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A GUIDE FOR VETERINARY STUDENTS

MINISTRY OF HEALTH CARE OF UKRAINE
NATIONAL UNIVERSITY OF PHARMACY

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Methodical recommendations "A guide for veterinary students" are intended for students majoring in "Veterinary Medicine" full-time and created in accordance with the requirements of programs of non-language specialties. The manual consists of two thematic sections: "The anatomy of the domestic animals" and» Diseases of animals".

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PREFACE

Methodical recommendations "A guide for veterinary students" are intended for students majoring in "Veterinary Medicine" full-time education.

The manual consists of two thematic sections: " The anatomy of the domestic animals " and " Diseases of animals".

In these Units the materials are carefully selected taking into account the vocabulary studied by students. The topics of the texts are thematically related to the future professions of students, as well as to the study of material with a professional focus. Each text or task is accompanied by vocabulary, which is presented with a transcription and Ukrainian translation for the convenience of its study and reading. Thus, it forms in higher education students the ability to read, translate literature by profession, as well as to understand and navigate in it, and to obtain the necessary professional information.

The purpose of the manual is to ensure the development of skills in working with professional literature and speaking on topics. Methodical recommendations "A guide for veterinary students" are based on the existing requirements set by the higher school for teaching a foreign language in non-language universities, correspond to the typical English language curriculum according to the credit-module system of educational process, and meets the "Standard of Higher Education of Ukraine".

UNIT 1

THE ANATOMY OF THE DOMESTIC ANIMALS

Read and translate the text.



The anatomy of the cat

Mouth. Cats have highly specialized teeth for the killing of prey and the tearing of meat: the **premolar** and first **molar** teeth. They present in **canids**, and are highly developed in **felines**. The cat's tongue has sharp **spines**, or papillae, useful for retaining and ripping flesh from a carcass. Cats use a variety of vocalizations for communication, including meowing, purring, hissing, growling, squeaking, chirping, clicking, and grunting. Their types of body language: position of ears and tail, relaxation of whole body, kneading of paws, all are indicators of mood.

Ears. Thirty-two individual muscles in each ear allow for a manner of directional hearing: a cat can move each ear independently of the other. Because of this mobility, a cat can move its body in one direction and point its ears in an-other direction. Most cats have straight ears pointing upward. When angry or frightened, a cat will lay back its ears, to accompany the growling or hissing sounds it makes. Cats also turn their ears back when they are playing, or to listen to a sound coming from behind them.

Legs. Cats, like dogs, are **digitigrades**. They walk directly on their toes, with the bones of their feet making up the lower part of the visible leg. Cats are capable of walking very precisely, because like all felines they directly register; that is, they place each hind **paw** (almost) directly in the print of the corresponding **forepaw**, minimizing noise and visible tracks. This also provides sure footing for their hind paws when they navigate rough terrain.

Claws. Cats have protractable claws. In their normal, relaxed position the claws are **sheathed** with the skin and fur around the toe **pads**. This keeps the claws

sharp by preventing wear from contact with the ground and allows the silent stalking of prey. The claws on the **forefeet** are typically sharper than those on the **hind feet**.

Most cats have five claws on their front paws, and four or five on their rear paws. However, domestic and **feral** are prone to **polydactylyism**, and may have six or seven toes. The fifth front claw is proximal to the other claws.

Skin. Cats possess rather loose skin; this allows them to turn and confront a predator or another cat in a fight, even when it has a grip on them. The particularly loose skin at the back of the neck is known as the **scruff**, and is the area by which a mother cat grips her kittens to carry them.

Skeleton. Cats have 7 **cervical vertebrae**, 13 **thoracic vertebrae**, 7 **lumbar vertebrae**, 3 **sacral vertebrae**, and 22 or 23 **caudal vertebrae**. The **extra lumbar** and **thoracic vertebrae** account for the cat's enhanced **spinal** mobility and **flexibility**, compared with humans. The **caudal vertebrae** form the tail, used by the cat as a counterbalance to the body during quick movements. Cats also have free-floating **clavicle bones**, which allow them to pass their body through any space into which they can fit their heads.

Head. The **masseter** is a great, powerful, and very thick muscle covered by a tough, shining **fascia** lying **ventral** to the **zygomatic arch**, which is its origin. It inserts into the posterior half of the **lateral surface** of the **mandible**. Its action is the elevation of the mandible (closing of the jaw).

The temporalis is a great mass of **mandibular muscle**, and is also covered by a tough and shiny fascia. It lies dorsal to the zygomatic arch and fills the **temporal fossa** of the skull. It arises from the side of the skull and inserts into the **coronoid process** of the mandible. It too, elevates the jaw.

The two main integumentary muscles of a cat are the **platysma** and the cutaneous **maximus**. The cutaneous maximus covers the **dorsal** region of the cat and allows it to shake its skin. The platysma covers the neck and allows the cat to stretch the skin over the **pectoralis major** and **deltoid muscles**.

Neck and Back. The **rhomboideus** is a thick, large muscle below the **trapezius muscles**. It extends from the vertebral border of the scapula to the **mid-dorsal line**. Origin, neural spines of the first four thoracic vertebrae, insertion, vertebral border of the scapula, action, draws the scapula to the dorsal.

Splenius is the most **superficial** of all the deep muscles. It is a thin, broad sheet of muscle underneath the clavotrapezius and **deflecting** it. It is crossed also by the **rhomboideus capitis**. Its origin is the mid-dorsal line of the neck and fascia. The **insertion** is the superior nuchal line and atlas. It raises or turns the head.

Serratus ventralis is exposed by cutting the wing-like **latissimus dorsi**. The origin is from the first nine or ten ribs, and from part of the cervical vertebrae. The insertion is the vertebral border of the scapula. It draws scapula for-ward, backward and against the body.

Serratus Dorsalis is medial to both the scapula and the Serratus Ventralis. Origin, **aponeurosis** following the length of the mid-dorsal line, insertion, dorsal portion of the last ribs, action, draws ribs cranial.

The **intercostals** are a set of muscles sandwiched between the ribs. They interconnect ribs, and are therefore the primary respiratory skeletal muscles. They are divided into the external and the internal **subscapularis**. The origin and insertion are in the ribs. The intercostals pull the ribs backwards or forwards.

Pectoantebrachialis muscle is just one-half inch wide, and is the most superficial in the pectoral muscles. Origin, **manubrium** of the sternum, insertion, in a flat **tendon** on the fascia of the proximal end of the ulna, action, draws the arm towards the chest.

The **pectoralis major**, also called, pectoralis **superficialis**, is a broad **triangular** portion of the pectoralis muscle which is immediately below the **pectoantebrachialis**. It is actually smaller than the pectoralis minor muscle. Origin, sternum and **median ventral raphe**, insertion, humerus, action, draws the arm towards the chest.

The **pectoralis minor** muscle is larger than the pectoralis major. However, most of its **anterior border** is covered by the pectoralis major. Origin, ribs 3–5,

insertion, **coracoid process** of scapula, Action, tipping of the scapula, elevation of ribs 3–5.

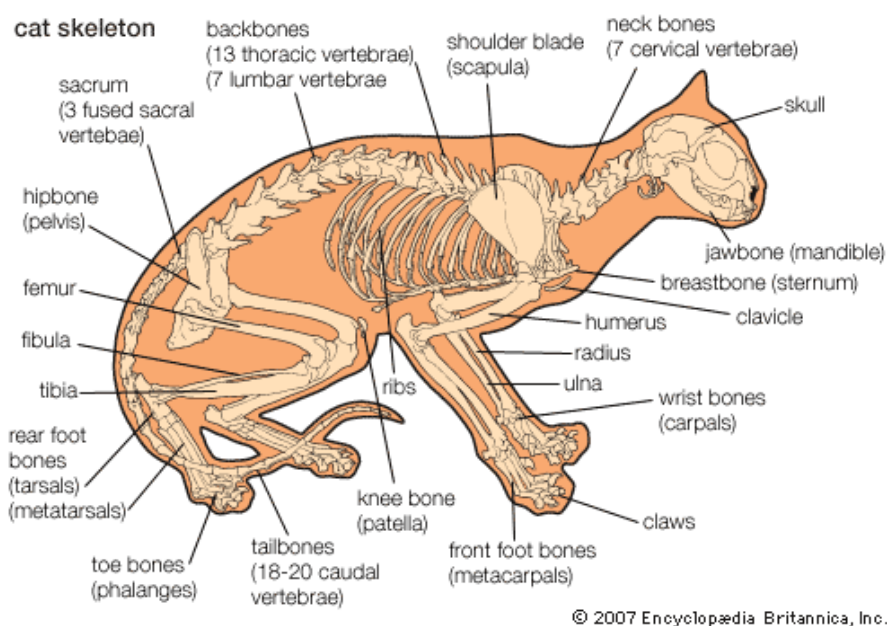
The most posterior, flat, thin, and long strip of pectoral muscle is the **xiphi-humeralis**. It is a band of parallel fibers that is not found in humans, but in felines. Its origin is the **xiphoid process** of the sternum, the insertion is the humerus.

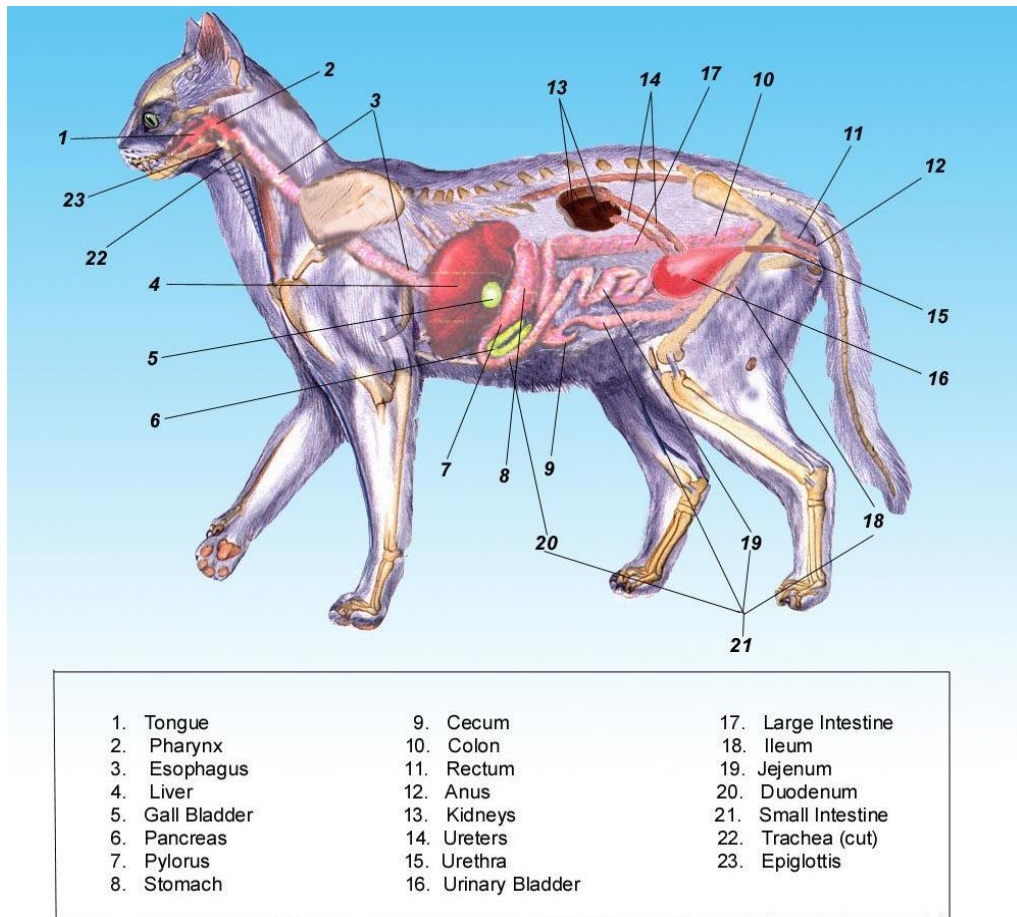
Trapezius covers the back, and the neck. They pull the scapula toward the mid dorsal line, anteriorly, and posteriorly.

Clavotrapezius, the most anterior of the trapezius muscles, is also the largest. Its fibers run obliquely to the ventral surface. Origin, **superior nuchalline** and **median dorsal line**, insertion, clavicle, action, draws the **clavicle dorsal** and towards the head.

Acromiotrapezius is the middle trapezius muscle. It covers the dorsal and lateral surfaces of the scapula. Origin, neural spines of the cervical vertebrae, insertion, in the **metacromion process** and fascia of clavotrapezius, action, draws the scapula to the dorsal, and holds the two scapulas together.

Spinotrapezius, also called **thoracic trapezius**, is the most posterior of the three. It is triangular shaped. Origin, neural spines of the thoracic vertebra, insertion, scapular fascia, action, draws the scapula to the dorsal and caudal regions.





premolar	[pri:'mæulə]	премоляр, малий корінний зуб
molar	['mæulə]	моляр, великий корінний зуб
canid	['kænid]	ікло
feline	['fi:lain]	тварина з сімейства котячих, котячий
spine	['spain]	хребет, хребетний стовп
digitigrade	['didʒiti'greit]	пальчастий, що має розвинені пальці
paw	[pɔ:]	лапа
forepaw	['fɔ:pɔ:]	передня лапа
to sheathe	[ʃi:d]	захищати оболонкою, захищати

toe	[təʊ]	палець стопи
pad	[pæd]	подушечка лапи
forefoot	['fɔ:fʊt]	передній відділ стопи, лапа
hind feet	[haɪnd fi:t]	задні ступні
feral	['fiərəl]	дикий, неприручений
polydactylyism	['pɒli'dæktɪlɪzəm]	полідактилія, багатопалий
scruff	[skrʌf]	задня частина шиї, загривок
cervical vertebra	[sə:'vaɪkəl 'vɜ:tɪbrə]	шийний хребець
thoracic v	[θɔ:'ræɪsɪk]	грудний хребець
sacral v	['seɪkrəl]	крижовий хребець
caudal v.	['kɔ:dəl]	хвостовий хребець
extra lumbar v	['ekstrə'lʌmbə]	додаткові поперековий хребець
spinal	['spainl]	хребетний, спінальний
flexibility	[fleksɪ'bɪlɪtɪ]	гнучкість
clavicle bone	['klævɪkl 'bɒn]	ключична кістка
masseter	[mæ'sætə]	жувальний м'яз
fascia	['feɪʃə]	фасція
ventral	['ventrəl]	вентральний, черевний
zygomatic arch	[zaɪgəʊ'mætɪk a:tʃ]	вигинаюча дуга
lateral surface	['lætərəl 'sə:fɪs]	латеральна поверхня
mandible	['mændɪbl]	нижньощелеповий
mandibular muscle	[mæn'dɪbj:ulə 'mʌsl]	нижньощелепний м'яз
temporal fossa	['tempərəl 'fɒsə]	скронева ямка, скроня
coronoid process	['kɒrənɔɪd'prəʊses]	вінцевий відросток (нижньої щелепи)
platysma	['plætɪzmə]	підшкірний м'яз шиї
maximus	['mæksɪməs]	найбільший, великий

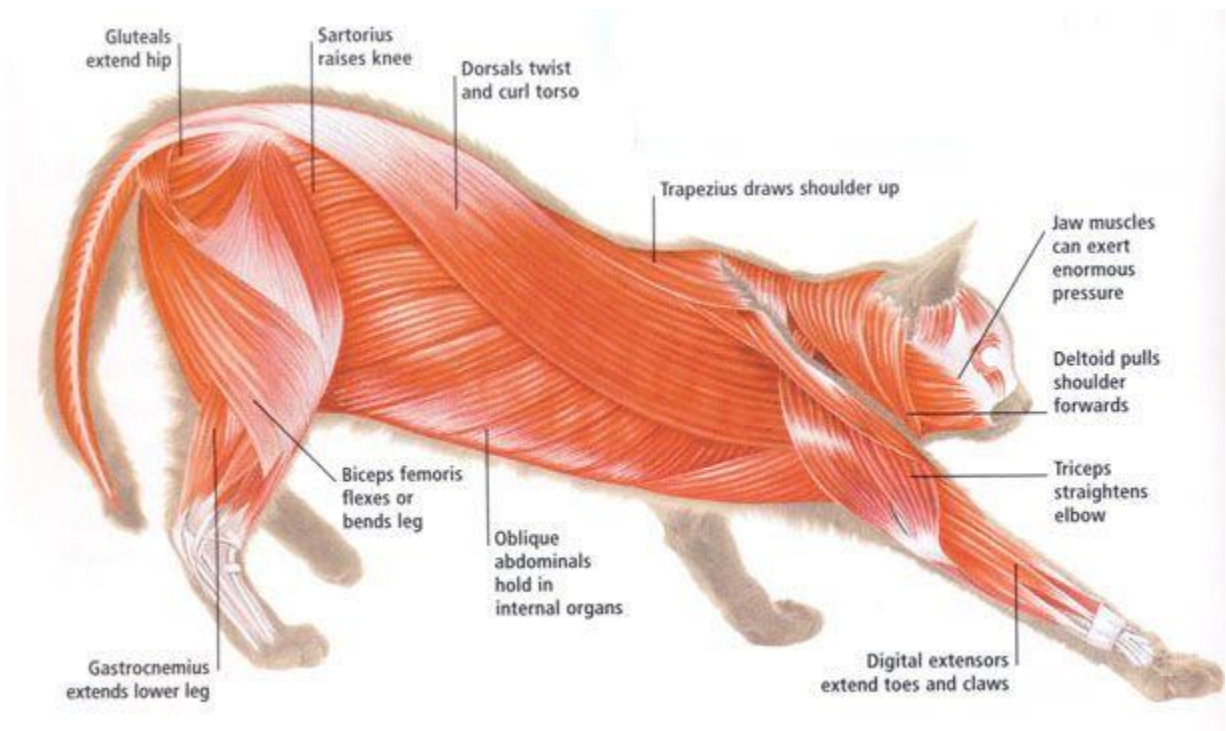
dorsal	['dɒ:səl]	дорсальний, спинний, тильний
pectoralis major	['pektərəlis]	грудна велика
deltoid muscle	['deltoid 'mʌsl]	дельтоподібний м'яз
rhomboideus	['rəm'bɔidəs]	ромбоподібний
trapezius	['træpi:zjəs]	трапецієподібний
mid-dorsal line	[mid-dɒ:səl]	середня дорсальна лінія
splenius L.		селезінка
superficial	['sju:pə'fi:əl]	поверхневий
deflecting	[di'flektiŋ]	викривлення, вигин
capitis	['kæpitis]	головний, головчастий
insertion	[in'sɜ:ʃən]	прикріплення, введення
serratus	['seritəs]	зубець, зубастість, зубчастий
ventralis	[ventr'ælis]	вентральний, черевний
atissimus	[læ'tisiməs]	найширший
dorsum	['dɒ:səm]	спина
dorsalis L.		спинний, тильний
aponeurosis L.		апоневроз (сухожильне розтягнення)
intercostal	['intə'kɒstl]	міжреберний
subscapularis L.		підлопаткова
pectoral	['pektərəl]	грудний
pectoantibrachialis L.		грудний передньо-плечовий
tendon	['tendən]	сухожилля
superficialis L.		поверхневий, неглибокий
triangular	[traɪ'æŋgjulə]	трикутний, кутовий, колінчастий
median ventral raphe	['mi:djən 'ventrəl reɪf]	серединний черевний шов
pectoralis minor L		мала грудна
anterior border	[æn'tiəriə 'bɒ:də]	передній край

coracoid process	'kɒrəkɔɪd 'prəʊses]	дзьобовидний відросток (лопатки)
xiphohumeralis L.		мечеплечевий відросток (грудини)
xiphoid process trapezius L.	[ksi'fɔɪd 'prəʊses]	мечоподібний, мечеобразний кістка- трапеція (зап'ястя)
clavotrapezius L.		ключична кістка-трапеція (зап'ястя)
superior nuchal line	[sju:'piəriə 'nju:kl lain]	верхня шийна лінія
median dorsal line	['mi:dʒən 'dɒsəl lain]	середня дорсальна лінія
clavicle dorsal	['klævɪkl 'dɒsəl]	дорсальна ключиця
acromiotrapezius L.		акроміальна кістка трапеція (зап'ястя)
metacromion process	['metə'krəʊmjən 'prəʊses]	метакроміальний відросток
spinotrapezius L.		спинна кістка-трапеція
thoracic trapezius	[θɔ:'ræsɪk trə'pi:zjəs]	грудна кістка-трапеція

Ex. 11. Answer the following questions.

1. Where are the organs of taste?
2. What teeth can you name?
3. What is the skeleton composed of?
4. How many bones and vertebrae of the cat body do you know?
5. What are the parts of the leg?
6. What is the normal body temperature of a cat?
7. How many muscles do the cats have? What muscles can you name?
8. What are the ears for?
9. What are the claws for?

10. How many hours a day can a cat sleep?



Ex. 12. Read and translate the text.



The anatomy of the dog

External anatomy is concerned with the study of such organs as **muzzle**, **dewlap** (throat, neck skin), shoulder, elbow, forefeet, **croup**, leg (thigh and **hip**), **hock**, hind feet, **withers**, **stifle**, paws, tail.

Physical characteristics. Like most predatory mammals, the dog has powerful muscles, a cardiovascular system that supports both **sprinting** and **endurance**, and teeth for catching, holding, and tearing.

The dog's **ancestral skeleton** provides the ability to run and **leap**. Their legs are designed to propel them forward rapidly, leaping as necessary, to **chase** and overcome **prey**. Consequently, they have small, tight feet, walking on their

toes; their rear legs are fairly rigid and sturdy; the front legs are loose and flexible, with only muscle attaching them to the **torso**.

Dogs have disconnected shoulder bones that allow a greater stride length for running and leaping. They walk on four toes, front and back, and have **vestigial dewclaws** (dog **thumbs**) on their front legs and sometimes on their rear legs.

Sight. Like most mammals, dogs are **dichromats** and have color vision equivalent to red-green color blindness in humans. Different breeds of dogs have different eye shapes and dimensions, and they also have different retina **configurations**. Dogs with long noses have a “visual **streak**” which runs across the width of the retina and gives them a very wide field of excellent vision, while those with short noses have an “area centralis” – a central patch with up to three times the density of nerve endings as the visual streak – giving them detailed sight much more like a human's.

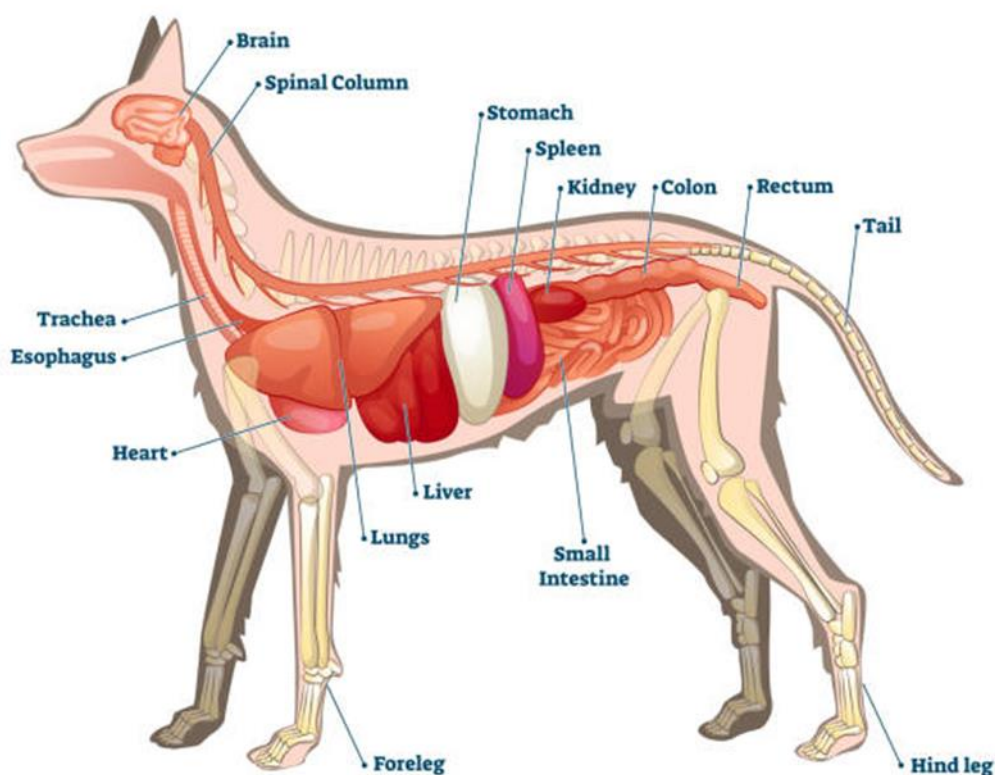
Some breeds have a field of vision up to 270°, although broad-headed breeds with short noses have a much narrower field of vision, as low as 180°.

Hearing. The frequency range of dog hearing is approximately 40 Hz to 60,000 Hz. Dogs detect sounds as low as the 16 to 20 Hz frequency range and above 45 kHz, and in addition have a degree of ear mobility that helps them to rapidly pinpoint the exact location of a sound. Eighteen or more muscles can tilt, rotate and raise or lower a dog's ear. Additionally, a dog can identify a sound's location much faster than a human can, as well as hear sounds up to four times the distance that humans are able to.

Smell. Dogs have nearly 220 million smell-sensitive cells over an area about the size of a pocket handkerchief. Dogs can sense **odours** at concentrations nearly 100 million times lower than humans can. The percentage of the dog's brain that is devoted to analyzing smells is actually 40 times larger than that of a human. Some dog breeds have been selectively bred for excellence in detecting **scents**, even compared to their **canine** brethren.

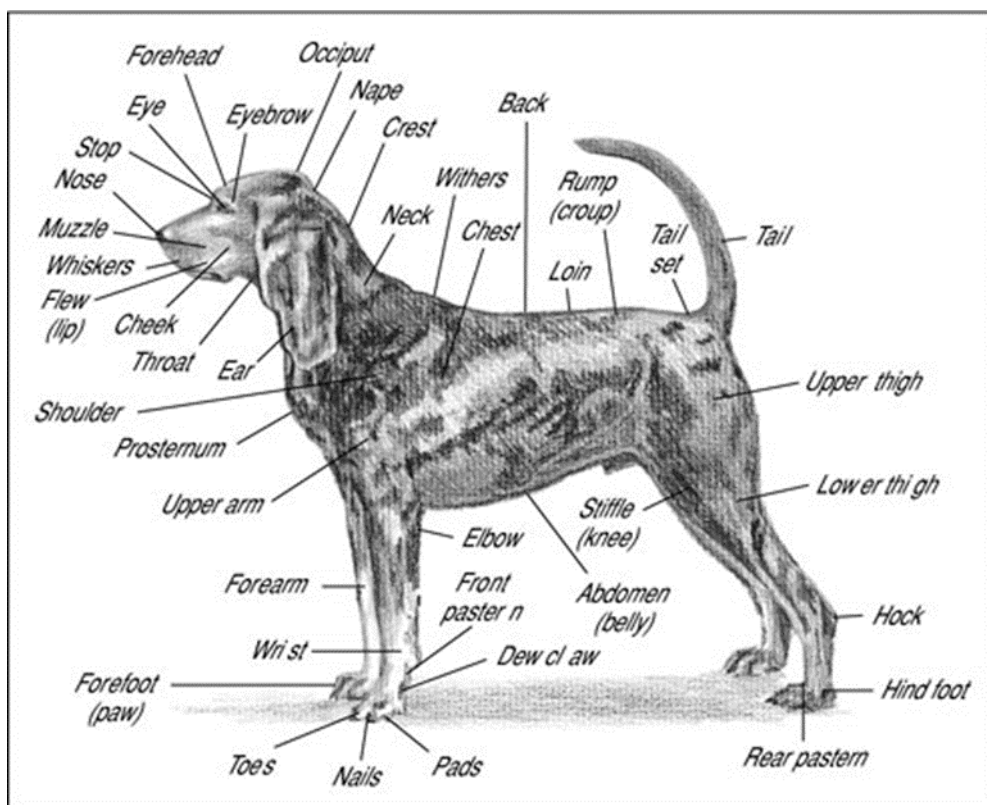
Modern dog breeds exhibit a diverse array of fur coats, including dogs without **fur**. Dog coats vary in texture, color, and markings, and a specialized vocabulary has evolved to describe each characteristic.

Tail. There are many different shapes for dog tails: straight, straight up, sickle, curled, corkscrew. In some breeds, the tail is traditionally docked to avoid injuries. It can happen that some puppies are born with a short tail or no tail in some breeds.



muzzle	[mʌzl]	морда
dewlap	['dju:læp]	підгруддя
croup	[kru:p]	зад, круп
hip	[hip]	стегно, бік
hock	[hɒk]	підколінок, колінне сухожилля
wither	['wiðə]	холка

stifle	[staɪfl]	колінний суглоб, колінна чашка бігти на коротку дистанцію,
to sprint	[sprɪnt]	спрінтовати
endurance	[ɪn'dʒu:ərəns]	витривалість
ancestral	[æn'sestrəl]	спадковий, родовий
leap; to leap	[li:p]	стрибок; стрибати
to chase	[tʃeɪs]	переслідувати, гнатися
to prey	[preɪ]	полювати, ловити
torso	[tɔ:səʊ]	тулуб
vestigial	[ves'tɪdʒiəl]	залишковий, зникаючий рудиментарний відросток у вигляді
dewclaw	[dju:klɔ:]	пальця на лапі
thumb	[θʌm]	великий палець
dichromatic	[ˈdaɪkrəʊ'mætɪk]	двоколірний
configuration	[kən'fɪgju'reɪʃən]	форма, конфігурація
streak	[stri:k]	жилка, прожилка
hearing	[hɪərɪŋ]	слух
odour	[ˈəʊdə]	запах
scent	[sent]	слід, запах
canine	[keɪnəɪn]	собачий
fur	[fə:]	шерсть, шкура
tail	[teɪl]	хвіст



Ex. 13. Answer the following questions.

1. How many chief parts of the dog body do you know?
2. What are the teeth for?
3. What is the skeleton composed of?
4. What are the legs for?
5. What are the organs of special sense?
6. What are the organs of sense for?
7. What shapes of dog tail do you know?

Read some short texts. Answer the questions, and work with new words using them in speech.

1. What are the main parts of the animal body?

The main parts of the animal body are the **head**, the **trunk** and the **pelvic** and **thoracic limbs**. The head is connected with the trunk by the **neck**.

head

[hed]

ГОЛОВА

trunk	[trʌŋk]	тулуб
pelvic	[ˈpelvɪk]	тазовий
thoracic	[θɔːˈræɪsɪk]	грудний
limb	[lɪm]	кінцівка
neck	[nek]	шия

2. What parts is the head formed by?

The head is formed by the **face, nasal, temporal, cheek, eye, ear** areas, the area of **parotid gland** and the **frontal** area with the area of **horns** at the **horned cattle**.

face	['feɪs]	лицьова область
nasal	['neɪzəl]	носовий
temporal	['tɛmpərəl]	скроневий
cheek	['tʃiːk]	щока
eye	['aɪ]	око
ear	['iə]	вухо
parotid gland	['pærətɪd 'glænd]	привушна залоза
frontal	['frʌntəl]	лобовий
horn	[hɔːn]	ріг
horned cattle	['hɔːnd 'kætəl]	рогата худоба

3. What organs are there according to structure?

There are two types of **internal** organs according to structure: soft **parenchymatous** organs – **lungs, liver, kidneys, spleen, genital** organs and **hollow tubular** organs – **intestine, trachea, bronchi, ureters, genital tracts**.

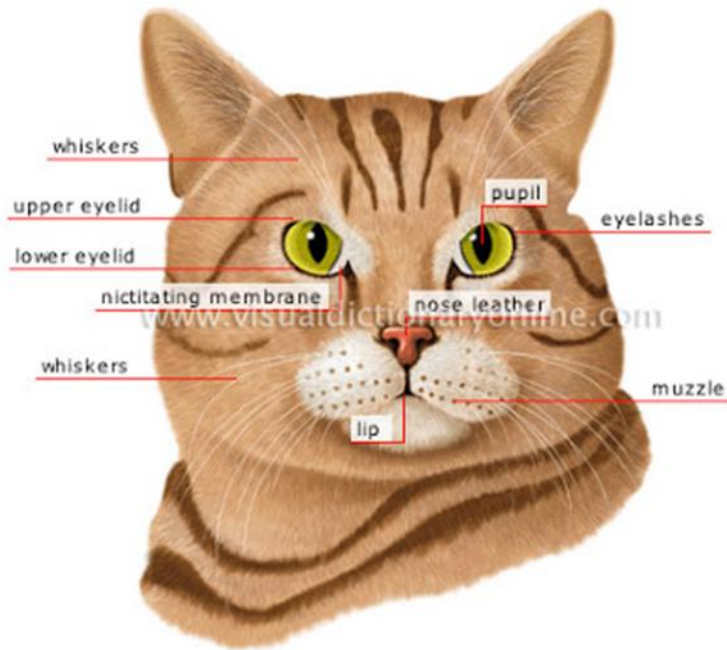
internal	[ɪntəːnl]	внутрішній
parenchymatous	['pærənʃɪmætəs]	паренхіматозний
lung	[lʌŋ]	легеня

liver	['livə]	печінка
kidney	['kidni]	нирка
spleen	['spli:n]	селезінка
genital	['dʒenitl]	статевий
hollow	['hɒləʊ]	порожнистий
tubular	['tju:bjulə]	трубчастий
intestine	[in'testin]	кишечник
trachea	[trə'ki:ə]	трахея
bronchi	['brɒŋki]	бронхи
ureter	[juə'ri:tə]	сечовід
tract	[trækt]	шлях

4. What are the parts of the face?

The upper part of the face is formed by the **forehead** and **temples**. Below there are the eyes, the **nose**, the cheeks, the **mouth**, the **chin**, and **nostrils**. On the both sides of the head there are the ears.

forehead	['fɒrɪd]	лоб
temple	['templ]	скроня
nose	['nɒʊz]	ніс
mouth	['maʊθ]	рот
chin	['tʃɪn]	підборіддя
nostril	['nɒstrɪl]	ніздря



5. What parts is the eye composed of?

The eye is composed of the **eyeball** and the **pupil**. **Eyebrows**, **lasher** and the **lid** **protect** the eye.

eyeball	['aɪbɔ:l]	очне яблуко
pupil	['pjʊ:pl]	зіниця
eyebrow	['aɪbraʊ]	брова
lasher	['læʃə]	вія
lid	[lɪd]	повіка
to protect	[prə'tekt]	захищати

6. What organs does the oral cavity include?

The **oral cavity** contains the **teeth** which are **set** in the **gums**, the **tongue**, the **hard** and the **soft palate**, the **tonsils** and the **throat**. The **margins** of the mouth are the **lips**. The **jaws** form the framework of the mouth.

oral cavity	['ɔ:rəl 'kævɪtɪ]	ротова порожнина
tooth (pl. teeth)	['tu:θ]	зуб (зуби)

set	[set]	розміщувати
gum	[gʌm]	ясна
tongue	[tʌŋ]	язик
hard palate	['hɑ:d 'pælit]	тверде піднебіння
soft palate	['sɒft 'pælit]	м'яке піднебіння
tonsil	['tɒnsil]	мигдалеподібна заліза
throat	['θrəʊt]	горло
margin	['mɑ:dʒin]	край
lip	[lip]	губа
jaw	['dʒɔ:]	щелепа

7. What are the organs of senses?

The organs of senses are the eyes, the ears, the nose and the tongue.

8. What are the parts of the trunk?

The parts of the trunk are the thoracic cavity, the pelvic cavity, the abdominal cavity, the **back**, the **genitals** and the **buttocks**. Inside the body, there are two large cavities – the **anterior** cavity and the **posterior** cavity. The thorax is in the anterior cavity. The **abdomen** or belly is located in the posterior cavity. The thorax is in the anterior cavity. The abdomen or belly is located in the posterior cavity. These two cavities are separated by a tense sheet of muscle called the diaphragm.

back	['bæk]	спина
genital pl.	['dʒenitl]	статеві органи
buttock	['bʌtek]	сідниця
anterior	['æn'tiəriə]	передній
posterior	[pɒs'tiəriə]	задній
abdomen	['æbdəmən]	черевна порожнина

9. What organs are there in the thorax or the thoracic cavity?

In the thoracic cavity are the respiratory, the **circulatory** and the digestive organs.

thorax	['θɒ:ræks]	грудна клітина
circulatory	['sə:kjulətəri]	кровоносний

10. What does the system of circulation comprise and what is its function?

The circulatory system **comprises** the heart and the blood vessels – the **arteries**, the arterioles, the **capillaries**, the **venulae** and the **veins**. The heart **pumps** blood to various parts of the body.

to comprise	[kəm'praɪz]	охоплювати
artery	['a:teri]	артерія
capillary	[kə'pɪləri]	капіляр
venule pl. venulae	[ve'nʊl]	венула (венули)
vein	[veɪn]	вена
to pump	[pʌmp]	качати, гнати

11. What are the main organs of respiration? What is their function?

The main organs of respiration are the nasal cavity, the **pharynx**, the **larynx**, the **trachea**, the **bronchi**, the **lungs** and the **diaphragm**. They **breathe** with their lungs.

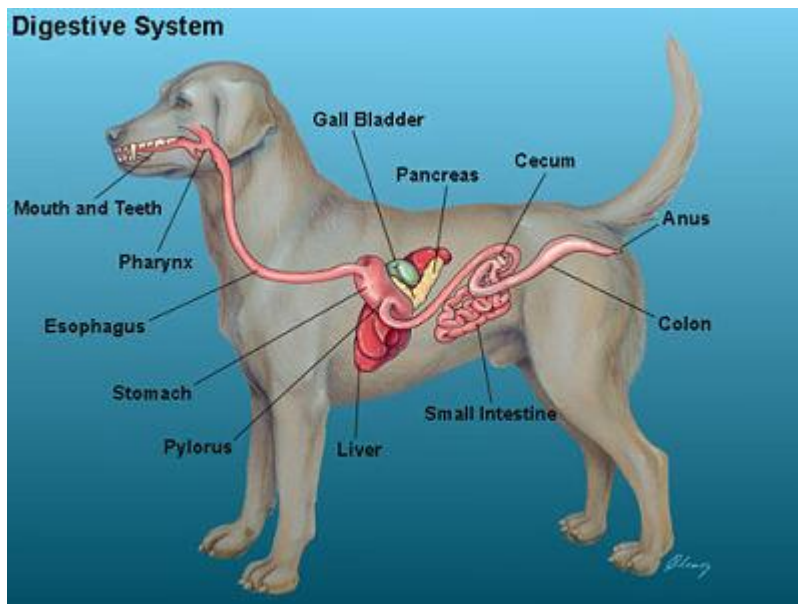
pharynx	['færiŋks]	глотка
larynx	['læriŋks]	гортань
trachea	[trə'ki:ə]	трахея
bronchi	['brɒŋki]	бронхи
lung	[lʌŋ]	легеня
diaphragm	['daɪəfrægm]	діафрагма
to breathe	['bri:ð]	дихати

12. Read and translate the text.

Organs form the digestive system. The functions of the organs of digestion.

The organs of digestion are contained in the oral cavity, in the thoracic cavity and in the abdominal cavity. Digestion begins in the mouth. From the mouth food passes into the esophagus which is in the thoracic cavity. Food passes into the stomach and the **intestines** through the esophagus where food is further digested. The **liver**, the **spleen** and the **gall-bladder** also take part in the process of digestion. An **alimentary canal** is divided into the **headgut** (the oral cavity and the pharynx), the frontal intestine or the **esophagus-gastral** canal (the esophagus and the **stomach**), **small intestine** (the **empty** and **twisted intestine**, the **duo-denum**), **large intestine** (the **blind** intestine, the **segmented** intestine and the **straight** intestine).

intestine	[in'testɪn]	кишечник, кишка
liver	['lɪvə]	печінка
gall-bladder	['gɔ:lblædə]	жовчний міхур
spleen	['spli:n]	селезінка
alimentary canal	[æli'mentəri]	травний канал
headgut	['hedgʌt]	головна кишка
esophagus-gastral	[i(:)'sɒfə'gæstrəl]	стравохідно-шлунковий
stomach	['stʌmək]	шлунок
small intestine	['smɔ:lin'testɪn]	тонкий кишечник
empty intestine	['empti in'testɪn]	тонка кишка
twisted intestine	['twɪstɪd in'testɪn]	клубова кишка
duodenum	[dju(:)əv'di:nəm]	дванадцятипала кишка
large intestine	['la:dʒ in'testɪn]	товста кишка
blind	['blaɪnd]	сліпа (кишка)
segmented	['segməntɪd]	ободова (кишка)
straight	['streɪt]	пряма (кишка)



13. What is urogenital system? What are the excretory organs? What functions have they got?

Urogenital system consists of **urinarius** and genital system. The main excretory organs are the **kidneys**, the **ureters**, the **urethra** and the urinary **bladder**. The organs of **excretion** excrete **waste products**. The female's genital system consists of **genital** glands called the **ovaries**; the male's genital system consists of **testes**. The female's **deferent tracts** are the **oviducts**, the **uterus**, the **vagina**, the urogenital **entrance**. The male's deferent tracts are the **epididymis**, the **deferent duct** and the urogenital **canal**.

urogenital	['juərəv' dʒenitəl]	сечостатевий
excretory	[eks'kri:təri]	видільний
urinarius	['juərinərəs]	сечовидільний
kidney	['kidni]	нирка
ureter	[juə'ri:tə]	сечовід
urethra	[juə'ri:θrə]	сечовипускальний канал
bladder	['blædə]	міхур
excretion	[eks'kri:ʃən]	виділення
waste products	[weist'prɒdəks]	виділення, відходи
genital	['dʒenitəl]	статевий
ovary	['əʊvəri]	яєчник

testis	['testis]	сіменник
deferent tracts	['deferənt trækts]	вивідні шляхи
oviduct	['əʊvidʌkt]	яйцевод
uterus	['ju:tərəs]	матка
vagina	[və'dʒaɪnə]	піхва
epididymis	[epi'didimis]	придаток
efferent duct	['efərənt dʌkt]	сім'япровід
canal	['kænəl]	канал

14. What is the body covered with?

The body is **covered** with **skin** and **hair**. The **thickness** of the skin is 1–7 mm. The skin is composed of the **epidermis**, the **derma** and the **subcutaneous layer**. The **udder** is along the **belly located** at the **pigs**. The **horses** and the **cattle** have the udder in the **inguinal** cavity. The hair-covering divided into long (the **mane**, the **tail**, the **fetlock**), **integumentary** (**downy** and **osteal**) and the **vibrissae** (**sensitive**). **Finger tips** have the **nails**.

to cover	['kʌvə]	покривати
skin	[skin]	шкіра
hair	['heə]	волосся
thickness	['θi:knis]	товщина
epidermis	['epi'də:mis]	шкіра, епідерміс
derma	['də:mə]	шкіра
subcutaneous	['sʌbkju:'teɪnjəs]	підшкірний
layer	['leɪə]	шар
udder	['ʌdə]	вим'я
belly	['beli]	живіт, черево
to locate	[ləu'keɪt]	розташовуватися
pig	[pɪg]	свиня

horse	[hɔ:s]	кінь
cattle	['kætl]	велика рогата худоба
inguinal	['iŋgwɪnl]	паховий
mane	['meɪn]	грива
fetlock	['fetlɒk]	щітка
integumentary	[ɪntegju: 'mentəri]	покривний
downy	['daʊni]	пуховий
vibrissae	['vɪbrɪsi]	вибриси
sensitive	['sensɪtɪv]	чутливий
finger-tips	['fɪŋgə 'tɪps]	кінчики пальців
nail	['neɪl]	ніготь
osteal	['ɒstiəl]	кістковий
tail	['teɪl]	хвіст

15. What does the nervous system consist of?

The nervous system consists of **nerves**, the **brain** and the **medulla**.

nerve	['nɜ:v]	нерв
brain	['breɪn]	ГОЛОВНИЙ МОЗОК
medulla	[me'dulə]	СПИННИЙ МОЗОК

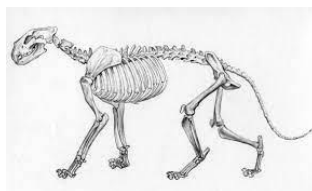
16. What do the osseous and the muscular system consist of? What functions have bones and muscles got?

The **osseous** system consists of **bones** which support the body. Their places of articulation are called the joints. The **muscular** system consists of **muscles** which **contract** and move the limbs. The **locomotor-apparatus** consists of three systems: osseous, muscular and **ligamentous**. The cattle have only 20 muscles. The muscles are divided into **somatic** and **vegetative**.

bone	['bʊn]	кістка
osseous	['ɒsiəs]	кістковий

muscle	['mʌsl]	м'яз
muscular	['mʌskjulə]	м'язовий
to contract	[kən'trækt]	скорочуватися
locomotor apparatus	['lʊkə'məʊtə 'æpəreɪtəs]	опорно-руховий апарат
ligamentous	[lɪgə'məntəs]	зв'язковий
somatic	[sə'mætɪk]	соматичний
vegetative	[ved dʒi'teɪtɪv]	вегетативний

17. What are the main bones which form the skeleton?



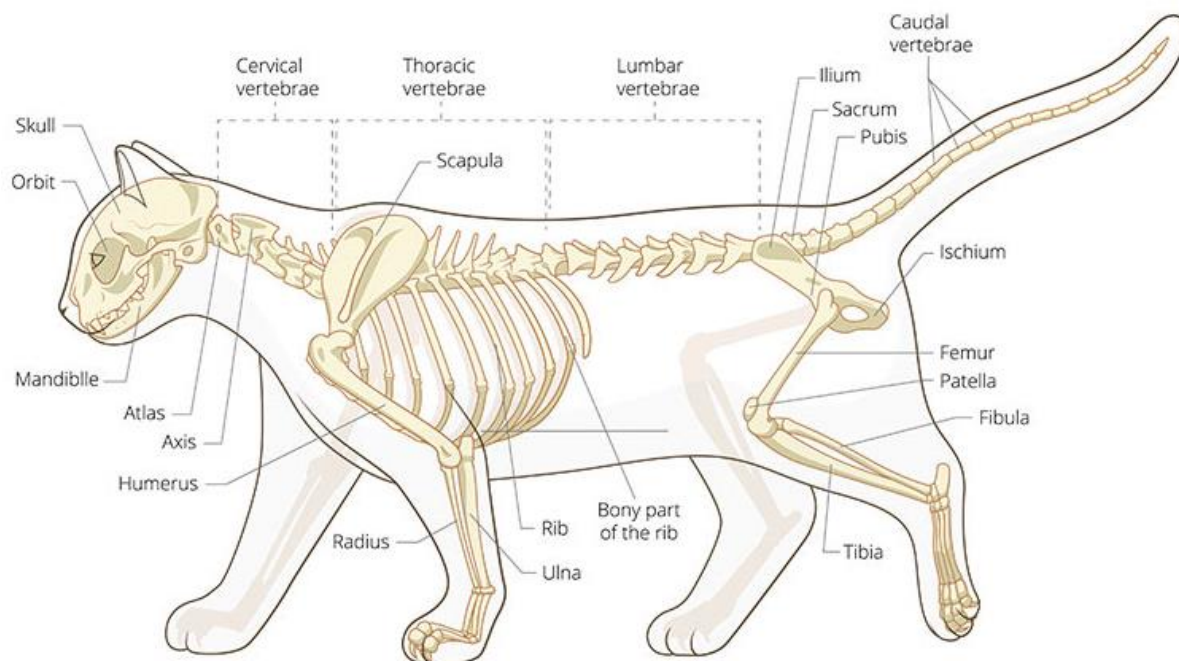
Domestic animals have 210 bones. The skeleton consists of the **vertebral column**, the skull, the **sternum** and the thoracic and pelvic limbs. The main bones which form the skeleton are the skull the vertebral column which consists of **vertebrae**, the **ribs**, the **scapular**, the **clavicles** and the sternum which form the thoracic cavity, and the pelvic bones. The **femur**, the **tibia** and the **fibula** are bones that form the lower extremities.

domestic	[dɒ'mestic]	домашній
vertebral	['vɜ:tibrəl]	хребетний
column	['kɒləm]	стовп
sternum	['stɜ:nəm]	грудина
vertebra	['vɜ:tibrə]	хребець
rib	['rɪb]	ребро
scapula	['skæpjulə]	лопатка
clavicle	['klævɪkl]	ключиця
femur	['fi:mə]	стегно
tibia	['tɪbiə]	велика гомілкорова кістка

fibula

['fɪbjʊlə]

мала ГОМІЛКОВА КІСТКА



18. What glands does the animal body contain?

The animal body contains the **secretory** glands, such as the **thyroid**, the **pancreas**, the **suprarenal** and the **salivary** glands. The **excretory** glands are the **sweat** glands, and the **lacrimal** glands. Epidermis has **sebaceous**, **sudoriferous** and **chyle** glands.

gland	[glænd]	залоза
secretory g.	[si'kri:təri]	залоза внутрішньої секреції
excretory g.	[i'kskri:təri]	заліза видільна
thyroid g.	['θairɒɪd]	щитовидна залоза
pancreas g.	['pæŋkriəs]	підшлункова залоза
suprarenal	['sju:prə'ri:nəl]	наднирковий
salivary g.	['sælivəri]	слинна заліза
sweat	[swet]	піт
lacrimal g.	['lækriməl]	слізна заліза
sebaceous	[si'beiʃəs]	сальний
sudoriferous	['sju:də'rifərəs]	потовий
chyle g.	[kail]	молочний сік, хілус

19. What extremities are there? What parts are they formed by?

There are thoracic and pelvic extremities. They are formed by the **hip**, the **thigh**, the **knee**, the **shank**, the **shoulder**, the hand, the **toe**, the **metacarpus**, **hoof**, **foot**, **tori and urgulae**.

hip	['hip]	СТЕГНО, СТЕГНОВА КІСТКА
thigh	[θai]	СТЕГНОВА КІСТКА
knee	[ni:]	КОЛІНО
shank	[ʃænk]	ГОМІЛКА
shoulder	['ʃouldə]	ПЛЕЧЕ
hand	[hænd]	КИСТЬ
metacarpus	[metə'ka:pəs]	ЗАП'ЯСТЯ
toe	[tʊ]	ПАЛЕЦЬ (ЗАД. КІНЦІВКА)
hoof	[hu:f]	КОПИТО
foot	[fu:t]	НОГА, СТУПНЯ
urgulae	[`ə:gjuli]	КОПИТЦЯ

20. What substances does the animal body consist of?

The **substances** which form the animal body consist of **cells**, **fibers**, and **tissue**.

substance	['sʌbstəns]	РЕЧОВИНА
cell	[sel]	КЛІТИНА
fiber, fibre	['faibə]	ВОЛОКНО
tissue	['tiʃu:]	ТКАНИНА

21. Read and translate the text.

Circulatory organs. Vascular system.

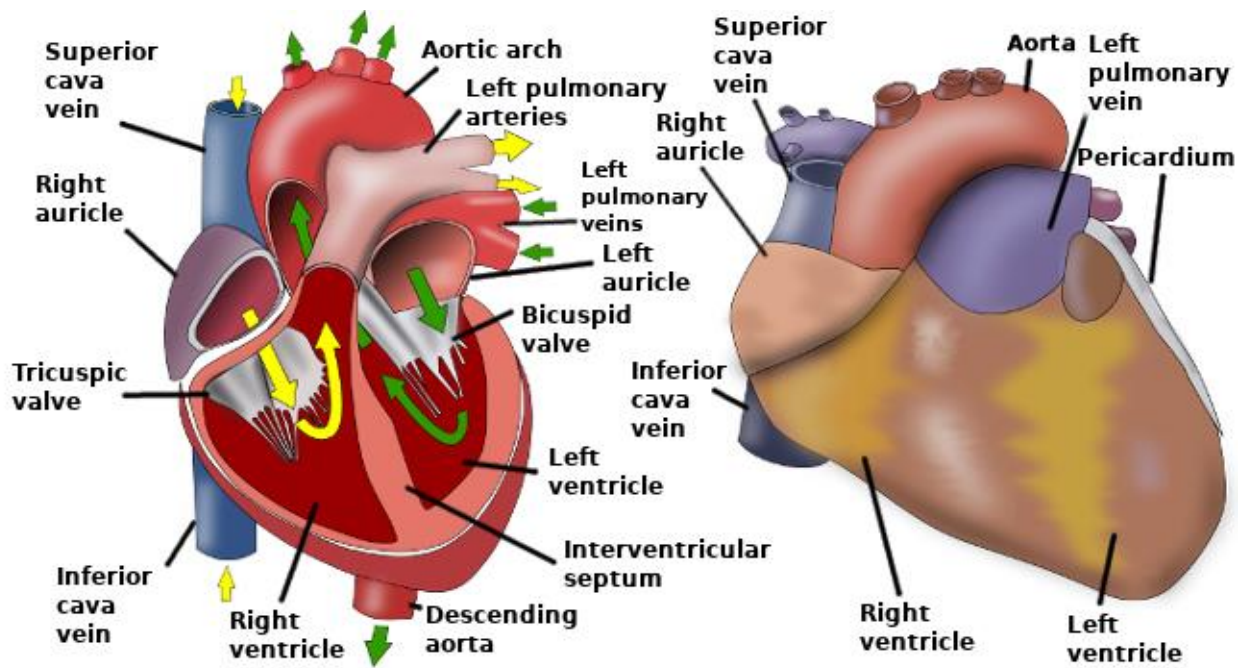


The circulatory organs consist of the heart, the arteries, the **arterioles**, the capillaries, the venulae, and the veins. Together they comprise the so-called **vascular** system. This system is a set of closed **tubes** beginning and ending at the heart and having only one or two **openings**. In the mammal there are two circulations, the greater and the lesser, each of which is provided with a heart, but the two hearts are so closely united anatomically that we generally speak of only one heart, dividing it physiologically into the right and left heart.

The heart is the central organ of this system. It is attached at the base to the large blood **vessels**. The heart pumps the blood through the vessels by strong contractions of the powerful muscles. The average weight of the heart of the horse is 7,5 pounds, of the ox – 5,5 pounds.

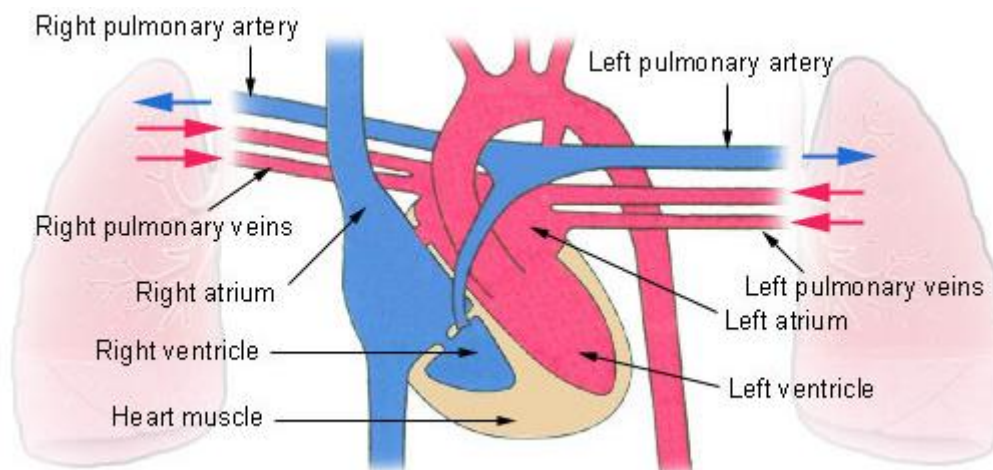
The heart is situated in the chest cavity between the lungs in a **chamber** called the **pericardium**. This is a double bag, one adherent to the heart itself, while the other **envelopes** the heart more loosely. Between these two coverings is the **pericardial fluid** which is a form of **lymph**.

The heart has four cavities – the right and the left **auricles** and the right and the left **ventricles**. The two cavities of one side are separated from those of the other by a **septum of fibromuscular** composition that keeps the pure and impure blood from mixing. The right anterior part of the base of the heart is formed by the right auricle. It has **orifices** for the anterior and posterior **venae cavae** and in the ventral part the right **auriculoventricular** orifices which open into the right ventricle. The right ventricle occupies the right anterior of the ventricular mass, but does not reach the apex. It communicates with the pulmonary artery through the **pulmonary** orifice. The left auricle forms the posterior part of the base of the heart.



The right and left **portion** of the heart each consists of an auricle and a ventricle. These are divided from one another by a transverse **partition** and communicate with another by **valves** which allow the blood to flow in one direction only, namely from the auricle to the ventricle.

The blood is kept in constant circulation through the vessels by the involuntary, rhythmic contractions of the heart which acts as a double pump. The right and left portions of the heart have no direct communication with each other. They work together but independently.



arteriole

['a:təriɒl]

артериола

vascular

['vaskju:lə]

судинний

tube	[tju:b]	трубка
opening	['əʊpniŋ]	отвір
vessel	[vesl]	сосуд
chamber	['tʃeimbə]	камера серця
		перикард,
pericardium	[peri'ka:dʒəm]	нарколосерцева сумка
envelope	['envələʊp]	плівка
pericardial fluid	[pəri'ka:dʒəm 'flu:ɪd]	перекардічна рідина
lymph	['lɪmf]	лімфа
auricle	['ɔ:rikl]	передсердя
ventricle	['ventrikl]	шлуночок
septum	['septəm]	перегородка
fibromuscular	['faɪbrəu'mʌskjulə]	фібромоскулярний
orifice	['ɔ:rɪfɪs]	отвір, вихід
vena cava	['vi:ni 'kʌvə]	порожниста вена
auriculoventricula	[ɔ:ri'kjuləuven'triksjulə]	атріовентрикулярний
pulmonary	['pʌlmənəri]	легеневий
fluid	['flu:ɪd]	рідина
partition	[pa:'tiʃən]	перегородка
valve	[vælv]	клапан

22. Read and translate the text.

The arterial system.

The arteries are the tubes that carry the blood from the heart to the tissue. Their walls are thick, strong, and contain much yellow, elastic tissue, which renders them **extensible**. When empty they do not collapse. Most arteries occupy protected positions and are straight in their course to reduce **friction** between the flowing blood and the walls of the arteries. Arteries communicate freely with one another,

thus promoting equality of distribution and **pressure** and making free circulation possible even after a large vessel becomes obliterated. A single large vessel, the pulmonary artery, originates from the right ventricle and another, the **aorta**, from the left ventricle. These large arteries divide into smaller vessels and then in turn into yet smaller ones. The term “arterial system” is given to the arteries as a whole. The pulmonary artery carries dark or **venous** blood from the right ventricle to the lungs, where it divides into numerous vessels that ramify in the lung tissue.

The aorta gives passage to the red or arterial blood from the left ventricle. This blood supplies all the organs of the body except the lungs. It is a short vessel that soon divides into **thoracic** and **abdominal** branches.

The common **brachiocephalic** artery is the thoracic division of the aorta. In the horses it is directed upward to supply the **fore limb**, neck, and head.

The posterior aorta is the abdominal division of the aorta. It **arches** back-ward and pierces the diaphragm. It supplies branches to the **walls** and **viscera** of the abdominal cavity, the body muscles, the **udder**, the **pelvic** organs, and the **hind** limbs.

The capillaries are the minute continuations of the arterioles that connect the latter with the venules.

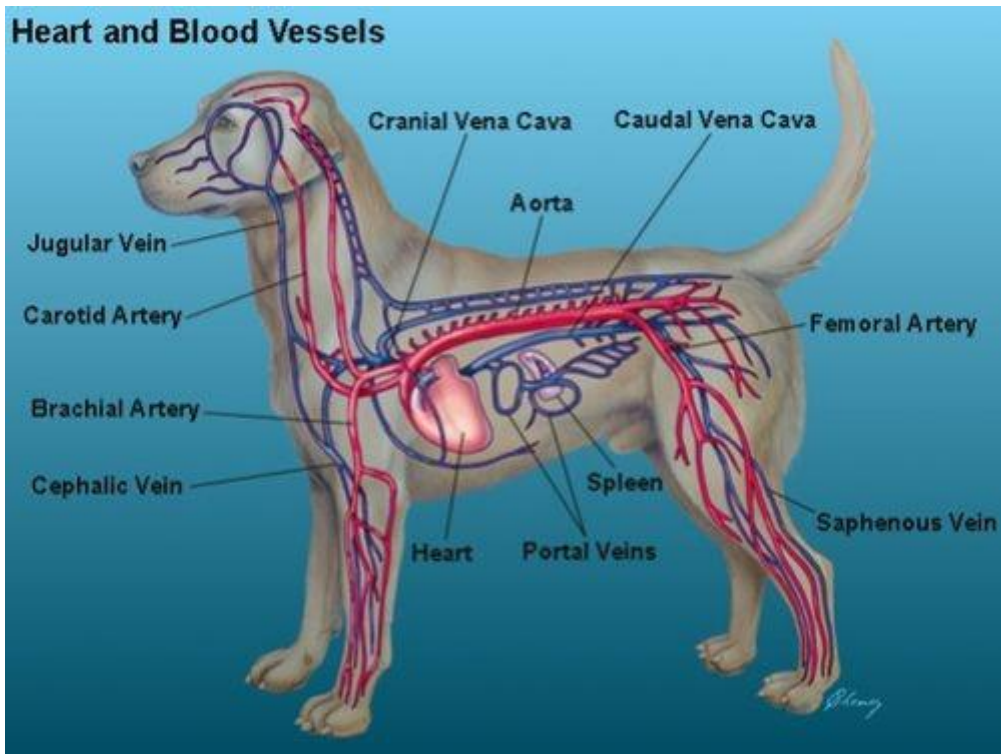
The veins conduct the blood back to the heart from the tissues. The capacity of the venous system is two or three times that of the arterial.

The pulmonary veins carry to the left auricle the blood, which has passed through the lungs and has become oxygenated.

The **anterior** vena cava carries to the right auricle the blood returned from the head and neck by the **jugular** veins and that from the thoracic limbs.

The **posterior** vena cava is the largest vein in the body and conveys to the right auricle nearly all the blood from the **liver, spleen, intestines**, other abdominal and pelvic organs, and the pelvic limbs.

The lymph vessels are provided with simple valves to prevent a backward flow of the lymph. They all end finally in two main **trunks**, which open into the venous system near the base of the heart



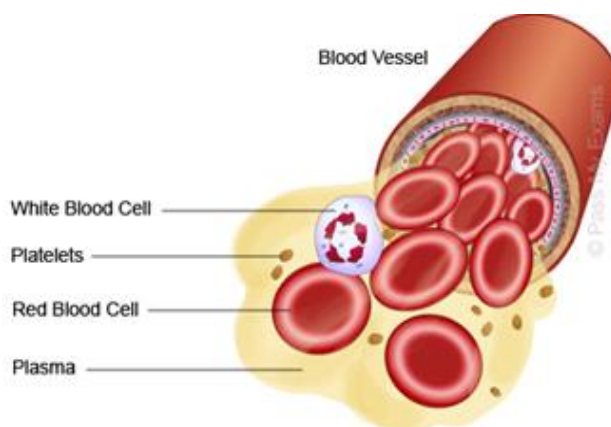
extensible	[iks'tənsɪbl]	розширювана
friction	['frɪkʃən]	тертя
pressure	['preʃə]	тиск, стискування
aorta	[ei'ɔ:tə]	аорта
venous	['vi:nəs]	венозний
thoracic	[θɔ:'ræsɪk]	грудний
abdominal	[æb'dɒmɪnəl]	черевний
brachiocephalic	['bra:ntʃi'u'sefəlɪk]	брахіоцефальний
fore	[fɔ:]	носовий
limb	[lɪm]	кінцівка
arch	[ɑ:tʃ]	дуга, вигин
wall	[wɔ:l]	стінка, перегородка
viscera	['vɪsərə]	внутрішні органи
udd	['ʌdə]	вим'я
pelvic	['pelvɪk]	тазовий
hind	[haɪnd]	задній
anterior	['æntɪəriə]	передній

jugular	['dʒʌgju:lə]	яремна вена (шийна)
posterior	[pɒs'tiəriə]	задній
liver	['livə]	печінка
spleen	['spli:n]	селезінка
intestine	[in'testɪn]	кишечник, кишка
trunk	[trʌŋk]	тулуб

23. What does the blood consist of?

The blood consists of a nearly colourless liquid – the blood plasma – in which are floating the red and the white **corpuses** blood therefore contains: a) the liquid **plasma**; b) the corpuses.

The liquid plasma contains in solution digested food materials obtained from the stomach and intestines.



The floating red corpuses are far more numerous than the white and have a special purpose.

In its passage from the arteries to the vein within the body, the blood travels through very **fine-walled** vessels termed capillaries.

Food materials easily soak or diffuse through the capillary walls and the living cells surrounding the capillaries select what they want.

The red corpuses themselves cannot pass out, but most of their **cargoes** of oxygen can and thus living cells receive free oxygen from the blood **stream**.

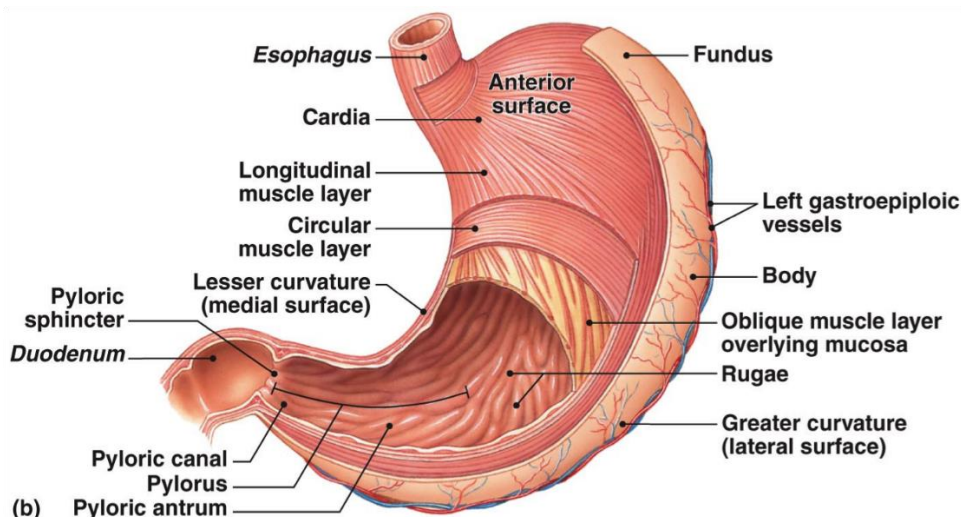
corpuses	['kɒ:pəsɪz]	корпускули
----------	-------------	------------

plasma	['plæzmə]	плазма
fine-walled	['fain 'wɒlt]	тонкостінний (судина)
cargo	['ka:ɡɒ]	вантаж
stream	['stri:m]	потік, русло

24. What parts does the stomach have?

The cow's stomach has 4 main parts: **rumen**, **reticulum**, **omasum** and **abomasum**. At birth, the omasum and reticulum are less developed.

The rumen is located in the left side of the abdominal cavity. It increases rapidly in size as the calf grows and begins to eat forage. The rumen wall contains muscle **fibre** that aid in the **rotary** motion of food in the stomach. Muscular pillars divide the rumen into dorsal, ventral and two posterior sacs. Much of the **inner** wall of the rumen is lined with numerous large papillae, giving the organ great absorptive area. The **esophagus** starts at the mouth, passes down the throat, through the chest cavity and diaphragm, and enters the rumen and at the cardia, high on its anterior wall. The esophageal **groove** begins at the end of the esophagus in the rumen, and continues as part of the rumen wall, somewhat down ward along the reticulum wall, to the omasum. Coarse foods, grain, most of the water and **saliva** pass into the rumen.



rumen	['ru:men]	рубець, перший відділ преджелудка,
-------	-----------	---------------------------------------

reticulum	[ri'tikjuləm]	сітка, другий відділ преджелудка
omasum	[ɒ'meiʃəm]	книжка, третій відділ преджелудка
abomasum	[æbɒ'meiʃəm]	сичуг, четвертий відділ преджелудка
fibra pl. fibrae	['faibə]	волокно
robary	['rɒubəri]	обертальний
inner	['inə]	внутрішній
esophagus	['i:sɒfəgəs]	стравохід
groove	['gru:v]	жолобок
saliva	[sə'laivə]	слина

Ex. 7. Answer the following questions.

1. What organs of the animal body can you name?
2. What does each organ carry out?
3. What does it consist of?
4. Are the organs united to form system of organs?
5. What do circulatory organs consist of?
6. How many circulations are there in the mammal?
7. What is the central organ of the vascular system?
8. What is the heart attached to?
9. How does the heart pump the blood?
10. What is the average weight of the heart of the horse?
11. Where is the heart situated? What is the pericardium?
12. How many cavities does the heart have? How are these cavities termed?
13. How many cavities are there inside the body?
14. Is the abdomen located in the anterior cavity?

15. What is the central organ of cardio-vascular system?
16. In what cavity is the heart situated?
17. How does the heart act?
18. Do the right and left portions of the heart communicate with each other?
19. What does the blood consist of?
20. What does the liquid plasma contain?
21. What are capillaries?
22. What materials easily soak through the capillary walls?
23. Where do the living cells receive free oxygen from?
24. What factors influence growth, development, structure and function of the joints?
25. Why is anatomy so important?

UNIT 2

DISEASES OF ANIMALS



Read and translate the text.

Plague of dogs

The **plague** of dogs is an **infectious** disease. It **amazes** dogs of young age, about one year. It is clinically shown as **catarrhal** inflammations of a **mucous membrane** of respiratory ways, a digestive path and occurrence **eczema** on a skin and very much frequently a defeat of the central nervous system. It causes the big death rate among fallen ill dogs. The season for occurrence and distribution of a plague of dogs has no essential value.

The **infecting agent** of a plague of dogs is a filtering virus opened in 1905. (Kappe). It complicates current of a plague infection.

According to practical supervision dogs with a plague in the age of from 3 till 12 months fall ill and are in advanced age.

The virus of a plague from an organism of a sick dog is allocated together with the **expiration** from nasal cavities, the eye and pollutes environment. It is possible, that the virus is allocated also with **urine** and stool.

After **recovery** a dog remains a virus carrier. It is proved; it can allocate a virus from an organism in an environment.

Secondary sources of infection can be **forages**, water, subjects of **stock**, and also places after walking a dog, polluted of feces of the sick animals. It is considered that the virus from a place of primary introduction will penetrate into a blood channel, together with a blood it is distributed along an organism and in such way reaches the central nervous system.

Duration of the incubatory period at infection with a plague of dogs is 2–3 weeks.

In one case there are symptoms which defeat respiratory organs and nervous system.

At the beginning of disease **depression**, the general weakness, **lowered reaction** to external irritations, refusal of forage, from time to time **trembling** (fever) are marked. The body temperature is raised. As specific means of treatment of a plague of dogs serum is applied.

plague	['pleig]	чума
infectious	[in'fekʃəs]	заразный
to amaze	[æ'meiz]	вражати
cattarrhal	[kə'ta:rəl]	катаральный
mucous	['mju:kəs]	слизовой
membrane	['membrein]	оболонка, мембрана
eczema	['eksimə]	екзема

infecting agent	[in'fektɪŋ 'eɪdʒənt]	збудник хвороби
expiration	[ˈɛkspaɪə'reɪʃn]	виділення
urine	[ˈjuəriːn]	сеча
recovery	[ri'kʌvəri]	одужання
forage	['fɔrɪdʒ]	корма
stock	[stɒk]	інвентар
duration	[dju'reɪʃn]	тривалість
depression	[dɪp'reʃn]	пригнічений стан
lowered reaction	[ˈləʊəd rɪ'ækʃn]	знижена реакція
trembling	['tremblɪŋ]	тремтіння

Ex. 6. Answer the questions.

1. What disease is the plague of dogs?
2. What symptoms of the disease do sick animals have?
3. Who opened a virus?
4. When was it opened?
5. At what age do the dogs fall ill?
6. What is a source of the disease?
7. What means of treatment is applied?
8. What should people do if they have a sick animal?
9. How long are the dogs ill?

Ex. 7. Read and translate the text.

Yersiniosis



Yersiniosis is a disease caused by the bacterium *Yersinia enterocolitica*. Can animals **transmit** yersiniosis to people? Yes, some animals **pass** *Yersinia enterocolitica* in their **feces** and people can get sick from contact with infected feces.

Other animals that can carry this disease include cats, dogs, horses, cows, **rodents**, and **rabbits**. People can also get yersiniosis by eating **pork** that is not cooked completely or by drinking contaminated milk. Young children usually have fever, stomach **pain**, and **diarrhea**. Adults can feel **pain** on their right side and may have a fever, pain in joints, such as knees or **wrists**.

yersiniosis	['jesɪnɪʊsɪs]	ієрсиніоз
to transmit	['trænz'mɪt]	передавати
to pass	['pɑ:s]	переносити
feces	['fi:sɪz]	фекалії
rodent	['rɒdənt]	гризун
rabbit	['ræbɪt]	кролик
pork	['pɜ:k]	свинина
pain	['peɪn]	біль
diarrhea	['daɪə'riə]	пронос, діарея
wrist	['rɪ:st]	зап'ястя

Ex. 8. Answer the questions.

1. What animals can get sick by yersiniosis?
2. Can people get yersiniosis? And how?
3. What symptoms of yersiniosis people have?
4. What should the patients do if they have yersiniosis?
5. Would you follow the doctor's recommendation if you have a disease?

Ex. 9. Read and translate the text.

Salmonellosis



Salmonellosis is a bacterial disease caused by the bacterium *Salmonella*. More often it infects cattle of young age. Symptoms include fever, watery diarrhea, and cough. In some cases animals may die in 5–10 days. Salmonellosis affects lungs, and gastrointestinal system. Many different kinds of *Salmonella* can make people sick. Most people have diarrhea, fever, and stomach pain. These symptoms usually go away after one week. Sometimes, people have to see a doctor or go to the hospital if the diarrhea is **severe** or the infection has **affected** other organs.

Many kinds of animals can pass salmonellosis to people. Usually, people get salmonellosis by eating contaminated food, such as chicken or eggs. However, animals can carry *Salmonella* and pass it in their feces (**stool**). Therefore, people can also get salmonellosis if they do not wash their hands after touching the feces of animals. Reptiles (**lizards**, **snakes**, and **turtles**), baby chicks, and ducklings are especially likely to pass salmonellosis to people. Dogs, cats, birds (including pet birds), horses, and farm animals can also pass *Salmonella* in their feces.

Some people are more likely than others to get salmonellosis. A person's age and health status may affect his or her **immune** system, increasing the chances of getting sick. People who are more likely to get salmonellosis include **infants**, children younger than 5 years old, organ transplant **patients**, people with **HIV/AIDS**, and people receiving treatment for **cancer**.

salmonellosis	['sælmə'nelvʊsɪs]	сальмонельоз
to infect	[ɪn'fekt]	заражати
severe	[si'viə]	сильний
to affect	[æ'fekt]	вразити
stool	[stu:l]	випорожнення, дія кишечника
lizard	['lɪzəd]	ящірка
snake	[sneɪk]	змія
turtle	['tɜ:tl]	черепаха
immune	[ɪ'mju:n]	імунний

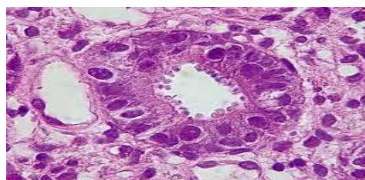
infant	['ɪnfænt]	дитина
patient	['peɪʃənt]	хворий
cancer	['kænsə]	рак
HIV (human immunodeficiency virus)		вірус імунодефіциту людини (ВІЛ)
AIDS (acquired immunodeficiency syndrome)		синдром набутого імунодефіциту (СНІД)

Ex. 10. Answer the question.

1. What disease is salmonellosis?
2. What cattle does salmonellosis infect more often?
3. What symptoms of the disease do the cattle have?
4. Can people get salmonellosis?
5. What symptoms do people have?
6. What should the patients do if they have salmonellosis?
7. How long are people ill?
8. What treatment do they have?

Ex. 11. Read and translate the text.

Cryptosporidium infection



Cryptosporidium infection (cryptosporidiosis) is a **parasitic** disease caused by *Cryptosporidium parvum*. It usually causes severe infection of the **gastrointestinal system**, including **watery diarrhea**, fever, abdominal **cramps**, **nausea**, and **vomiting**.

Most people get *Cryptosporidium* infection from contaminated food and water. However, sometimes animals (including farm animals, cats, and dogs) carry this **parasite** in their feces (stool) and pass it to people. People with **com-promised** immune systems, such as those undergoing **immunosuppressive** treatments for cancer, organ transplant patients, and people with HIV/AIDS, are more likely than others to get *Cryptosporidium* infection.

<i>Cryptosporidium</i> L.		криптоспоридійний
parasitic	['pærə'sitik]	паразитичний
gastrointestinal	['gæstrə'intestinəl]	шлунково-кишковий
watery diarrhea	['wɔtəri 'daɪə'riə]	водяний пронос
cramp	[kræp]	судоми
nausea	['nɔ:sjə]	нудота
vomit	['vɒmit]	блювота
parasite	['pærə'sait]	паразит
to compromise	['kɒmprəmaɪz]	піддавати ризику
immunosuppressive	[i'mju:nɒsʌp'resɪv]	імунодепресивний

Ex. 12. Answer the questions.

1. What disease is cryptosporidium infection?
2. Can people get cryptosporidium infection?
3. What symptoms do people have if they have cryptosporidium infection?
4. How do people get cryptosporidium infection?

Ex. 13. Read and translate the text.

Brucellosis



Brucellosis is a bacterial diseases caused by the bacterium *Brucella*. It is a chronicle disease of man and animals. At the **acute form** (< 8 weeks from ill-ness onset) people have nonspecific and “flu-like” symptoms such as fever, sweats, **malaise**, **anorexia**, **headache**, **myalgia**, and back pain. At the **undulant** form (< 1 year from illness onset), symptoms include undulant fevers, arthritis. Neurologic symptoms may occur acutely in up to 5 % of cases. In the chronic form (> 1 year from onset), symptoms may include chronic **fatigue syndrome**, depression, and arthritis. Among cattle and pigs are usually met abortions and **epididymo- orchitis**. Commonly it is transmitted through **abrasions** of the skin from handling infected mammals. It occurs more frequently by ingesting unpasteurized milk or dairy products at the **abattoir** workers, meat inspectors, animal handlers, **veterinarians**, and laboratorians.

brucellosis	['bru:si'ləʊsis]	бруцельоз
acute form	['ækjut 'fɔ:m]	гостра форма
malaise	[mæ'leiz]	нездужання
anorexia	['ænə'reksɪə]	втрата апетиту
headache	[he'deɪk]	головний біль
myalgia	[mai'ældʒɪə]	міальгія, біль в м'язах
undulant	['ʌndjulənt]	хвилеподібний
epididymo-orchitis	[epididimo 'ɔrkitis]	запалення яєчка і його придатка

fatigue	[fæ'tiɡ]	втома
syndrome	['sindrəm]	синдром
abrasions	[ə'breɪʒən]	садно
abattoir	['æbətwa:]	скотобійня
veterinarian	['vetəri'nɛəriən]	ветеринар

Ex. 14. Answer the questions.

1. What symptoms of brucellosis do people have?
2. What symptoms of brucellosis does cattle have?
3. How does brucellosis spread?
4. Can people get brucellosis?

Ex. 15. Read and translate the text.

Rabies



Rabies is the **anthropozoonotic** disease with aggressive clinical behavior. It is caused by polypathogenic **neurotropical virus** and transferred **via** the bite with saliva of an infective patient. It is accompanied by the affection of central nervous system, and as a rule ends with animal's death.

All warm-blooded animals are **susceptible** to rabies virus. They are fox, wolf, and jackal of cats and cattle, dogs, sheep, goats, and horses.

The source of virus agents comes to be ill animals and virus carries. The most typical **signs** are registered with dogs. The first symptoms usually appear in 10–15 days after the **contamination**. The animal does not react to calling, it becomes very gentle, or barks without any reason. The appetite is per-verted, the animal refuses to eat, but can hardly swallow. Dogs have no hydro-phobia; they are

thirsty but cannot drink much. The experience dysphasia and difficulty of urination excrements are watery with odd objects inside. Salivation and sexual instincts are more intense. Depression comes after rage attacks and continues with indifference. During rage attacks the animal can bite a stick and keep it, if in a cage it bites swigs damaging its mouth mucous **tunic** and breaking teeth. The animal becomes aggressive wants to escape wherever. The wandering dogs tires to bite people and animals. The **paralysis** of larynx, tongue, lower jaw or pelvic is possible. The animals die because of the **suffocation** caused by the paralysis of respiratory center. The clinical behavior of other species of animals can differ. For example, cats usually have violent form followed by **husky mewing, scratching** other animals and people, tries to escape. The duration of the disease is 3–6 days.

The violent form is observed with horses; they fall down and stand up, bite people caring after them or other try to run away, hit against obstacles. The paralysis starts with pelvic **limbs** and proceeds slowly. The disease lasts 4–6 days. The symptoms with cattle are the same as with horses. An ill animal is very aggressive, attacks other cattle and horses, butting or even biting them. The **mooring** is hoarse, loud and long. The clinical behavior of sheep and goats is practically the same.

The violent forms are also observed with pigs characterized by **anxiety, excitement** and aggressive attitude towards other animals and people. Rabies with birds is very rare, and is registered only in natural conditions due to a **bite** of an animal.

Among wild animals the wolves are affected mostly. They are extremely aggressive; they attack animals and people even in cities. The cases of rabies with jackal, wild pig, bear, lion and antelope are known.

The cadavers of dead animal have bites and scratches. There is congestive **hyperemia** of inner organs. The stomach is empty; have some uneatable objects inside. There may be some signs catarrhal inflammation of stomach mucous tunic and small intestine and sometimes of hemorrhage. The brain is edematic with cerebral hemorrhage.

Diagnosis is identified on the basis of epizootological clinical data and results of laboratory testing. The cadaver or the head is examined in the laboratory. Brain tissue is microscopically examination in order to discover Negri corpuscles.

Dry cultural inactivated vaccine of BNIITIBP and AZVI antirabic vaccine are used for rabies prevention and postinfectious vaccination with exception of dogs.



In 1973 World Health Organization recommended inactivated antirabic vaccine as the most adequate for rabies prevention and treatment with animals. In our country inactivated ethanol VGNKI is used. All animals are killed, and their cadavers are destroyed (cremated).

rabies	[ˈreɪbɪz]	сказ
anthropozoonotic	[ˈæntərəʊzɔːˈnɒstɪk]	антропозоонотичний
neurothropical	[njuəˈrɒθrɒpɪkəl]	нейротропічний
virus	[ˈvaɪrəs]	вірус
via	[ˈvaɪə]	через
susceptible	[səˈsɛptəbl]	сприйнятливий
sign	[saɪn]	ознака
contagination	[ˈkɒntɛɡɪˈneɪʃən]	зараження
tunic	[ˈtjuːnɪk]	оболонка
paralysis	[pəˈrælɪsɪs]	параліч
suffocation	[ˈsʌfəˈkeɪʃən]	задуха
husky mewing	[ˈhʌski ˈmjuː]	хрипке нявкання
scratching	[ˈskrætʃɪŋ]	дряпання
limb	[lɪm]	кінцівка

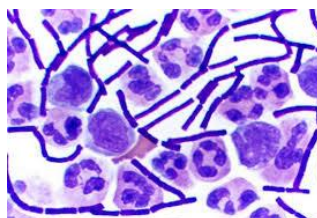
mooring	['mu:ɪŋ]	мування
anxiety	[æŋk'saɪəti]	занепокоєння
bite	[baɪt]	укус
hyperemia	['haɪpərəməɪə]	гіперемія
excitement	[ɪk'saɪtmənt]	збудження, хвилювання

Ex. 16. Answer the questions.

1. What disease is rabies?
2. What virus is it caused by?
3. What kinds of animals are susceptible to rabies virus?
4. What is a source of the disease?
5. How long are the animals ill?
6. How many stages of the disease do the animals have?
7. What treatment do they have?
8. What prevention and measures should be recommended?
9. What symptoms of rabies do three stages of the disease include?

Ex. 17. Read and translate the text.

Anthrax



Anthrax is an acute infectious disease caused by the bacterium *Bacillus anthracis* and is highly **lethal** in some forms. Anthrax most commonly occurs in wild and domestic **ruminants**, but it can also occur in humans when they are

exposed to infected animals, tissue from infected animals, or high density of anthrax **spores**. Anthrax cannot spread from human to human. Anthrax infection is extremely rare in common domestic pets (dogs and cats).

Anthrax is rare in humans although it occasionally occurs in ruminants such as cattle, sheep, goats, camels, and antelopes. *Bacillus anthracis* bacteria are **soil-borne**.

Anthrax can enter the human body through the intestines, **lungs**, or skin (**cutaneous**) and causes distinct clinical syndromes based on its site of entry. An infected human will generally be quarantined. However, anthrax does not usually spread from an infected human to a noninfected human.

Anthrax is usually contracted by handling infected animals or their wool, germ warfare/terrorism or laboratory accidents.

Pulmonary (respiratory or inhalation) anthrax. Respiratory infection initially present with cold or flu-like symptoms for several days, followed by severe (and often fatal) respiratory **collapse**. If not treated soon after exposure, before symptoms appear, inhalation anthrax is highly fatal, with near 100% mortality.

Gastrointestinal (gastroenteric) anthrax. Gastrointestinal infection is most often caused by the ingestion of infected meat and often presents with serious gastrointestinal difficulty, vomiting of blood, severe diarrhea, acute inflammation of the intestinal **tract**, and loss of appetite. Intestinal infections result in fatality 25 to 60 % of the time.

Cutaneous (skin) anthrax. **Cutaneous** infection is manifested by progressive stages from an erythematous **papule** to **ulceration** and finally to formation of black **scar** (i.e., eschar). The black **eschar** often presents with a large, painless necrotic ulcers (beginning as an irritating and **itchy** skin **lesion** or blister that is dark and usually concentrated as a black **dot**, somewhat **resembling** bread mold) at the site of infection. Cutaneous infection is the least fatal but without treatment, approximately 20 % of all skin infection cases may progress to toxemia and death. Treated cutaneous anthrax is rarely fatal.

Treatment for anthrax infection and other bacterial infections includes large doses of intravenous and oral antibiotics, such as, penicillin, ciprofloxacin, doxycycline, erythromycin, and vancomycin.

Anthrax spores can **survive** for long periods of time in the environment after release. Methods for cleaning anthrax contaminated sites commonly use **oxidizing agent** such as peroxides. These agents slowly destroy bacterial spores. Chlorine dioxide has emerged as the preferred **biocide** against anthrax-contaminated sites having been employed in the treatment of numerous government buildings over the past decade.

anthrax	['ænræks]	сібiрська виразка
lethal	['li:θəl]	смертельний
ruminant	['ru:minənt]	жуйна тварина
spore	[spɔ:]	спора
soil-borne	[sɔil bɔ:n]	переносити ґрунтом
lung	['lʌŋ]	легеня
cutaneous	['kju:'teinjəs]	шкірний
pneumonic	['nju'mɒnɪk]	пневмонічний
collapse	[kə'læps]	загибель
tract	[trækt]	тракт
papula	['pæpjʊ:li]	вузлик папули
ulceration	['ʌlsə'reiʃən]	виразки
scar	[ska:]	шрам
eschar	['eska:]	струп
itchy	['itʃi]	сверблячий
lesion	['li:ʒən]	ураження
dot	[dɒt]	цяточка
to resemble	[ri'zəmbəl]	нагадувати
to survive	[sə:'vaɪv]	виживати
biocide	['baɪəsaid]	біоцид

oxidizing	['ɒksidaɪzɪŋ]	ОКИСЛЕНИЯ
agent	['eɪdʒənt]	АГЕНТ

Ex. 18. Answer the questions.

1. What disease is anthrax?
2. What animals suffer from anthrax?
3. How can people get anthrax?
4. What kinds of anthrax are there?
5. What symptoms of pulmonary anthrax do the animals have?
6. What symptoms of gastro-intestinal anthrax do the animals have?
7. What symptoms of cutaneous anthrax do the animals have?
8. What treatment for anthrax infection do the animals have?
9. What measures should be recommended?

Read and translate the text.

Animal diseases that threaten man

Animals, domesticated or wild, can be a source of human illness. Such diseases, **transmitted** between animals and man, are often referred to as **zoonoses**.

The animal **inflicted malady** that **inspires** the most fear is **rabies**, a virus that attacks the nervous system. The **saliva** of an **infected** animal contains the deadly virus and comes to us through a **bite** or open **sore** or **wound**. **Rural** people are at greater risk than urban because of the proximity of wild animals and many free **roaming unvaccinated** dogs and cats. **Warn** children about petting or feeding any animal acting abnormally. Have your family pets **inoculated**. Take immediate action if someone is bitten – try to capture the animal for examination by a veterinarian and seek prompt medical consultation.

Brucellosis afflicts cattle, goats and swine. It can be transmitted from infected animals to man through raw milk, contact of an open sore or wound with an **aborted fetus** or after birth or from **carcasses** at the time of **slaughter**.

Undulant fever is a severe and **tenacious** malady that you can avoid through good sanitation and management. Animals should be tested regularly and removed if infected. Check with your state regulatory officials regarding vaccination.

Bovine tuberculosis is much less common today due to **rigorous** testing and **elimination** of infected animals. As bacteria are found in any body **secretion** or **discharge, handling tubercular** cattle is a health. Protective measures are regular testing and slaughter of those showing positive reaction, and **pasteurization** of family **consumed** milk.

Trichinosis is a painful and sometimes fatal disease in man. Eating un-cooked or partially cooked **infested pork** is how we get in. Thorough cooking of pork is the best prevention.

Salmonella organisms are found in a variety of domestic and wild animals and **poultry. Transmission** to people occurs through contaminated food and water. The disease causes severe **gastro-intestinal distress**, fever and loss of appetite, and can be serious for the very young or old.

The natural reservoir of **tetanus** organisms is the intestinal tract of animals, especially horses. The **spores** are introduced into a person's body by contamination of a wound with soil, street dust or **fecal** material. Tetanus is a horrible dis-ease with a high fatality rate; therefore, all rural people should be immunized.

Leptospirosis in humans can be a serious ailment. Carriers include domestic animals, rats and wild rodents. It is passed from animal to animal or to people through contact with **infected urine**, or with soil, feed, water or other materials so contaminated. Once on a farm, the disease is difficult **to eradicate**.



Tularemia is usually acquired by handling wild rabbits and eating imperfectly cooked contaminated meat. Though the disease is not usually life **threat-ening**, it is characterized by a high fever.

Other zoonoses that farm people should **guard** against include swine **erysipelas, animal pox disease, ring worm, tape worm, Newcastle disease, histoplasmosis, psittacosis**, and insect-borne animal diseases.

Here a few general preventive measures.

Keep animal **quarters** clean.

Immunize animals and keep them free of **parasites**.

Quarantine or remove sick animals.

Don't unduly expose yourself to any sick animal.

Wear rubber gloves when treating sick animals or assisting at birth and without fail if you have open sores or wounds on your hands and arms. Wash up and change clothing when finished.

Call your doctor if you become ill after contact with animals.

to transmit	[trænz'mit]	передавати
zoonosis	[zu:'nəʊsɪs]	зооноз
to inflict	[ɪn'flɪkt]	страждати
malady	['mælədi]	хвороба; розлад
to inspire	[ɪn'spaɪə]	вселяти
rabies	['reɪbɪz]	сказ
saliva	[sə'laɪvə]	слина
to infect	[ɪn'fekt]	заражати
bite	[baɪt]	укус
sore	[sɔ:]	рана, хворе місце
wound	[wu:nd]	рана
rural	['ruərəl]	сільський
unvaccinated	[ʌn'væksɪneɪtɪd]	невакцинований
to roam	[rəʊm]	блукати, тинятися

to warn	[wɜ:n]	попереджати
to inoculate	[i'nɒkjuleit]	робити щеплення
brucellosis	[ˈbru:si'ləʊsis]	бруцельоз
to afflict	[ə'flikt]	вражати, заподіювати біль
aborted	[æ'ɒ:tɪd]	недоношений
fetus	['fi:təs]	утробний плід
carcass	['ka:kəs]	тіло, туша
slaughter	['slɒ:tə]	забій худоби
undulant fever	[ʌn'dʌlənt 'fi:və]	мальтійська лихоманка
tenacious	[ti'neiʃəs]	серйозний, міцний
bovine	['bəʊvain]	бичачий
tuberculosis	[tju:'bə:kju'ləʊsis]	туберкульоз
rigorous	['rigərəs]	суворий, точний
elimination	[i'limi'neiʃən]	знищення, усунення
secretion	[si'kri:ʃən]	виділення, секреція
discharge	[dis'tʃɑ:dʒ]	видаляти
handling	['hændliŋ]	догляд
tubercular	[tju:'bə:kju:lə]	туберкульозний
pasteurization	[ˈpæstəraɪ'zeɪʃən]	пастеризація
to consume	[kən'sju:m]	споживати
trichinosis	[ˈtriki'nəʊsis]	трихінельоз
to infest	[in'fest]	заражати
pork	[pɜ:k]	свинина
poultry	['pəʊltri]	домашня птиця
transmission	[trænz'miʃən]	спосіб передавання
gastro-	['gæstrəu-	
intestinal	in'tenstinəl]	шлунково-кишковий
distress	[distres]	розлад
etanus	['tetənəs]	правець
spore	[spɜ:]	спора

fecal	[fi:kl]	каловий, фекальний
leptospirosis	[ˈleptɒspiˈrəʊsis]	лептоспіроз
urine	[ˈjuəriːn]	сеча
to eradicate	[iˈrædikeɪt]	викорінювати, знищувати
to threaten	[ˈθreɪn]	загрожувати
to guard	[gɑ:d]	захищати
erysipelas	[ˈeriˈsɪpɪləs]	рожа, рожисте запалення
animal pox	[ˈæniməl pɒks]	хвороба з висипанням на
disease	diˈzi:z]	шкірі
ring worm	[rɪŋ wɜ:m]	кільцеві черви
tape worm	[teɪp wɜ:m]	солітер
		ньюкаслська хвороба
Newcastle		(псевдо-
disease	[ˈnju:ˈka: sl diˈzi:z]	чума)
histoplasmosis	[ˈhɪstəplæzˈməʊsis]	гістоплазмоз
psittacosis	[ˈpsɪtəˈkəʊsis]	пситтакоз, папугова хвороба
quarter	[ˈkwɔ:tə]	приміщення, місце, стійло
parasite	[ˈpærəsəɪt]	паразит
to quarantine	[ˈkwɔrənti:n]	піддавати карантину

Ex. 22. Answer the questions.

1. What is zoonosis?
2. What does rabies attack?
3. Who is at greater risk of rabies?
4. What are the ways of brucellosis transmitting?
5. What are the protective measures of Bovine Tuberculosis?
6. What does Salmonella cause?
7. What is the natural reservoir of tetanus organisms?
8. What is Tetanus?
9. Who are the carriers of Tetanus?

10. What are the general preventive measures?

Ex. 23. Translate into English.

1. Люди можуть заразитися сибіркою від хворих тварин при обробці шкіряної сировини і вовни. При кишковій формі у хворих з'являються кривава блювота, кривавий пронос, болі в животі і висока температура. При легеневій формі розвивається запалення легенів. Для попередження зараження треба дотримуватися правила по догляду за тваринами.

3. Сказ викликається вірусом, який передається від хворих тварин здоровим через укуси або слину хворих. На сказ хворіють сільськогосподарські та свійські тварини всіх видів, дикі тварини, також людина. Слід ізолювати тварину, хвору на сказ, і викликати ветеринарного лікаря. Профілактика сказу проводиться вакцинацією тварин і знищенням бродячих собак.

4. Грип курей - гостра контагіозна хвороба, що характеризується ураженням органів дихання і травлення. Переносниками вірусу грипу курей служать різні види диких і екзотичних птахів. Основний спосіб передачі інфекції повітряно-крапельний.

5. Сальмонельоз викликаються бактерією сальмонелою. У хворих тварин з'являються пронос, кашель, задишка, уражаються кишечник, легені, печінку і інші органи. Хворі тварини можуть заражати здорових. Хворі тварини гинуть протягом 5-10 діб. З метою профілактики сальмонельозу тварин вакцинують.

6. Бруцельоз – хронічна хвороба тварин і людини, що викликається мікробом бруцели. Основна ознака бруцельозу у великої рогатої худоби і свиней – аборт і запалення сім'яників, а також ураження суглобів. Людина може заразитися від овець хворих на бруцельоз. Тварин, хворих на бруцельоз, не лікують, їх здають на забій.

7. Ящур – вірусна хвороба, що характеризується утворенням пухирів на слизовій оболонці рота, межкопитної щілини і на вимені. Тварини, хворі

на ящур, одужують через 3-4 місяці. Для профілактики ящуру використовують вакцини.

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Методичні рекомендації “ A guide for veterinary students ” призначені для студентів освітньої програми «Хвороби дрібних домашніх тварин» зі спеціальності «Ветеринарна медицина» денної форми навчання та створена відповідно до вимог програм немовних спеціальностей.

Робота складається з двох тематичних розділів: «Анатомія домашніх тварин» та «Захворювання тварин». В цих розділах підібрані матеріали з урахуванням лексики, яка вивчається студентами. Тематика текстів тематично співвідносяться з майбутніми професіями студентів, а також з вивченням матеріалу з професійним напрямом. До кожного тексту, або завдання вноситься лексика, яка подана с транскрипцією та українським перекладом для зручності її вивчання та читання. Таким чином, це формує у здобувачів вищої освіти вміння читати, перекладати літературу за фахом, а також розуміти та орієнтуватися в ній, і здобувати необхідну фахову інформацію.

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A GUIDE FOR VETERINARY STUDENTS

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