certain viruses, bacteria, fungi, protozoans, worms, and arthropods) capable of producing disease are pathogens. The term pathogenicity refers to the ability of a parasite to enter a host and produce disease; the degree of pathogenicity—that is, the ability of an organism to cause infection—is known as virulence. The capacity of a virulent organism to cause infection is influenced both by the characteristics of the organism and by the ability of the host to repel the invasion and to prevent injury. A pathogen may be virulent for one host but not for another. Pneumococcal bacteria, for example, have a low virulence for mice and are not found in them in nature; if introduced experimentally into a mouse, however, the bacteria overwhelm its body defenses and cause death.

Many pathogens (e.g., the bacterium that causes anthrax) are able to live outside the animal's body until conditions occur that are favourable for entering and infecting it. Pathogens enter the body in various ways—by penetrating the skin or an eye, by being eaten with food, or by being breathed into the lungs. After their entry into a host, pathogens actively multiply and produce disease by interfering with the functions of specific organs or tissues of the host.

Before a disease becomes established in a host, the barrier known as immunity must be overcome. Defense against infection is provided by a number of chemical and mechanical barriers, such as the skin, mucous membranes and secretions, and components of the blood and other body fluids. Antibodies, which are proteins formed in response to a specific substance (called an antigen) recognized by the body as foreign, are another important factor in preventing infection. Immunity among animals varies with species, general health, heredity, environment, and previous contact with a specific pathogen.

Some infectious diseases are contagious, meaning that they can be transmitted from one animal to another through contaminated breath, bodily fluids, bite wounds, or from mother to fetus/newborn. Infectious organisms can also be contracted through the ingestion of contaminated food, infection with affected parasites, or from the environment. The signs of illness vary depending on the part of the body that the disease affects. Some diseases impact particular organ systems, such as the respiratory system (causing for instance, pneumonia) or the gastrointestinal system (causing diarrhoea, for example), while other infections have more general signs of illness such as fever, decreased appetite and lethargy. Respiratory infections are one of the more commonly reported types of disease.

6. Translate the following words and phrases into English.

Инфекция, возбудитель инфекции, заболевание, заражение, клинические признаки, симптомы, инфекционные заболевания, причина заболевания, лечение, клиническая картина, патогенез, ящур, туберкулез, распознавать, распространение заболевания, карантин, вакцинация животных, предотвращение и лечение инфекционных заболеваний животных, причина чего-либо, передавать, обследовать, жар, боль, сыпь, краснота, истощение.

7. Answer the following questions.

1. What kind of diseases do you know?
2. A pathogen may be virulent for one host but not for another, mayn't it?
3. Is infection a type of a parasitism?

4. What is a pathogen?
5. Does pathogens enter the body in various ways or in one way?

8. Read and translate the text.

Zoonoses (also known as zoonotic diseases) are infectious diseases caused by bacteria, viruses and parasites that spread between animals and humans.



Major modern diseases such as Ebola virus disease and salmonellosis are zoonoses. Most strains of influenza that infect humans are human diseases, although many strains of swine and bird flu are zoonoses. Zoonoses can be caused by a range of disease pathogens such as viruses, bacteria, fungi and parasites; of 1,415 pathogens known to infect humans, 61% were zoonotic. Most human diseases originated in animals; however, only diseases that routinely involve animal to human transmission, like rabies, are considered direct zoonosis.

Zoonoses have different modes of transmission. In direct zoonosis the disease is directly transmitted from animals to humans through media such as air (influenza) or through bites and saliva (rabies). In contrast, transmission can also occur via an intermediate species (referred to as a vector), which carry the disease pathogen without getting infected. When humans infect animals, it is called reverse zoonosis or anthroponosis.

Causes. Zoonotic transmission can occur in any context in which there is companionistic (pets), economic (farming, etc.), predatory (hunting, butchering or consuming wild game) or research contact with or consumption of non-human animals, non-human animal products, or non-human animal derivatives (vaccines, etc.).

Farming, ranching and non-human animal husbandry

Contact with farm animals can lead to disease in farmers or others that come into contact with infected farm animals. Glanders primarily affects those who work closely with horses and donkeys. Close contact with cattle can lead to infection, whereas inhalation anthrax infection is more common for workers in slaughterhouses, tanneries and wool mills.

Contamination of food or water supply

The most significant zoonotic pathogens causing foodborne diseases are Escherichia coli, Campylobacter, Caliciviridae, and Salmonella.

Many food outbreaks can be linked to zoonotic pathogens. Many different types of food can be contaminated that have a non-human animal origin. Some common foods linked to zoonotic contaminations include eggs, seafood, meat, dairy, and even some vegetables Food outbreaks should be handled in preparedness plans to prevent widespread outbreaks and to efficiently and effectively contain outbreaks.

9. Translate the sentences into English.

1) Такие серьезные заболевания как гемморагическая лихорадка Эбола и сальмонеллез являются зоонозными.
2) Когда люди заражают животных, это называется обратным зоонозом или антропонозом.
3) Контакт с сельскохозяйственными животными может привести к заболеваниям у фермеров или других людей, которые контактируют с зараженными сельскохозяйственными животными.
4) Такие продукты питания как яйца, мясо, морепродукты, молочная продукция и даже некоторые овощи могут передавать зоонозную инфекцию.

10. Scan the text to determine whether these statements are true(T) or false(F), and if they are false say why.

1) Zoonoses are infectious diseases caused by bacteria, viruses and parasites that spread between animals.

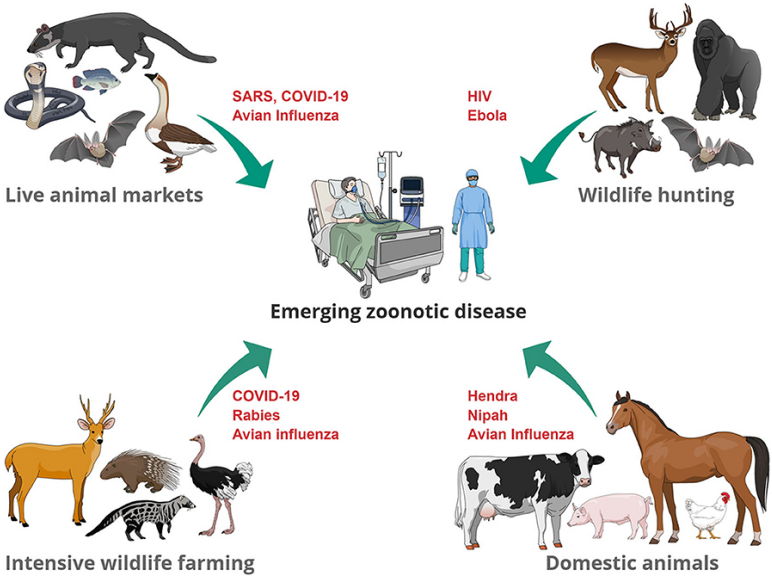
2) Zoonoses have different modes of transmission.

3) Zoonoses can be caused by a range of disease pathogens only as viruses or bacteria.

4) Contact with farm animals can lead to disease in all people who are in contact with infected farm animals.

5) Zoonotic diseases are transmitted only through meat.

11. Look at the picture and comment it.



12. Here is a list of some infectious diseases. Choose one and find information about:

- Transmission and spread
- Clinical signs / Diagnostic
- Prevention and control
- Treatment

1. BRUCELLOSIS
2. CLASSICAL SWINE FEVER
3. ANTHRAX
4. FOOT AND MOUTH DISEASE
5. RABIES

13. Give the definition.

Infectious disease is …
Zoonoses are …

14. Choose the correct answer.

1. What is the word used for a disease that people can catch from animals?

A. Hypochondriasis B. Zoonosis C. Toxicosis D. Narcosis E. Halitosis

2. From which common pet are you most likely to catch a disease?

A. Cats B. Dogs C. Birds like parrots or parakeets D. Fish

3. A zoonotic disease is one that can pass back and forth between humans and ___.

animals plants

space soil

4. Which of the following is a common location where people come into contact with zoonotic diseases?

a. Petting zoo
b. Farm
c. Pet stores
d. State fair
e. All answers are correct

5. Which of the following cause infectious diseases

a. Injury
b. Fungi
c. Bacteria
d. All of the above

6. What is a pathogen?

a. An organism that does not cause disease
b. An organism that does cause disease
c. A disease that only affects plants

d. A organism that only affects animals

7. Mass vaccinations of animals may help prevent outbreaks of disease

True False

8. Which of the following is used to control and prevent the spread of animal disease?

a. Hygiene
b. Vaccinations
c. Bio-Security
d. All of the above

9. Which of the following are not routes of disease transmission?

a. Direct Contact
b. Looking at animals
c. Vectors
d. Ingestion of contaminated products

10. Which of the following is not a vector?

Car
Crow
Mouse
Fly

15. Complete the following sentences and elaborate by adding at least one additional sentence.

1. Zoonoses can be caused by … 2. Diseases that involve animal to human transmission … 3.When human infects animal, it is called … 4. Zoonotic transmission can occur through …

16. Write a paragraph with at least 5 sentences responding to the following question: How can we help prevent the spread of infectious diseases in animals?

17. Read the text.

VETERINARY PARASITOLOGY

Veterinary parasitology is the study of animal parasites, especially relationships between parasites and animal hosts. Veterinary parasitologists study the genesis and development of parasitosis in animal hosts, as well as the taxonomy and systematics of parasites, including the morphology, life cycles, and living needs of parasites in the environment and in animal hosts. Using a variety of research methods, they diagnose, treat, and prevent animal parasitosis. Data obtained from parasitological research in animals helps in veterinary practice and improves animal breeding. Veterinary parasitology is also important for public health, as a great number of animal parasites are transmitted to humans.

Various methods are used to identify parasites in animals such as using feces, blood, and tissue samples from the host animal.

Coprological examinations involve examining the feces of animals to identify and count parasite eggs. Some common methods include fecal flotation and sedimentation to separate eggs from fecal matter.

Haematological examinations involve examining the blood of animals to determine the presence of parasites. Blood parasites tend to inhabit the erythrocytes and are most likely to be detected during the acute phase of infection.

Histopathological examinations involve examining tissue samples from animals. A small slice of the organ suspected of being infected by parasites is mounted on a slide, stained, and examined under a microscope.

Molecular biological methods involve studying the DNA of the parasite in order to identify it. These techniques are very sensitive, which is useful for diagnosing parasites even when they are present in very low numbers.

18. Decide if the statements are true or false. Correct false statements.

1. Veterinary parasitology is the branch of medicine that deals with the diagnosis and treatment of injury.

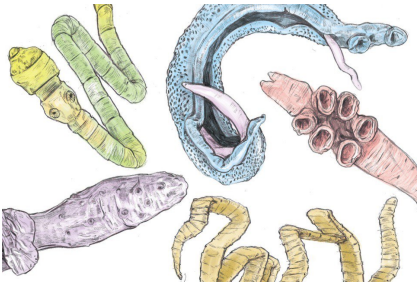
2. Veterinary parasitologists study the genesis and development of parasitosis.
3. Veterinary parasitologists diagnose, treat, and prevent animal parasitosis.
4. Coprological examinations involve examining the blood of animals to determine the presence of parasites.
5. Haematological examinations involve examining the feces of animals to identify and count parasite eggs.
6. Histopathological examinations involve examining tissue samples from animals.
7. Molecular biological methods involve studying the DNA of the animal host in or- der to identify it.
8. Molecular biological methods are very sensitive.

19. Read and translate the text. Write a logical plan to it.

A parasite is an organism that lives in or on another and takes its nourishment from that other organism, or "host." Parasites of animals and humans come in many forms, including helminths (worms), arthropods (lice, ticks, mosquitoes, etc.), and protozoa. There are over 1,000 species of parasites affecting domesticated animals throughout the world. They can be broadly classified as external or internal, depending on where they live on their host.

External parasites often annoy their hosts by biting, embedding, or otherwise irritating the skin. They can cause serious diseases, such as mange and scabies, which affect animals' health and growth.

Internal parasites live in the blood or tissues inside an animal's body. Some organisms enter an animal when it swallows contaminated food or water. Others burrow through the skin, reach the blood stream, and settle in a preferred location to mature and reproduce. Internal parasites often interfere with digestion and assimilation of food, causing poor growth, temporary or permanent injuries, or death.



Both external and internal parasites may weaken an animal's immune system and create condi-

tions favorable to bacterial disease. In severe cases, these diseases can also be deadly.

Parasites have been responsible for economic losses ever since humans first undertook the domestication of animals. Farmers and ranchers whose herds are infected with parasites pay higher costs to raise sick animals and earn less because of lower production. Economic losses occur not only when animals die, but also when they are unable to perform their regular work, or when they produce inferior meat, milk, wool, hides, or eggs.

General symptoms of worm infections are rough hair coat, diarrhea, emaciation, weight loss, and/or blood loss. External parasites symptoms are hair loss (lice), scabs (mites), lumps on back (grubs), or blood loss (flies, sucking lice and ticks) and weight loss.

Internal roundworm parasites are diagnosed by fecal egg or larval counts from live animals. Post mortem, worms can be counted in the abomasum, intestine, lungs and liver. External parasites are diagnosed by visual observation, hair loss, or skin scrapings.

Various methods are used to identify parasites in animals, using feces, blood, and tissue samples from the host animal.

Coprological examinations involve examining the feces of animals to identify and count parasite eggs. Some common methods include fecal flotation and sedimentation to separate eggs from fecal matter. Others include the McMaster method, which uses a special two-chamber slide that allows parasite eggs to be more clearly visible and easily counted. It is most commonly used to monitor parasites in horses and other grazing and livestock animals. The Baermann method is similar but requires more specialized equipment and more time and is typically used to diagnose lungworm and threadworm.

Haematological examinations involve examining the blood of animals to determine the presence of parasites. Blood parasites tend to inhabit the erythrocytes or white blood cells and are most likely to be detected during the acute phase of infection. Veterinary parasitologists use blood smears, which involve placing a drop of blood onto a slide and spreading it over the surface in a thin film in order to examine it under a microscope. The blood is stained with a dye in order for the cells to be easily distinguished.

Histopathological examinations involve examining tissue samples from animals. A small slice of the organ suspected of being infect-

ed by parasites is mounted on a slide, stained, and examined under a microscope.

Though not technically considered a histopathological technique, skin scraping – which involves taking a small sample of the epidermal cells of a dog, cat, or other household pet – is commonly used to detect the presence of mites.

Immunological examinations, such as indirect immunofluorescence, ELISA, Immunoblotting (Western blot), and Complement fixation test are methods of identifying different kinds of parasites by detecting the presence of their antigens on or within the parasite itself. These diagnostic methods are used in conjunction with coprological examinations for more specific identification of different parasite species in fecal samples.

Molecular biological methods involve studying the DNA of the parasite in order to identify it. PCR and RFLP are used to detect and amplify parasite DNA found in the feces, blood, or tissue of the host. These techniques are very sensitive, which is useful for diagnosing parasites even when they are present in very low numbers; they are also useful for identifying parasites not only in large animal hosts but smaller insect vectors.

With advances in veterinary medicine, most parasitic infections can be prevented. However, pet owners may not be fully aware of the appropriate measures to protect their pets and, in turn, themselves and their families.

The first step is the practice of good personal hygiene, which includes always washing hands after handling pets and before eating food. Grooming animals regularly helps to reduce the risk of coat contamination. To protect people and the environment, cleaning up pet feces regularly is important because most intestinal worms are transmitted by the passage of worm eggs or larvae in feces.

Good hygiene aside, controlling infection through endoparasite or ectoparasite preventative measures and treatment is also important. Because risks vary per geographical region, it is important to seek veterinary advice on the necessary preventative measures.

In general, it is important to put all dogs and cats on a regular deworming program from a young age. Most infections are acquired from the garden, park, pavement or other places dogs or cats frequent. Treatment is advised at least four times a year for adult animals or more

often for young and higher risk animals. Getting your pet to take a deworming treatment can be a challenge, but the range of formulations can help. Pastes, granules and palatable tablets are available.

20. Translate the given below words and word combinations into English.

Паразиты, трансмиссивный путь, клещи, паразитические черви, гельминты, простейшие, потеря веса, иммунологические исследования, анализ крови, обнаруживать, определять, заражать.

21. Complete the following sentences.

1. _____ live in the blood or tissues inside an animal's body.
2. A _____ is an organism that lives in or on another and takes its nourishment from that other organism.
3. General symptoms of worm infections are _____, _____, _____, _____, _____.
4. Parasites of animals and humans come in many forms, including _____, _____ and _____.
5. _____are diagnosed by visual observation, hair loss, or skin scrapings.

22. What methods help to identify parasites in animals?

1. This method involves examining tissue samples from animals.
2. This method is most commonly used to monitor parasites in horses and other grazing and livestock animals.
3. These techniques are very sensitive, which is useful for diagnosing parasites even when they are present in very low numbers; they are also useful for identifying parasites not only in large animal hosts but smaller insect vectors.
4. This method involves examining the blood of animals to determine the presence of parasites.

5. These diagnostic methods are used in conjunction with coprological examinations for more specific identification of different parasite species in fecal samples.

23. Here is a list of some parasitic diseases. Choose one and find information about:

- Transmission and spread
- Clinical signs / Diagnostic
- Prevention and control
- Treatment

1. BABESIOSIS IN DOGS
2. TRICHINELLOSIS
3. MYXOMATOSIS
4. OTOCARIASIS
5. TOXOPLOSMOSIS

24. Answer these multiple-choice questions.

1. Which is a distinguishing characteristic describing most parasitic diseases?

They are often carried by insects or vectors.
They are usually harmless diseases and seldom fatal.
They are most often experienced in very dry climates.
They are most often experienced in very wet climates.

2. Ectoprasites can be found.....

In the digestive system
In the fur
On the skin
In the ear

3. Over time a parasite will weaken or sicken the host.

True
False

4. Endoparasites live inside the body.....

True
False

5. This is the most common parasite of cats and dogs

Flea
Tick
Lice
Mite

6. These parasites can kill an animal's liver.

Flukes
Mites
Tapeworm
Kidneyworm

7. This parasitic disease is caused my mites.

Mange
Lyme Disease
Ear Infection
Malaria

8. When cats lick this external parasite, it causes a tapeworm.

Flea
Tick
Lice
Mites

9. A tapeworm lives in the intestines of its host. Which example best describes the relationship between the tapeworm and its host?

The tapeworm benefits from its host; however, the host is not af fected.

The tapeworm does not benefit from its host, but the host does benefit.

The tapeworm benefits from its host, and the host is negatively affected.

10. Why are protozoan parasites so common in animals?

Animals have to drink water, and in nature water can easily become contaminated via the fecal route.

There are a lot of animals and a lot of protozoans so it is reasonable that they could come into contact with each other.

Protozoans and Animals have the same basic cell type and the same nutritional needs - protozoans therefore 'know' how animal hosts work and how to exploit them.

A lot of animals live in the tropics where a lot of protozoans live also.

11. What is a common way that pathogenic protozoa are transmitted?

eating undercooked food
fecal-oral contact
airborne
sexual contact

25. Read and translate the text.



Non-communicable diseases are not caused by virulent pathogens and are not transmitted from one animal to another. They can be caused by hereditary factors or the environment in which the animal lives. Many metabolic diseases are caused by inappropriate changes, sometimes caused by humans, in the genetic Constitution of the animal or in its environment. Metabolic diseases usually occur as a result of a violation of the normal balance of physiological mechanisms that support stability or homeostasis. Examples of metabolic diseases include overproduction or underproduction of hormones that control specific processes in the body; malnutrition; poisoning by agents such as insecticides, fungicides, herbicides, fluorine and poisonous plants; and inherited deficiencies in the ability to synthesize active forms of specific enzymes, which are proteins that control the rate of chemical reactions in the body.

The main causes of the disease:

- The disease can be classified as acute or chronic.
- An acute disease begins rapidly and lasts a short time, when the animal either recovers or dies.
- A chronic disease lasts a long time and weakens the animal.
- Diseases are considered non-communicable (will not spread from one animal to another).
- Non-communicable diseases can be caused by poor nutrition and lack of minerals, salts and vitamins needed by the body.
- Non-communicable disease can also be caused by chemical or plant poisoning, cuts, burns and bone fractures.
- Many non-communicable diseases are chronic, but they can be acute. They can lead to large losses of meat, milk and wool. Working (draft) animals do not work well, and the rate of reproduction may be low when young are born dead or die before they are weaned.

- Chronic diseases are often considered "normal", but when the cause is known and eliminated, production can be significantly increased.

Prevention of non-communicable diseases:

- Chronic non-communicable disease cannot be recognized as a disease.
- Affected animals may not die, but may not produce as much milk, meat or wool, or work as well as one would expect.
- If we constantly look for ways to improve the supply of feed, water, minerals and vitamins, we will find a way to combat non-communicable diseases.
- This will lead to more production of wool, meat and milk, draft animals will be stronger and more young animals will be produced. The bird will produce more eggs and get fat.

26. Give the full answers to the questions *What have you learned about non-communicable diseases? What noninfectious factors can cause animal diseases?*

27. Translate the following words and phrases into Russian.

Non-communicable diseases, virulent pathogens, hereditary factors, genetic constitution, to occur, homeostasis, to support, can weaken the animal, can lead to large losses of meat, significantly increased.

28. Make up sentences.

1. the animal lives / can be caused / or the environment / in which / by hereditary factors / they.
2. classified as / can be / acute or chronic / the disease.
3. lasts a long time / a chronic disease / and / weakens the animal.
4. chronic / as a disease / cannot be recognized / non-communicable disease.
5. get fat / the bird / more eggs / will produce / and.

29. Translate the following sentences into Russian.

1. Non-communicable diseases are not caused by virulent pathogens and are not transmitted from one animal to another.
2. Many metabolic diseases are caused by inappropriate changes, sometimes caused by humans, in the genetic Constitution of the animal or in its environment.
3. Inherited deficiencies in the ability to synthesize active forms of specific enzymes, which are proteins that control the rate of chemical reactions in the body.
4. Non-communicable disease can also be caused by chemical or plant poisoning, cuts, burns and bone fractures.
5. Chronic diseases are often considered "normal", but when the cause is known and eliminated, production can be significantly increased.
6. Affected animals may not die, but may not produce as much milk, meat or wool, or work as well as one would expect.

30. Here is a list of some non-communicable diseases. Choose one and find information about:

- Causes and risk factors
- Symptoms
- Prevention
- Treatment

1. GASTRITIS
2. RICKETS
3. MASTITIS
4. UROLITHIASIS
5. KETOSIS

31. Find answers to the questions given below:

1. Which of the following is the best definition of a non-communicable disease?

A disease that is spread by the transfer of pathogens
A genetic disease
A disease that cannot be transferred from person to person

2. What health complications may arise in a cat that is fed only dog food?

3. List some causes of colic in horses. What signs would a horse exhibit if it were suffering from colic?

4. List three conditions that will increase an animal's nutritional needs.

5. Describe three causes of infertility in cows.

6. List three factors that might cause abortion.

7. List steps you should take in a poison emergency.

8. Describe the effects of stress on the health and well-being of animals.

9. Describe a cause of heat stroke or heat exertion.

10. Match.

1. _____ Wounds	a. Urinary disorder
2. _____ Photosensitization	b. Hyperthermia
3. _____ Calculi	c. Trauma
4. _____ Heat cramps	d. Endocrine disorder
5. _____ Internal bleeding	e. Sunburn
6. _____ Polyuria	f. Hypothermia
7. _____ Frostbite	g. Heat exhaustion
8. _____ Bloat	h. Circulatory shock
9. _____ Cancer eye	i. Digestive disorder
10. _____ Heat stroke	j. Neoplasm

REFERENCES

1. Войнатовская, С.К. Английский язык для зооветеринарных вузов : учебное пособие / С. К. – Санкт-Петербург : Лань, 2012. – 240 с.- ISBN 9785811412617 – Текст : непосредственный.

2. Дмитриева, С. Ю. Английский язык для технологов и ветеринаров: учебное пособие: учебное пособие для студентов бакалавриата и специалитета, обучающихся по направлениям подготовки: 35.03.07 Технология производства и переработки сельскохозяйственной продукции; 36.03.02 Зоотехния; 38.03.01 Ветеринарно-санитарная экспертиза; 36.05.01 Ветеринария / С. Ю. Дмитриева, Э. М. Карпузова. – Пенза : ФГБОУ ВО Пензенский , 2017. – 120 с. - Текст : непосредственный.

3. Картунова, А. И. English for Animal Science. Английский язык. Сборник учебных текстов : учебно-методическое пособие / А.И. Картунова. – Витебск : Витебская ордена «Знак Почета» государственная академия ветеринарной медицины, 2009. – 80 с. - ISBN 978-985-512-194-8. - Текст : непосредственный.

4. Островская, К. З. Animal diseases (Болезни животных) : учебное пособие по английскому языку для студентов и аспирантов, обучающихся по всем направлениям подготовки факультета ветеринарной медицины / К. З. Островская. – Персиановский : Донской ГАУ, 2019. – 132 с. – Текст : непосредственный.

5. Пудовкина, Л. Н. Английский язык для ветеринаров : учебное пособие для студентов специальности «Ветеринария» / сост. Л. Н. Пудовкина. – Астрахань : Астраханский государственный университет, Издательский дом «Астраханский университет», 2011. – 81 с. - ISBN 978-5-9926-0508-7. - Текст : непосредственный.

6. Саенко, Е. С. English for Veterinary Medicine 1 : учебное пособие для обучающихся по всем направлениям факультета ветеринарной медицины и технологии животноводства / сост. Е.С. Саенко, А.Г. Соломатина. – Воронеж: ФГБОУ ВО Воронежский ГАУ, 2017. – 120 с. - ISBN 978-5-7267-0951-2; ISBN 978-5-7267-0952-9. - Текст : непосредственный.

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