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FOR
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Затверджено на засіданні кафедри української та іноземних мов імені Якима Яреми: протокол № _____ від _____.

Посібник призначений для студентів першого курсу університету, які обрали своїм фахом ветеринарну медицину та вивчають англійську мову за професійним спрямуванням. Метою посібника є допомога майбутнім фахівцям у підготовці до опрацювання англійської оригінальної літератури за обраною спеціальністю.

Посібник розрахований на аудиторні та самостійні заняття, має лекції з лексико-граматичними вправами, тексти для домашнього читання із завданнями для самоконтролю та англо-український довідник.

Topic 1. OUR UNIVERSITY
(PART 1: MODERN TIMES)

I live and study in the city of Lviv. It is a big city in Western Ukraine. There are many state higher schools here. Stepan Gzhytskyi National University of Veterinary Medicine and Biotechnologies Lviv is one of them.

There are two forms of studying at our University: full-time and extra-mural. There are about 30 chairs at the University. More than 300 lecturers and professors work here.

The University is run by the Rector and the faculties are headed by Deans. Our University trains veterinary doctors, technologists of production and processing of animal products, ecologists, managers, marketing specialists, and many others. They are specialists whom our young state needs today and will need tomorrow. Some students will graduate with a degree of a bachelor, the others will go on to do a second degree of a master.

There are also postgraduates who do researches and prepare to get a PhD. They will teach students at higher educational institutions and continue their scientific work.

The University has five educational buildings with many lecture-halls, classrooms and laboratories. Four hostels, two libraries, four clinics, a sports complex and a sports camp are at the students' disposal. There are three museums at the University: the Museum of University's History, the Museum of Horseshoes, and the Anatomical Museum. Our students have three or four lectures or practical classes a day. They work much at lessons, in laboratories, and in the library. The students also work in different scientific circles and go in for sports.

TASK 1. Find the following words and word expressions in the text:

вищий навчальний заклад, державний, факультет, стаціонарна форма навчання, заочна форма, кафедра, очолювати, декан, ректор, керувати, навчати, навчальний корпус, лекційна зала, гуртожиток, у розпорядженні студентів, науковий гурток, займатися спортом.

TASK 2. Answer the questions:

1. What is the name of your higher school?
2. What faculty do you study at?
3. What forms of studies are at the University?
3. How many chairs are there at the University?
4. Who runs the University?
5. Who heads the faculties?
6. What specialists will our students become?
7. What facilities are at the students' disposal?
8. What museums can you visit here?

TASK 3. Fill in auxiliary words *am, is, are, do, does, has got, don't, doesn't, haven't got*:
1. Where … you study?
2. I … a first-year student.
3. My friend … speak German.
4. The professor … … a new group of students.
5. The students … attend classes in the evening.
6. We … will-be specialists whom our young state needs.
7. Where … our University situated?
8. What … a Dean do?
9. I … … your text-book. You have given it to somebody else.

TASK 4. Write sentences in the Present Indefinite Tense:
1. Our higher school (to train) veterinary students and other specialists.
2. Deans (not/to head) the university.
3. A rector (not/to run) the faculty.
4. Our state (to need) well-educated specialists?
5. Your friend (to study) at the University too?
6. The students (to attend) practical classes in laboratories.
7. Our University (to be) one of sixteen state higher schools in Lviv.
8. There (to be) three museums at the University?
9. There (not/to be) any texts about economics in this book.

TASK 5. Listen to the text and re-tell it. What are the similiarities and differences between students' life in Great Britain and our country?

OXFORD COLLEGES

Oxford is an old university in England. This university has 32 colleges – 27 for men and 5 for women. There are 16 faculties, including the veterinary one. A large college has about 500 students, about one hundred students study at a small college.

During the first days at Oxford the student meets his tutor and begins to work. The tutor tells him about the lectures which he must attend and gives the list of books that the student must read during the term.

At the beginning or end of each term the student must take examinations in a written form.

At Oxford the working hours of students are from 9 a.m. till 1 p.m. At 9 o'clock they see their tutors or go to the library or to the lectures. From 2 p.m. till 5 p.m. they go in for sports and do different exercises. From 5 p.m. till 7 p.m. they work in the library or in the laboratory. At 7 p.m. they have dinner. After dinner the students have club activities or attend different societies. At about 10 p.m. they begin to work again and work for about two hours.

TASK 6. Memorize the following abbreviations and word combinations concerning higher education:

BA – Bachelor of Arts – бакалавр у галузі гуманітаних дисциплін;

BSc – Bachelor of Science – бакалавр технічних дисциплін;

MA – Master of Arts – магістр гуманітарних дисциплін;

MSc – Master of Science – магістр технічних дисциплін;

PhD – Doctor of Philosophy – доктор філософії (у нас – кандидат наук);

To go to the university (to enter the university) – вступати до університету;

To take examinations – складати іспити;

To pass examinations – скласти успішно іспити;

To fail examinations – не скласти іспити;

To do a degree – здобувати ступінь;

To have a degree – мати ступінь;

To go on to do a second degree – продовжити навчання на здобуття другого ступення;

To do research into/on – робити дослідження у певній галузі

TASK 7. Translate the following sentences:

1. Він здобуває ступінь бакалавра фізики.
2. Він має ступінь бакалавра англійської мови.
3. Ми збираємося складати іспити.
4. Мій викладач досліджує вплив екології на здоров'я тварин.
5. Ми збираємося продовжити навчання у магістратурі.
6. Було досить складно вступити до університету.
7. Мій батько – кандидат наук.
8. В університеті можна здобути ступені бакалавра або магістра з гуманітарних дисциплін.
9. Необхідно успішно скласти іспити.
10. Я не можу провалити іспити.

Topic 2. OUR UNIVERSITY (PART 2: HISTORY)

Our university has rich and glorious history that begins with the department of veterinary medicine founded in 1784 at the medical faculty of Lviv University. In 1881 the veterinary school was opened in the city of Lviv. In 1896 the school was renamed into Lviv Academy of Veterinary Medicine. Since 1939 it was the Veterinary Institute with one faculty only. The second faculty – Zootechnical or Zooengineering, now the Faculty of Biology and Technology – was set up in 1949. In 1991 the third faculty – the Sanitary and Technological Faculty, now the Faculty of Food Technologies and Biotechnology – was opened here. In June 1992 the higher school regained its former name – the Academy of Veterinary Medicine. In 2002 the Faculty of Economics and Management was created.

Professor Peter Seifman was the first director of Veterinary school, professor Joseph Spielman was the first rector of the Academy. In 1994 the Academy received the name of its former student, prominent scientist – Prof. Stepan Gzhytskyi (1900-1976). In 2007 the Academy was renamed into the University.

TASK 1. Answer the questions:

1. How old is our University?
2. What faculty is the oldest one?
3. How is the history of our higher school connected with the history of Ivan Franko National University?
4. When was the veterinary school founded?
5. How many faculties were there in the former Institute in 1939?
6. When was the second faculty established? What was its name?
7. When was the Sanitary and Technological Faculty created? What is its name today?
8. When did our higher school regain the name of the Academy?
9. When was the faculty of Economics and Management created?
10. Who was the first director of Veterinary school?
11. Who was Joseph Spielman?
12. Whose name did our University receive in 1994?
13. When did the Academy become a University?

TASK 2. Match the words on the left with synonyms or explanations on the right:

a department	eminent, famous, celebrated
to found	to change the name
glorious	previous
to rename	notable, remarkable
to regain	a scholar
former	to establish, to create, to open, to set up
prominent	to receive back
a scientist	a chair

TASK 3. Divide the following verbs into regular and irregular ones: *to be, to have, to begin, to found, to open, to rename, to set (up), to regain, to create, to receive*. Write three forms of the mentioned-above words: the Infinitive, the Past Indefinite, the Past Participle:

Regular verbs	Irregular verbs
to open-opened-opened	to be-was/were-been
…	…

TASK 4. Make up sentences with the words from Task 3.

TASK 5. What constructions prevail in the text: active or passive ones? Give examples.

TASK 6. Listen to the text and re-tell it:

BRISTISH UNIVERSITIES

Most UK universities fall into one of six categories:

1. Ancient universities - the seven universities founded before 1800, Oxford and Cambridge including;
2. Universities chartered in the 19th century (for example, London University);
3. Red Brick universities - large civic universities chartered at the beginning of the 20th century before World War II;
4. Plate Glass universities - universities chartered after 1966 (formerly described as *the new universities*);
5. The Open University - The UK's *open to all* distance learning university (established in 1968);
6. The New Universities - Post-1992 universities formed from Polytechnics or Colleges of Higher Education.

The central co-ordinating body for universities in the United Kingdom is Universities UK.

The academic year at British Universities has three terms. They are from October to the middle of December, from the middle of January to the end of March and from the middle of April to July. There are ten weeks in each term. The students have examinations at the end of each term, that is at the end of the autumn, spring and summer terms. Final examinations are at the end of the course of studies.

Topic 3. MY PROFESSION IS A VETERINARY DOCTOR (A VETERINARIAN)

Veterinary medicine is the branch of medicine that deals with the **diseases** of animals. Doctors that treat animals are called *veterinarians.* Veterinarians are trained to prevent, diagnose, and **treat** illnesses in large and small animals. Their work is especially valuable because many animal diseases can **be transmitted** to human beings. Such diseases, called *zoonoses,* include *rabies, brucellosis* (Bang's disease), *tuberculosis, psittacosis* (parrot fever), and *tularemia* (rabbit fever).

In cities, the main activity of veterinarians is the care of dogs, cats, and other household pets. Most veterinarians in cities are associated with animal hospitals. These hospitals often contain **equipment** much like that used in hospitals for human beings. There, animals may **be cared for** during illnesses, and **surgery** may be performed to treat an illness or **injury**.

An important part of a veterinarian's duties is the control of rabies. All dogs, cats, and other pets that may be exposed to rabies must be vaccinated against it. Veterinarians also vaccinate pets against distemper and other diseases.

Many veterinarians are also associated with the public health services. The special skills and knowledge of these doctors are helpful in controlling zoonotic diseases. Veterinarians may **inspect** meat and meat products in slaughtering and packing houses. They may also work in laboratories testing milk or other **dairy products**, or preparing serums and vaccines.

On farms, veterinarians are concerned chiefly with the care and treatment of **livestock**. Veterinarians help keep farm animals in good health and work to prevent outbreaks of animal diseases. Epidemics of animal diseases, or *epizootics*, may be extremely dangerous, not only to the animals, but also to **human beings.** Modern vaccines have made it possible for veterinarians to protect farm animals against many diseases. For example, young **hogs** must be vaccinated against the disease *hog cholera.* At one time, hog cholera often **swept** from farm to farm, killing all the hogs in an entire farming community.

Veterinarians have played an important role in controlling *bovine tuberculosis,* a form of tuberculosis that can be passed from cows to human beings. There are projects that work to control and eradicate *bovine tuberculosis* and *bovine brucellosis.* These diseases can be transferred from **cattle** to human beings, so the veterinarians try to **wipe** them **out**.

(Adapted from: www.wikipedia.org)

TASK 1. Match the words in bold with the following definitions and synonyms:

1. The same as illnesses.
2. To control, to examine, to test, to check.
3. To cure, to help the sick.
4. Cows.
5. To eliminate.
6. The same as harm, hurt, or damage.
7. Instruments used to treat animals.
8. Spread quickly.
9. People.
10. Be looked after.
11. The same as operations on somebody.
12. Products made of milk.
13. Be transferred
14. Pigs, swine.
15. Farm animals.

TASK 2. Answer the questions:
1. What is veterinary medicine?
2. How are the doctors treating animals called?
3. What are veterinarians taught to do?
4. Why is a veterinarian's work so important?
5. What diseases of animals can be transmitted to people?
6. How can rabies be prevented?
7. Do veterinary doctors work only in hospitals?
8. What was done to control bovine tuberculosis?

TASK 3. Fill in the table. Find all the names of diseases mentioned in the text:

Disease	Ukrainian Translation
rabies	сказ
…	…

TASK 4. Fill in the required preposition:
To deal … diseases, to be transmitted … people, the care … household pets, to be associated … hospitals, to care … animals, the control … rabies, to be exposed … rabies, to vaccinate … distemper, to be helpful … controlling, to be concerned … treatment, to play an important role ... controlling diseases, to be passed … cows … human beings, to be transferred … animals … people.

TASK 5. Find uncountable nouns in the text and underline them. What articles are used before countable nouns? What articles can be used before the uncountable? Find examples in the text to illustrate your answers.

TASK 6. Write a plural of the following nouns:
a branch, a disease, a veterinarian, a diagnosis, an illness, a human being, a man, an injury, a duty, a service, a house, a

vaccine, a serum, a community, a degree, a license, a state, a research, an agency.

NB: Ancient (Latin or Greek) origin of some medical terms is reflected in their plural forms: e.g.: alveolus (sing) – alveoli (pl), diagnosis (sing) – diagnoses (pl), genus (sing) – genera (pl), nucleus (sing) – nuclei (pl), phylum (sing) – phyla (pl), streptococcus (sing) – streptococci (pl), bacterium (sing) – bacteria (pl), bacillus (sing) – bacilli (pl), fungus (sing) – fungi (pl).

Topic 4. FROM THE HISTORY OF VETERINARY MEDICINE

The first written records of veterinary medicine are ancient Indian and Egyptian texts that date to 1900 BC. It is written in one of the Buddhist manuscript about two kinds of medicine available (medicine for people and medicine for animals) and about **healing herbs** for them.

The first attempts to organize and regulate the practice of **treating animals** tended to focus on horses because of their economic significance. In the Middle Ages from around 475 AD, farriers combined their work in **horseshoeing** with the more general task of "horse doctoring". In 1356, the Lord Mayor of London, concerned with the poor standard of care given to horses in the city, requested that all **farriers** operating within a seven mile radius of the City of London form a "fellowship" to regulate and improve their practices. This ultimately led to the establishment of the Worshipful Company of Farriers in 1674.

The first comprehensive treatise on the anatomy of a non-human **species** was Carlo Ruini's book *Anatomia del Cavallo* (*Anatomy of the Horse*), that was published in 1598 in Italy.

The first veterinary college was founded in Lyon, in France, in 1761 by Claude Bourgelat. After observing the

devastation being caused by **cattle plague** to the French **herds**, Bourgelat devoted his time to seeking out **a remedy**. This resulted in his founding the above-mentioned establishment. He dispatched his students **to combat the disease**. In a short time, the plague was stopped.

The Odiham Agricultural Society was founded in 1783 in England to promote agriculture and industry. It played an important role in the foundation of the veterinary profession in Britain. A founding member, Thomas Burgess, began to think of animal **welfare** and campaign for the more **humane** treatment of sick animals.

The English physician James Clark wrote a treatise entitled *Prevention of Disease* in which he argued for the professionalization of the veterinary trade, and the establishment of veterinary colleges. The Royal College of Veterinary Surgeons was established by royal charter in 1844.

In the United States, the first schools were established in the early 19th century in Boston, New York and Philadelphia.

(Adapted from www.wikipedia.org)

TASK 1. True or False?

1. The first veterinary literature dates back to the beginning of the 20th century BC.
2. The farriers were the first veterinarians.
3. The first veterinarian societies were organized in Paris.
4. The Worshipful Company of Farriers was set up in 1670.
5. Carlo Ruini wrote the first fundamental book about people.
6. The first veterinary college was founded in Lyon, France in 1761 by Claude Bourgelat.
7. The Lyon College was concerned with cattle plague.
8. The Odiham Agricultural Society was founded in the USA.
9. Thomas Burgess was the first who began to think of animal welfare and campaign for the more humane treatment of sick animals.
10. A treatise entitled *Prevention of Disease* was written by Claude Bourgelat.

TASK 2. Explain the meaning of the following words:
healing herbs, treating animals, horseshoeing, farriers, species, cattle plague, herds, a remedy, to combat the disease, welfare, humane, human.

TASK 3. Make the following sentences active:
1. Carlo Ruini's book *Anatomia del Cavallo* (*Anatomy of the Horse*) was published in 1598.
2. The first veterinary college was founded in Lyon, France in 1761 by Claude Bourgelat.
3. A treatise entitled *Prevention of Disease* was written by James Clark.
4. The Royal College of Veterinary Surgeons was established by royal charter in 1844.

TASK 4. Find some information about the establishment of veterinary medicine in Ukraine and write a composition. Be ready to tell about it to the class.

TASK 5. Find all the numerals in the text and write them in words. Practise their pronounciation.

Topic 5. CLASSIFICATION OF ANIMALS

People often divide animals into various groups based on certain similarities the animals share. For example, some animals can be kept as pets, but others are wild. Arranging animals according to their similarities is a handy way of remembering and understanding them.

Some common ways of grouping animals. Animals can be grouped in many ways. They can be arranged according to whether they live on land or in water. Animals that live on land are known as *terrestrial animals.* They include cats, dogs, lizards, mice, and worms. Animals that live in water are called

aquatic animals. They include fish, lobsters, octopuses, and whales.

Animals can be arranged by the number of legs they have. Dogs, frogs, and lizards have four legs. Bats and birds have two legs. Insects have six legs, and spiders have eight. Snakes and worms have no legs.

Another way to group animals is according to the way they move. Bats, most birds, and many insects fly. Whales and fish swim. Snakes and worms crawl. Antelopes and cheetahs run. Frogs, kangaroos, and rabbits hop.

Some animals are *cold-blooded,* and others are *warm-blooded.* The bodies of cold-blooded animals are warm when their *surroundings* is warm and cool when their surroundings is cool. Warm-blooded animals, on the other hand, almost always have the same body temperature, regardless of the warmth of their surroundings. Birds, mammals, and a few species of fish and insects are warm-blooded.

Animals are also commonly divided into groups according to whether they have a backbone. The vast majority of animals are *invertebrates.* They include clams, insects, jellyfish, sea urchins, snails, spiders, sponges, and worms. The ordinary farm animals belong to the large group known as *Vertebrata*, or animals with a backbone. Fish, amphibians, reptiles, birds, and mammals are all *vertebrates.*

All domestic animals are divided into 3 orders: *herbivorous, carnivorous and omnivorous. Herbivorous animals* are those that live chiefly on plants. These are cattle, deer, horses, sheep, and rabbits. As they consume coarse food, e.g. leaves and stems of plants, they need considerably larger amount of common salt that is supplied by their usual feeds. The cow, the ox, the sheep and the goat belong to the *ruminants* (animals which chew the cud). Unlike the pig they are capable of digesting a large quantity of coarse fibrous material due to their compound stomachs. *Carnivorous (flesh-eating animals, such as cats, dogs, sharks, etc.)* need no additional salt because they live

on the bodies of other animals. *Omnivorous animals*, such as pigs, bears, rats and others utilize both plant and animal food.

Hierarchy in the Animal World. The largest group is the *Kingdom Animalia* itself, which includes all animals. Next, each animal is placed in a group called a *phylum.* Each phylum is divided into groups called *classes.* The classes are broken into *orders*, and the orders into *families.* The families are split into *genera*, and the genera into *species.*

Essential Terminology

terrestrial	наземний
aquatic	водний, водяний
cold-blooded	холоднокровний
warm-blooded	теплокровний
surroundings	середовище існування
a backbone	хребет
invertebrate	безхребетний
vertebrate	хребетний
the vertebrata	хребетні
herbivorous	травоїдний
carnivorous	м’ясоїдний
omnivorous	всеїдний
a ruminant	жуйна тварина
a mammal	ссавець
a compound stomach	складний шлунок
a phylum	тип
an order	ряд
genus (*pl* genera)	рід
species (*pl* species)	вид

TASK 1. Answer the questions:
1. What animals are called aquatic?
2. What terrestrial animals do you know?
3. What is a common feature of snakes and worms?
4. What animals are called mammals?

5. What animals can crawl?
6. What classification according to the animal surroundings do you know?
7. What animals are called invertebrates?
8. Does a pig belong to the ruminants?
9. How many orders of domestic animals do you know?
10. What do carnivorous animals live on?
11. Why are cattle capable of digesting large quantities of coarse fibrous material?

TASK 2. What types of questions are the above-mentioned ones? Study the following table:

Types of questions (типи питань)	Definitions	Examples
General questions (загальні)	Питання, на які можна відповісти словами *yes* або *no*.	Are reptiles cold-blooded?
Special questions (спеціальні)	Питання, що починаються питальними словами what (що), who (хто), where (де), how many (скільки)	What classifications of animals do you know?
Alternative questions (альтернативні)	Запитання вибору. Складаються з двох частин, з'єднаних сполучником or.	Do you keep a cat or a dog?
Disjunctive questions (розділові)	Питання-"перепитування" (Чи не так?)	You will be a veterinary doctor, won't you?

TASK 3. Make up your own examples by the text.

TASK 4. Complete the sentences:
1. The group of animals with a backbone is called …
2. … can produce milk.
3. Ruminants can …
4. The orders of domestic animals are: …
5. … animals live on plants.
6. … animals utilize both plants and animal food.
7. The cow, the ox, the sheep and the goat are …
8. … animals need no additional salt.

TASK 5. Fill in the table:

Classifications	Definition	Representatives
	Animals who live in someone's home	
Wild animals		
Classification according to the number of legs	The animals that have: no legs 2 legs 4 legs 6 legs 8 legs	
Classification according to the way of movement	The animals that: crawl run fly swim hop	
Cold-blooded animals		
		Birds, mammals, and a few species of

		fish and insects
Vertebrates		
Invertebrates		
Herbivorous animals		
	Animals living on the bodies of other animals	
		pigs, bears, rats…
	Animals that produce milk	
	Animals that chew the cud	

TASK 6. True or False:

1. Cattle, deer and horses are omnivorous animals.
2. Carnivorous animals need a lot of additional salt.
3. Cows have compound stomachs.
4. Ruminants can't digest a lot of fibrous material.
5. Omnivorous animals live on plants.
6. Herbivorous animals need considerably larger amount of salt than is supplied by their usual feeds.
7. All domestic animals are divided into 2 classes.

TASK 7. Look at the following example and make up a similar chart:

Kingdom: Animalia (includes all animals)

A phylum: Chordata (includes all vertebrate animals, as well as some other more primitive ones)

A subphylum: Vertebrata (includes animals with a backbone)

A class: Mammalia (includes all mammals)

An order: Carnivora (includes carnivorous mammals)
A family: Falidae (includes all cats)
A genus: Panthera (includes the great roaring cats: lions, tigers, jaguars, and leopards)
A species: Leo

TASK 8. Guess the meaning of idioms concerning *A Genus Panthera* and learn them:

to let *the cat* out of the bag	через себе не перестрибнеш
when *the cat*'s away the mice will play	отримати левову частку
a leopard can't change its spots	проговоритися
to receive the lion's share	кіт – із хати, миші – танцювати

TASK 9. Listen to the text and say why it is difficult to count animals and their species:

HOW MANY SPECIES OF ANIMALS ARE THERE?

The answer to this question is – nobody knows! Scientists who study animal life are called zoologists. They have recorded 20,000 species of fish, 6,000 species of reptiles, 9,000 birds, 1,000 amphibians, and 15,000 species of mammals. And, although there is a million of named species of insects, scientists estimate that there could be another million waiting to be discovered and named!

The tragedy is that men are wiping out species so fast that children today will never have the opportunity of seeing many of those that are still living as they read this book. By the time they are grown up, many more species will be extinct. The destruction of the Amazon rain forests, for instance, which is taking place now, will wipe out thousands of species of animal life that a man has not yet even identified.

Topic 6. DOMESTIC ANIMALS

Animals are such agreeable friends –
they ask no questions, they pass no criticisms.
George Eliot (Mary Ann Cross)
(1819-1880)

TASK 1. How do you understand the given-above quotation? Do you agree with it? What else can you say about animals?

TASK 2. Are cows, goats, camels, llamas, reindeer wild or domestic animals? Explain the meaning of the word combinations "wild animals", "domestic animals".

TASK 3. Why is the word *reindeer* underlined? What is necessary to remember about its singular and plural forms? What other examples of irregular nouns denoting animals do you remember?

TASK 4. Phonetic warm-up. Look at the words. Fill in a phonetic symbol. Practice the following sounds and words:

[ ]	[ ]	[ ]	[ ]
rabbit	snail	pig	sheep
cat	whale	squirrel	seal
lamb	snake	fish	zebra
camel	predator	pigeon	peacock
rat	caterpillar	chicken	eagle

TASK 5. Vocabulary activity. Think of the names of: a) farm animals; b) pets; c) animals living in nature. Write down as many words as you can. You may also use the words from them previous exercises.

TASK 6. Read and practice the new words to the new text:

throughout	скрізь
wild	дикий
domestic	домашній
domesticate	приручати
pet	домашній улюбленець
take care for	піклуватися про
prehistoric	доісторичний
tame	приручати
occupation	заняття
poultry	свійська птиця
hog	свиня
livestock	домашня худоба
mule	мул
mink	норка
chinchilla	шиншила
water buffalo	буйвол
plow	плуг
approach	наближатись
spoilt	зіпсований, нечемний
right	право
protect	захищати
movement	рух
deserve	заслуговувати
consideration	увага
defend	захищати

TASK 7. Listen to the text, then read and translate it:

DOMESTIC ANIMALS

Animals live throughout the world. There are many classifications of them. One of them consists in dividing animals into wild and domestic ones. Domestic animals are those who live in someone's home (**pets**, for example, a cat or a dog that you keep and take care for) and **farm animals** who live on

farms. Wild animals are animals living in a natural state, not changed or controlled by people.

Animals have provided people with food and clothing since prehistoric times. At least 10 000 years ago, people began domesticating (taming) animals. Farming is the most important occupation in the world. People usually raise cattle, hogs, sheep, chickens, ducks, and geese. The farms can be divided into three main groups: 1) beef cattle, hog, and sheep farms, 2) dairy farms, and 3) poultry farms. Other specialized livestock farms raise horses, mules, goats, rabbits, minks, chinchillas, bees, or fish. Some domesticated animals help people work. Water buffaloes pull plows in Asian rice fields. Horses and camels carry people from one place to another.

As to cats, people first kept cats in their houses to catch rats and mice. They raised dogs to help them hunt and to warn them when danger approaches. Today, cats and dogs are kept largely as pets. The British adore pets – no English home is complete without its dog, the most spoilt member of the family. The dog, like the weather, is the topic for conversation.

Animals need to be protected. *Animals' rights movement* is a term that refers to organized efforts opposing the use of animals for research, food, and clothing. People who defend animal rights are called animal rights activists. They point out that animals deserve greater moral consideration than human beings generally give them.

TASK 8. Answer the questions:

1. What classification of animals do you know?
2. When did people begin domesticating animals?
3. What kinds of farms do you know?
4. Why did people begin taming cats and dogs?
5. What do animal rights activists do?
6. Do you agree that domestic animals are our friends? Do we have to protect them?

TASK 9. Multiple choice. Choose the best variant of an answer:

1. Animals who live in a natural state are called … animals:
   a) domestic; b) wild; c) pet; d) farm
2. The main product of dairy farms is:
   a) clothing; b) meat; c) milk; d) feathers.
3. Who pulls plows in Asian rice fields?
   a) a llama; b) a reindeer; c) a water buffalo; d) a bull.
4. Who is the most spoilt member of the British family?
   a) a child; b) a parent; c) a parrot; d) a dog.

TASK 10. Matching activity.

Names of animals are often a part of different proverbs or idioms in Ukrainian language. For example, впертий як віслюк, незграбний як слон, хитрий як лисиця.

Guess the meaning of English idioms, matching two halves of the table.

a black sheep	впертий
dog-eared (book, album)	ворог, що вдає з себе друга
to flog a dead horse	вжити рішучих заходів
to take the bull by the horns	той, хто не дотримується загальноприйнятих норм суспільства
a wolf in the sheep's clothing	даремно намагатись когось переконати
pig-headed	із загнутими сторінками (книжка, альбом)

Supplementary exercises:

TASK 11. Grammar point: a or an.

- What article would you use with the word "elephant": *a* or *an*?
- Recollect the rules, how to use indefinite articles before vowels and consonants, present your examples.

TASK 12. Answer the questions: what wild animals can be domesticated? Can penguins be made domestic? Read and listen to the "Penguin joke" and dramatize the dialogue:

A PENGUIN JOKE

One day a man and his wife were walking down the street when they came across a penguin.

'Oh!' explained the man. 'What a surprise! What shall we do with it?'

'I know,' said his wife. 'We'll ask a policeman.'

So they found a policeman and explained what had happened.

'Mmm,' said the policeman, 'I think the best thing is to take it to the zoo.'

'What a good idea!' said the woman. 'We'll go there straight away.'

The next morning the policeman was walking down the same street when he saw the couple again with the penguin. 'I thought I told you to take that penguin to the zoo,' the policeman said. 'Well, we did,' said the man. 'We took it to the zoo and we all had a really good time. So this afternoon we're taking it to the cinema, and this evening we're going to have a meal in a fish restaurant.'

TASK 13. Grammar point: *definite* and *indefinite* articles. Why is the word *penguin* first used with an indefinite article *a* and then with a definite article *the*?

TASK 14. Grammar point: future forms. Underline the sentences that contain future forms of the verbs (structures *to be going to do something* and *will + verb*). What is the difference between the structures. Make up your own examples.

TASK 15. What animals are usually described as clever (brave, stupid)?

TASK 16. Read one of Aesop's fables and fill in the missing words.

A stupid … found a …'s skin in the forest one afternoon. He put it on and went to the barnyard to frighten the other animals. "Hee-haw, I'm a …," the stupid … said. "That's a very silly joke," the … answered. "Even though you look like a …, anyone can tell you're a … as soon as you open your mouth."

TASK 17. Write your own fable or funny story about domestic animals.

TASK 18. Find interesting facts about domestic animals and present them to the class.

Topic 7. FARM ANIMALS: A COW

TASK 1. What farm animal would you breed if you were a farmer? Why? Tell the class about your preferences.

TASK 2. What farm animal…

- chews the cud?
- has a compound stomach?
- produces wool?
- produces milk?
- produces eggs?
- produces feathers?
- is used for transportation and work?
- has a cleft upper lip?
- has a 40-week gestation period?

- has a 21-week gestation period?
- has dense fleece?
- has a keen sense of sight and hearing?
- has claws?
- has a beak?
- can swim?
- can perform in circus?
- is concerned with sports?

COW

The cow belongs to the class of ruminants. Its value as a domestic animal consists in its ability to consume and digest large quantities of roughage and to convert it into milk and meat for human food.

The cow's stomach is compound. It has four distinct compartments: a rumen, a reticulum, an omasum, and an abomasum. The stomachs of mature cows vary in capacity depending on the size of the animal.

To produce a large supply of rich milk, cows must be not only well fed but also be of good milking qualities. The cows that are producing milk require a much larger quantity of water than is necessary for growing animals.

The period of gestation in cows is about 40 weeks.

The lactation period is the period of milking after each calf and it usually lasts for about ten months.

The first milk after calving is called colostrums, and it has a necessary laxative action on the calf's stomach.

Dairy cows are milked three times a day and watered twice a day. In summer the consumption of water by cattle is greater on account of the greater evaporation from the skin.

TASK 1. Answer the questions:

1. What class of animals does the cow belong to?

2. What farm animals chew the cud?
3. Why is a cow a valuable animal?
4. How many compartments are there in the cow's stomach?
5. How long does the period of gestation in cows last?
6. How long does the lactation period last?
7. In what season do the cattle consume more water?

TASK 2. True or False:

1. The cow belongs to ruminants.
2. The cow's stomach has three parts.
3. The cows that are producing milk require less water than is necessary.
4. The period of gestation is 20 weeks.
5. The period of lactation lasts for about ten months.
6. The first milk after calving is called colostrums.
7. Dairy cows are milked two times a day and watered three times a day.
8. In summer the consumption of water by cattle is lower.

TASK 3. Listen and tell what information is new for you:

INTERESTING FACTS ABOUT COWS

At first glance, cows might seem to be simple animals, but they're not! Cows are fascinating animals. For instance did you know that cows can smell something up to six miles away? Here's a list of interesting facts:

1. Cows are social animals, and they naturally form large herds. And like people, they will make friends and bond to some herd members, while avoiding others;
2. Cows are red-green colorblind. In a bullfight, its the waving of the cloth that attracts the bull not the red color;
3. A cow's heart beats between 60 and 70 beats per minute;

4. Cows can hear lower and higher frequencies better than humans;
5. The average cow chews at least 50 times per minute;
6. The typical cow stands up and sits down about 14 times a day;
7. An average cow has more than 40,000 jaw movements in a day;
8. Cows actually do not bite grass; instead they curl their tongue around it;
9. Cows have almost total 360-degree panoramic vision;
10. Cows have a single stomach, but four different digestive compartments;
11. Cows are pregnant for 9 months just like people;
12. Cows spend 8 hours per day eating, 8 hours chewing the cud, and 8 hours sleeping;
13. You can lead a cow upstairs, but not downstairs. Cows knees can't bend properly to walk downstairs;
14. Cows only have bottom teeth;
15. Dairy cows are economic job creating machines! One dairy cow creates four full-time jobs in the local community;
21. The spots of the Holstein breed are like fingerprints. No two cows have exactly the same pattern of black and white spots. They are all different.

Topic 8. A HORSE

A horse has been one of the most useful animals for thousands of years. Horses once provided the fastest and surest way to travel on land. Hunters on horseback chased animals and killed them for food or for sport. Soldiers charged into battle on sturdy war horses.

The horse today is not as an important means of transportation as it once was. In most countries, the iron horse (a train) and a horseless carriage (an automobile) have replaced the horse almost entirely. But people still use horses for recreation, sport and work. Children and adults ride horses for fun and

exercise. Large crowds thrill to the excitement of horse races. Horses perform in circuses, rodeos, carnivals, parades, and horse shows. They may be used to pull plows and to do other farm work.

Horses have a good sense of smell, sharp ears and keen eyes. They have strong teeth, but they eat only grain and plants, never meat. Long, muscular legs give horses the strength to pull heavy loads or to run at fast speeds. Horses also use their legs as their chief weapons. Most horses have good memories and can easily be trained to obey commands.

There are more than 150 breeds and types of horses and ponies. The smallest breed is the Falabella, which grows only 76 centimeters high. The largest breed of horses is the Shire, which was originally developed in England. Shires may measure more than 173 centimeters high. They may weigh more than 910 kilograms.

All breeds of horses are commonly divided into three main groups: light horses, heavy horses and ponies.

Notes
provided the (surest) way – були (найнадійнішим) засобом
to travel on land – для пересування на суші
as it once was – яким він був колись
ride for fun – їдуть верхи для забави
as chief weapons – як головну зброю
measure 173 cm high – (можуть) мати 173 см висоти

TASK 1. Answer the questions:
1. Is a horse today an important way of transportation?
2. How do people use horses today?
3. Where do horses perform?
4. Do horses eat meat?
5. How many breeds of horses are there?
6. Which breed is the largest?
7. What groups of horses do you know?

TASK 2. True or False?
1. People nowadays still use horses for transportation. F / T
2. Horses perform in circuses, rodeos, carnivals. F / T
3. Most horses have bad memories and can't be trained. F / T
4. The largest horse may weigh 910 kilograms. F / T
5. There are three groups of horses. F / T
6. Horses once provided the fastest way to travel on land. F / T
7. Horses have strong teeth, they eat only meat, never grain and plants. F / T
8. There are less than 30 breeds and types of horses. F / T

TASK 3. Fill in the missing words:
1. Hunters on horseback chased animals and killed them for _____ .
2. They may _____ to pull plows.
3. They have strong teeth, but _____ never meat.
4. Most horses have good memories and can easily be trained to _____.
5. There are more than 150 _____of horses and ponies.
6. The _____ breed of horse is the Shire, which was originally _____ in England.
7. All breeds are divided into _____ main groups:_____ .

TASK 4. Choose the right answer:
1. Horse has been one of the most useful animals for …
a) millions of years
b) billions of years
c) thousands of years
2. People still use horses for …
a) meat
b) sport and work

c) industry
3. How many breeds of horses exist?
a) more than 250 breeds
b) more than 150 breeds
c) less than 50 breeds
4. The smallest breed is called…
a) the Macarella
b) the Curebella
c) the Falabella
5. One of the horse`s breed groups is called …
a) hard horses
b) ponies
c) little horses

TASK 5. Match the words on the left with the examples/definitions on the right:

A heavy horse	a type of an animal that is kept as a pet or on a farm
A light horse	a small horse
A breed	a type of large powerful horses used for pulling large loads
A pony	a horse that people ride and use for performances

TASK 6. Put the words in the gaps using the following words:
sports, work, plants, races, a horse, types, grain, breeds.
1…. has been one of the most useful animals for thousands of years.
2. People still use horses for … and … .
3. Horses have strong teeth, but they eat only … and …, never meat.
4. Large crowds thrill to the excitement of horse … .

5. There are more than 150 … and … of horses and ponies.

TASK 7. Write the sentences in the Past Indefinite Tense:

1. Last year I (spend) … my holidays in the Carpathians.
2. It (be) … great.
3. I (go) … to horse races with my grandfather.
4. There I (try) … to ride a horse.
5. It (be) … a very interesting experience for me.
6. I (enjoy) … that holiday so much.

TASK 8. Story Telling in the Present Continuous Tense:

1. It's Saturday, my favorite day of the week. I 1) …. (to walk) in the garden with my big happy family. My mother and father 2) … (to prepare) dinner for us. My sister 3)…(to ride) a horse. My grandfather always goes to the horse races on Saturdays. He feels himself satisfied there. Today he 4) … (to go) to the races too. I'd like to go with him, but now I 5)…(to teach) my little sister how to ride a horse.

TASK 9. Learn more about horses. Fill in a necessary word from the list:

wild, breeding, a stallion, tail, domestic, a mare, a stable, a foal, hooves, paddocks, herbivorous, horns, neigh, a hide, troops, mane, mammals.

1. Horses nourish their young, so they are… .
2. A male horse is called … and a female one is called ...
3. Horses are kept in … .
4. A horse gets rid of flies by flickering its … .
5. A newborn horse is called … .
6. The horse hurt one of his … in the race.
7. Modern horses are the result of centuries of selective ...
8. Horses are trained on … .
9. Horses eat grass, so they are … animals.
10. Horses living in nature are called … .
11. Horses who are bred on farms are called … ones.

12. Horses have no … .
13. Horses don't speak. They … .
14. A horse's coat is called … .
15. Horses gather in … .
16. A horse has a wonderful … .

TASK 10. Match the words and their definitions. Try to translate them:

a.	A paddock	1. An enclosed area in a building for a horse
b.	A stable	2. A sports event in which people compete to show their skill in riding horses
c.	A stall	3. A small field in which horses are kept
d.	A horseshoe	4. A building where horses are kept
e.	A horsebox	5. A U-shaped piece of iron that is fixed onto the bottom of a horse's foot
f.	A horse fly	6. Someone who rides horses
g.	A horseman	7. A sport in which horses with riders race against each other
h.	A groom	8. Someone whose job is to feed, clean, and take care of horses
i.	A horse show	9. A large vehicle for carrying horses, often pulled by another vehicle
j.	A horse racing	10. A large insect that bites horses.

TASK 11. Make up a dialogue between a student and a horse keeper using the above-mentioned words. Use the following patterns:
Could you tell me, please…
I would like to know…
I am interested in …

I wonder if …
Could you explain me, please…

TASK 12. Idioms. Match an idiom with its description. Try to find Ukrainian equivalents:

1. To have something straight from the horse's mouth	a. The process of matching people with suitable jobs or activities
2. Horses for courses	b. Common sense
3. A two horse race	c. Be grateful for something that has been given to you
4. That's a horse of a different color	d. To waste time or effort by trying to do something that is impossible
5. Put the cart before the horse	e. It is something that is completely different from another thing
6. You can lead a horse to the water but you can't make it drink	f. Waves in the sea or on a lake white at the top.
7. A stalking horse	g. An election that only two competitors can win
8. Horse sense	h. Do it more slowly or carefully
9. A dark horse	i. Something or somebody that hides someone's true purpose, especially a politician who says he wants his leader's job when the real plan is that another, more important politician should get it
10. Never look a gift horse in the mouth	j. Nobody can make a person be happy
11. To be on one's high horse	k. To do two things in the

	wrong order
12. To flog a dead horse	l. Someone who is not well known, and who surprises people by winning a competition or doing something very well
13. Hold your horses!	m. To get information from someone who has direct knowledge of it
14. White horses	n. To be too proud of oneself

TASK 13. Prepare a project about horses.

TASK 14. Listen and comment on the facts about horses:

INTERESTING FACTS ABOUT HORSES

- Horses can sleep both lying down and standing up.
- Horses can run shortly after birth.
- Domestic horses have a lifespan of around 25 years.
- A 19th century horse named 'Old Billy' is said to have lived 62 years.
- Horses have around 205 bones in their skeleton.
- Horses have been domesticated for over 5000 years.
- Horses are herbivorous (plant eaters).
- Horses have bigger eyes than any other mammal that lives on land.
- Because horses' eyes are on the side of their heads they are capable of seeing nearly 360 degrees at one time.
- Horses gallop at around 44 kph.
- The fastest recorded sprinting speed of a horse was 88 kph.
- Estimates suggest that there are around 60 million horses in the world.

- Scientists believe that horses have evolved over the past 50 million years from much smaller creatures.
- A male horse is called a stallion.
- A female horse is called a mare.
- A young male horse is called a colt.
- A young female horse is called a filly.

Topic 9. A HOG

About a fourth of the meat eaten in Europe and the United States comes from hogs. These animals provide pork, which is eaten as pork chops, ham, bacon and sausage. The fat, skin, hair, glands and other parts of hogs are used to make a variety of products. These products include lard, leather, brushes, soap, fertilizer, glue, and medicines.

Farmers in almost every country raise hogs. Both young and adult hogs are also called pigs or swine. Young hogs are almost always called pigs. Hogs are among the most intelligent of the domesticated (tamed) animals. Some people consider them dirty, yet hogs keep themselves cleaner than most other farm animals do. However, during warm weather, hogs often roll about in mud to keep cool.

There are about 840 million hogs on farms throughout the world. China has the most hogs, about 40 per cent of the world total. Hogs rank with cattle and poultry as an important source of farm income.

There are many kinds of hogs raised around the world. Because hogs have short reproduction cycle, new breeds can be developed over a relatively short period of time. Often, such breeds of hogs reflect the climate and production methods of the region in which they are raised. In Europe, for example, each country has developed its own breeds of hogs. Common breeds of hogs include here the Large White and the Landrace. All such hogs are white and have droopy ears.

Farmers in the United States raise chiefly crossbred hogs. Crossbred hogs are produced by mating parents of different breeds. Crossbreeds, also called hybrids, are more active at birth, grow more rapidly and have high reproduction rates.

Notes
about a fourth – майже одна четверта
consider them dirty – вважають їх брудними
to keep cool – щоб охолодитися
of the world total – від усієї кількості у світі
by mating parents – паруванням батьків
reproductive rates – відтворювальні показники

TASK 1. Answer the questions:
1. What kinds of products are hogs used for?
2. How do people call young hogs?
3. How many hogs are there all over the world?
4. Do hogs have short or long reproduction cycle?
5. Name two common breeds of hogs.
6. What are Crossbred hogs?
7. What qualities do the Crossbred hogs have?

TASK 2. True or False?
1. Farmers in almost every country raise hogs. T / F
2. Hogs are among the most stupid domesticated animals. T / F
3. Hogs are considered to be dirty. T / F
4. Breeds of hogs reflect the climate of the region in which they are raised. T / F
5. Farmers in the United States raise chiefly Large White hogs. T / F

TASK 3. Fill in the missing words:
1._____
and other parts of hogs are used to make a variety of products.

2. Young hogs are almost always called _____ .
3. During _____ weather, hogs often roll about in mud to _____.
4. Hogs rank with cattle_____as an important source of farm income.
5. In Europe each country has developed _____ .
6. Common breeds of hogs include _____and_____.
7. Crossbred hogs are produced by _____ parents of different breeds.

TASK 4. Choose the right answers:
1. How are hogs also called?
a) swine
b) boar
c) pig
2. Hogs are …
a) wild animals
b) domesticated animals
c) pets
3. How many hogs are there throughout the world?
a) about 760 000 000
b) about 457 000 000
c) about 840 000 000
4. There …
a) are different breeds of hogs in every country
b) is only one breed
c) are 100 breeds throughout the world
5. Crossbred hogs are …
a) produced by mating parents of different breeds
b) produced by mating parents of the same breed
c) not produced; they are an independent breed

TASK 5. Match the words on the left with the examples/definitions on the right:

mud	a large pig that is kept for its meat
a hog	wet earth that has become soft and sticky
a crossbreed	pigs' meat
pork	a breed that results from crossing different breeds

TASK 6. Put the words in the gaps:
hogs, million, pigs, crossbred, pork, swine.
1. There are many kinds of … raised around the world.
2. Hogs provide …, which is eaten as chops, ham, bacon, and sausage.
3. Both young and adult hogs are also called … or … .
4. There are about 840 …. hogs on farms throughout the world.
5. Farmers in the USA raise chiefly…. hogs.

TASK 7. The Present Simple Tense. Filling in the gaps:
1. Hogs ….. (to be) one of the most intelligent domestic animals.
2. In Europe each country … (have) its own breed of hogs.
3. Hogs … (have) a little reproduction cycle.
4. Farmers in the USA … (raise) chiefly crossbred hogs.
5. Crossbreeds, also called hybrids, … (to be) more active at birth, … (to grow) more rapidly and … (to have) high reproduction rates.

TASK 8. Fill in "was or "were":
1. Last summer I … on my grandfather's farm.
2. My parents ….. afraid of hogs.
3. I … in a danger because one hog was trying to attack me.
4. My grandfather calmed it down, and I … happy.

TASK 9. Write sentences in the Present Continuous Tense:
1. I/ across / the road /walk/now.
2. Jane and Jack /a hog/ look / for.

3. They/to/find/try/it.
4. My grandfather/them/laugh/at.
5. I/read/a/now/about/book/hogs.

TASK 10. Prepare a project about raising hogs in Ukraine. Is it an important branch of animal husbandry in our country?

TASK 11. Listen to the facts about hogs. What can you add?

INTERESTING FACTS ABOUT HOGS

- Pigs are intelligent animals.
- Like humans, pigs are omnivorous, meaning they eat both plants and other animals.
- A pig's snout is an important tool for finding food in the ground and sensing the world around them.
- Pigs have an excellent sense of smell.
- Some people like to keep pigs as pets.
- Wild pigs (boars) are often hunted in the wild.
- In some areas of the world, wild boars are the main source of food for tigers.
- Feral pigs that have been introduced into new areas can be a threat to the local ecosystem.
- Pigs can pass on a variety of diseases to humans.
- In comparison to their body size, pigs have small lungs.

Topic 10. A SHEEP

Sheep are among the most important animals that people have tamed because they provide both food and clothing. Today, sheep are raised in all parts of the world. Australia is the world`s leading sheep-producing country. In Australia, there are about 10 sheep per every person. In New Zealand, there are about 20 sheep per every person. Sheep yield wool, meat, milk, and leather. They also furnish the raw materials for many by-

products, such as glue, tallow, soap, fertilizer, cosmetics and the catgut that is used in tennis rackets.

Domestic sheep vary greatly in size. The ewes (females) of some breeds may weigh 45 kilograms, while the ewes of some other breeds may weigh more than 102 kilograms. The rams (males) are larger. Their weight, including a heavy coat of wool, ranges from 68 to 159 kilograms.

The horns of a ram usually curve outward. In some breeds, both rams and ewes have horns. In other kinds, only the rams have horns, or the breed is hornless. Sheep walk upon hooves that are divided into two toes. The upper part of their legs is muscular, helping them to move quickly. Most sheep have tails, but these are often cut off.

Sheep can bite off grass much closer to the ground than cattle can. In fact, where too many sheep are allowed to graze, plant life may be severely damaged.

Sheep live for an average of seven years, but some live as long as 13. Most ewes give birth to one or two lambs at a time. The mother carries the lambs in her body for about five months before they are born. Ewes can begin breeding at the age of six months, but most producers do not allow them to do so until they are about 1.5 years old.

Notes
sheep-producing – вівчарство
vary in size – відрізняються за розміром
curve outward – вигинатися назовні
closer to the ground – ближче до землі
for an average of seven years – у середньому сім років
as long as 13 (years) – аж до 13 (років)
give birth to – народжують

TASK 1. Answer the questions:
1. What do sheep provide?
2. Name two countries, where there are a lot of sheep.

3. What do sheep produce?
4. How are female and male sheep called?
5. Do all sheep have horns?
6. What do farmers usually do with sheep's tails?
7. How long do ewes carry their lambs in their body?

TASK 2. True or False?
1. Today, sheep are raised in all parts of the world. T / F
2. In New Zealand, there are about 10 sheep per every person. T / F
3. The ewes are bigger than the rams. T / F
4. Sheep do not live a very long life. T / F
5. Ewes can give birth at the age of six months. T / F

TASK 3. Fill in the missing words:
1. In_____, there are about 10 sheep per every person. In New Zealand, there are about _____.
2. Sheep yield _____ .
3. The ewes (_____) of some breeds may weigh 45 kilograms, while the ewes of _____may weigh more than 102 kilograms.
4. Sheep walk upon _____ that are divided into _____.
5. Where too many sheep are allowed to _____, plant life may be _____.
6. Most ewes _____to one or two lambs _____ .
7._____ can begin _____ at the age of six months.

TASK 4. Choose the right answer:
1. What are sheep used for?
a) providing food, clothing
b) sport

c) keeping as a home pet
2. Do all sheep have horns?
a) yes, they do
b) sheep have no horns at all
c) some breeds have horns, some breeds are hornless
3.Sheep's tails are …
a) long
b) short or cut off
c) absent
4. Sheep live approximately …
a) from 5 to 7 years
b) from 7 to 13 years
c) from 15 to 18 years
5. Most ewes give birth to …
a) one or two lambs at a time
b) three or four lambs at a time
c) two or three lambs at a time

TASK 5. Put the words in the gaps:
meat, Australia, milk, tails, ewes, give birth
1 … is the world's leading sheep-producing country.
2. Sheep yield wool, …, …, and leather.
3. The …. of some breeds may weight 45 kilograms.
4. Most sheep have … but these are often cut off.
5. Most ewes …. to one or two lambs at a time.

TASK 6. Match the words on the left with the examples/definitions on the right:

a horn	a farm animal that is kept for its wool and its meat
a sheep	a hard pointed thing that grows, usually in pairs, on the heads of cows, goats and some other animals
an ewe	a hard foot of a horse, a cow,

	etc.
tallow	a female sheep
a hoof	hard animal fat

TASK 7. Write sentences in the Present Simple Tense:
1. In New Zealand, there (be) about 10 sheep per person.
2. Sheep (to be) among the most important animals that people have tamed.
3. Most sheep (to have) tails.
4. An ewe (to carry) the lambs in her body for about 5 months before they are born.

TASK 8. Choose "was" or "were":
1.Yesterday I and my sister … in the country, at my grandfather's house.
2. There … so many sheep that I couldn't count them all.
3. One sheep … in trouble.
4. It … tired and unwell.
5. We … sorry for it.

TASK 9. Read and guess whether these statements are true or false:
1. Sheep are known to self-medicate when they have some illnesses. They will eat specific plants that can cure them.
2. Sheep are pregnant for 9 months just like people.
3. Egyptians believed that sheep were sacred. They even had them mummified when they died, just like humans.
4. Sheep have an acute sense of smell.
5. Sheep have very good memories. They can remember sheep and humans for years.

TASK 10. Read the article and fill in the correct form of the verb:

HOW TO RAISE SHEEP

(By Lauren Ware)

Why Raise Sheep?

People have raised sheep for milk, meat and wool for thousands of years. Sheep _____ (to have) some advantages over other types of livestock: they_____(to be) relatively small and easy to handle, compared with cows and pigs. They_____ (not / to need) a lot of space.
Sheep _____ (to be) gentle and docile.

Buying Sheep

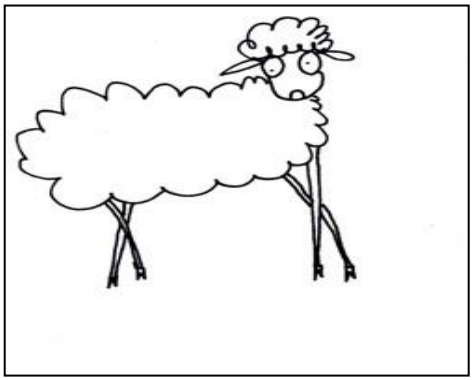
Make sure that you purchase sheep directly from the person who raised them . _____ (to look) at the flock the sheep comes from. _____ (to talk) with the farmer about the sheep's history. _____ (to check) the sheep's physical condition: eyes should be clear and bright; teeth should not be worn or missing. The lower jaw must not be undershot or overshot. _____ (to check) the head and neck for lumps or swelling, which may mean an untreated worm infestation or abscess. The sheep should have a wide back and deep body and not be too thin or too fat.

Care and Feeding of Sheep

You can use a characteristic of sheep to your advantage. They _____ (to love) grain, peanuts and apples. Be careful not to make sheep think you are chasing them. Sheep _____ (to have) only one defence against predators or danger: to bunch together and run to escape. Sheep _____ (to be) ruminants, meaning they _____ (to eat) plants like fresh grass and hay. Their main feed _____ (to be) pasture grasses, salt, a vitamin and mineral supplement, and fresh water. Sheep _____ (to need) salt – it can be granulated or loose.

Fencing and Shelter for Sheep

The best type of fence for sheep _____ (to be) a smooth-wire electric or woven wire fencing.
Sheep _____ (not/ to need) much protection – they_____(to prefer) to have a simple, south-facing, three-sided shed to protect them from the worst of the rain, cold, snow and wind.



Task 11. Language work: guess the translations for the words in the table from the following list:
отара; вовна; огорожа; сіль; хижак; перевага; зараження паразитами; захист; жуйна тварина; пухлина; щелепа; сіно; нарив; переслідувати (гнати); зерно; добавка.

wool *n*	[wul]	
flock *n*	[flɔk]	
predator *n*	['predətə]	
infestation *n*	[infes'teiʃ(ə)n]	
abscess *n*	['æbses]	
grain *n*	[grein]	
supplement *n*	['seplimənt]	

salt *n*	[sɔ:lt]	
hay *n*	[hei]	
advantage *n*	[əd'vɔ:ntɪdʒ]	
ruminant *n*	['ru:minənt]	
jaw *n*	[dʒɔ:]	
fence *n*	[fens]	
chase *v*	[ʧeis]	
lump *n*	[lʌmp]	
defence *n*	[dɪ'fens]	

Topic 11. A CHICKEN

A chicken is a bird that is raised for its meat and eggs. Chickens live throughout the world.

Chickens – like other birds – have feathers and wings. The feathers help them to keep warm in cold weather. Wings enable chickens to fly. However, they can fly only a few meters at a time. But chickens also have a number of special growths on their bodies that most other birds do not have. These growths include the red comb on top of the head and the red wattles that hang beneath the beak. Chicken meat and eggs are a good source of protein. Protein is a chemical compound that is necessary for a healthy diet. Chicken meat is also low in fat. However, chicken eggs contain a large amount of cholesterol. Many physicians believe that cholesterol in a person`s diet may contribute to heart disease.

Raising chickens for meat and eggs is a major industry in many countries. Some people raise chickens as a hobby. They breed them for body size and color patterns. The birds are exhibited at fairs and livestock shows. People sometimes use feathers from the chicken's neck and back to make flies (special

hooks) for fishing. In addition, scientists may use chickens for research in medicine and other fields. Chicken eggs are used to make many vaccines, which protect human beings and animals from diseases.

Chickens are grouped according to class, breed and variety. Most classes are named for the area where the chickens were first developed.

Notes
to keep warm – грітися
special growths – окремі нарости
is low in fat – має мало жиру
in other fields – в інших галузях
according to – відповідно до
are named for – називаються за

TASK 1. Answer the questions:
1. What is a chicken raised for?
2. What do feathers do for chickens?
3. Which compound does chicken meat contain?
4. What may cholesterol contribute to?
5. Say a few words about chicken breeding.
6. According to what aspects are chickens grouped?
7. What are classes of chicken named for?

TASK 2. True or False?
1. A chicken is raised for its skin. F / T
2. Wings enable chickens to fly. F / T
3. Chicken meat and eggs have no protein at all. F / T
4. Chicken eggs are used to make perfume and cosmetics. F / T

TASK 3. Fill in the missing words:
1. Chickens have _____ and wings.

2. They can fly only a few meters _____ .
3. _____ is a chemical compound that is necessary for a healthy _____.
4. Cholesterol may _____ to heart _____ .
5. Scientists may use chickens for _____ in medicine and other fields.
6. Chicken eggs are used to make many _____, which protect human beings and animals from diseases.

TASK 4. Choose the right answer:
1. Chicken is raised for …
a) skin
b) meat and eggs
c) fat
2. Special growths on chickens` bodies are …
a) horns and fur
b) wattles and a comb
c) needles
3. People sometimes use feathers from the chicken's neck and back to make …
a) furniture
b) pens
c) flies
4. Most classes are named for …
a) the time when they were developed
b) the area where they were developed
c) the city where they were developed

TASK 5. Match the words on the left with the examples/definitions on the right:

a beak	a common farm bird that is kept for its meat and eggs
a chicken	a red piece of flesh that

	grows on the top of a male chicken's head
a comb	a hard pointed mouth of a bird
a breed	a chemical substance found in your blood
cholesterol	a type of animals that is kept as a pet or on a farm

TASK 6. Put the words in the gaps:
wings, hobby, a chicken, protein, meat
1 ... is a bird that is raised for its meat and eggs.
2 …. enable chicken to fly.
3. Chicken …is low in fat.
4. … is a chemical compound that is necessary for a healthy diet.
5. Some people raise chickens as a … .

TASK 7. Write sentences in the Past Simple:
1. Yesterday my mother … (to prepare) chicken for dinner.
2. I … (not / to want) to eat it.
3. But mother … (to say) that chicken meat and eggs (to be) a good source of protein.
4. After some complaining I eventually … (to eat) more than I usually do.

TASK 8. The Present Simple Tense:
1. A chicken … (to be) a bird that is raised for its meat and eggs.
2. Chiken eggs… (to contain) a large amount of cholesterol.
3. Some people … (to raise) chickens as a hobby.
4. Chicken meat and eggs … (to be) a good source of protein.
5. Feathers … (to help) them to keep warm in cold weather.

TASK 9. Listen to the new facts about chickens and comment on them:

AMAZING FACTS ABOUT A CHICKEN

1. The highest number of eggs produced by one hen in a year is 371.
2. Bred for meat, a pullet becomes a hen at one year old, kept for eggs it is a hen at 16-20 weeks.
3. Mexico has the highest egg consumption of any country at 420 eggs per year.
5. The Hen and Chicken Islands lie to the east of Auckland off the coast of northern New Zealand. They were named by James Cook after the star cluster the Pleiades which was also known as the Hen and Chickens.
6. The world's oldest known chicken was a hen that died of heart failure at the age of 16.

Topic 12. PETS: A CAT

The **domestic cat** is a small, usually furry, domesticated, and carnivorous mammal. It is often called the **housecat** when kept as an indoor pet, or simply the **cat** when there is no need to distinguish it from other felids and felines. Cats are often valued by humans for companionship and their ability to hunt vermin and household pests.

Since cats were cult animals in ancient Egypt, they were commonly believed to have been domesticated there, but there may have been instances of domestication as early as the Neolithic from around 9500 years ago (7500 BC).

A genetic study in 2007 concluded that domestic cats are descended from African wildcats 8000 BC, in West Asia. Cats are the most popular pets in the world, and are now found in almost every place where humans live.

Cats are similar in anatomy to the other felids, with strong, flexible bodies, quick reflexes, sharp retractable claws, and teeth adapted to killing small prey. Cats can hear sounds too faint or too high in frequency for human ears, such as those

made by mice and other small animals. They can see in near darkness. Like most other mammals, cats have poorer color vision and a better sense of smell than humans.

Despite being solitary hunters, cats are a social species, and cat communication includes the use of a variety of vocalizations (mewing, purring, trilling, hissing, growling and grunting) as well as cat pheromones, and types of cat-specific body language.

Cats have a rapid breeding rate. Under controlled breeding, they can be bred and shown as registered pedigree pets, a hobby known as cat fancy. Failure to control the breeding of pet cats by neutering, and the abandonment of former household pets, has resulted in large numbers of feral cats worldwide, requiring population control.

TASK 1. Answer the questions:

1. Is a cat a carnivorous animal?
2. What is the difference between **a cat** and **a housecat**?
3. What are cats valued for?
4. What are the physical characteristics of a cat?
5. Do cats hear and smell well?
6. Do cats have a keen sight?
7. Are cats good communicators?
8. Should cats' breeding be controlled?
9. In what countries were cats cult animals?
10. When were first cats domesticated?

TASK 2. True or False:

1. Domestic cats are descended from American wildcats. T/F
2. A hobby of cat breeding is called a cat fancy. T/F
3. Cats have no specific forms of communication. T/F
4. Cats' hearing is faint. T/F
5. Cats distinguish colours very well. T/F
6. Cats cannot see in the darkness. T/F

7. Cats distinguish colours very well. T/F

TASK 3. Complete the sentences:

1. A housecat is an / a …….. pet.
2. Cats can hunt household …….. .
3. Cats can see in the ……. .
4. Cats have …….. colour vision and a …… sense of smell than humans.
5. A cat's communication includes a variety of ……..
6. Cats have a …… breeding rate.
7. Cats were …….. animals in ancient Egypt.

TASK 4. Write degrees of comparison:

small –
furry –
strong –
flexible –
sharp –
quick –
faint –
poor –
rapid –
large –

TASK 5. Write a project on one of the cats' breed.

TASK 6. Listen to the new facts about cats and comment on them:

AMAZING FACTS ABOUT CATS

- Cats are one of the most popular pets in the world.
- There are over 500 million domestic cats in the world.

- Cats and humans have been associated for nearly 10 000 years.
- Cats conserve energy by sleeping for an average of 13 to 14 hours a day.
- Cats have flexible bodies and teeth adapted for hunting small animals such as mice and rats.
- A group of cats is called a clowder, a male cat is called a tom, a female cat is called a molly or queen while young cats are called kittens.
- Cats can be lethal hunters and very sneaky, when they walk their back paws step almost exactly in the same place as the front paws did beforehand, this keeps noise to a minimum and limits visible tracks.
- Cats have powerful night vision, allowing them to see at light levels six times lower than what a human needs in order to see.
- Cats also have excellent hearing and a powerful sense of smell.
- Older cats can at times act aggressively towards kittens.
- Domestic cats love to play, this is especially true with kittens who love to chase toys and play fight. Play fighting among kittens may be a way for them to practice and learn skills for hunting and fighting.
- On average cats live for around 12 to 15 years.
- Cats spend a large amount of time licking their coats to keep them clean.
- Feral cats are often seen as pests and threats to native animals.

Topic 13. A DOG

The domestic **dog** is a subspecies of the gray wolf. The term "a domestic dog" is generally used for both domesticated and feral varieties. The dog was the first tamed animal and has been the most widely kept for working, hunting, and as a pet

animal in human history. The word "dog" can also refer to the male of a canine species, as opposed to the word "bitch" which refers to the female of the species.

Recent studies date dogs' domestication to the period of 14,000 and 16,000 years ago, though it is assumed that there were instances of wolves' domestication as early as 34,000 years ago. Dogs' value to early human hunter-gatherers was enormous. Dogs still perform many roles for people, such as hunting, herding, pulling loads, protection, assisting the police and military, companionship, and, more recently, aiding handicapped individuals. This impact on human society has given them the nickname "man's best friend" in the Western world. In 2001, there were estimated to be 400 million dogs in the world.

Most breeds of dogs are at most a few hundred years old, having been artificially selected for particular morphologies and behaviors by people for specific functional roles. Through this selective breeding, the dog has developed into hundreds of varied breeds, and shows more behavioral and morphological variation than any other land mammal.

TASK 1. Answer the questions:

1. What is the term "domestic dog" generally used for?
2. Was a dog a first-domesticated animal?
3. Has it been the most widely kept?
4. When were the first dogs domesticated?
5. Why did pre-historic people domesticate them?
6. How do people name dogs?
7. How many dogs are there in the world?
8. Are there a lot of breeds of dogs in the world?

TASK 2. List roles of dogs for people using the ending -ing:
- hunting…

TASK 3. Write a composition "Man's best friend".

TASK 4. Listen to the facts about dogs. What information was the most surprising for you?

INTERESTING FACTS ABOUT DOGS

- In total there is said to be around 400 million dogs in the world.
- The domestic dog has been one of the most popular working and companion animals throughout human history.
- Dogs perform many useful tasks for humans including hunting, farm work and security as well as assisting those with disabilities such as the blind.
- Although experts often disagree, there is scientific evidence which shows that the domestication of dogs could have occurred more than 15,000 years ago.
- There are hundreds of different breeds of dogs.
- The most popular breed of dogs in the world by registered ownership is the Labrador. With their gentle nature, obedience, intelligence and near limitless energy, Labradors make for excellent family pets and reliable workers. They often assist the police and are a common choice as guide dogs.
- Dogs have formed such a strong bond as pets, workers and companions to humans that they have earned the nickname "man's best friend".
- Humans help train various dog breeds to enter in competitions such as breed shows, agility and obedience contests, racing and sledge pulling.
- Dogs have superior hearing than humans, capable of hearing sounds at four times the distance.
- Dogs have a remarkable sense of smell, they are capable of differentiating odors in concentrations nearly 100 million times lower than humans can.

- The average life span for a dog is around 10 to 14 years.
- Those involved in dog breeding refer to males as ‘dogs’, females as ‘bitches’, dogs younger than a year old as ‘puppies’ and a group of offspring as a ‘litter’.
- Domestic dogs are omnivorous, they feed on a variety of foods including grains, vegetables and meat.

Topic 14. DISEASES OF ANIMALS. CHANNELS OF INFECTION

There are many diseases of animals. Some of them are so dangerous that they can kill animals. The diseases can be divided into non-infectious and infectious ones.

The diseases can involve any system of the body: the cardiovascular system (for example, pericarditis), the respiratory system (pneumonia), the alimentary tract (hepatitis), the urinary system (nephritis), the blood (anaemia), and the skin (eczema). Some problems arise due to metabolic disorders (ketosis of ruminants), nutritional deficiencies (vitamin A deficiency), and poisoning by chemical agents, fertilizers, fungi, or ferns. Some diseases affect mainly the young (rickets), the others are common to all farm animals (tuberculosis, botulism, rabies).

There is a number of ways by which microorganisms may be introduced into the living tissues of the animal body. The most common of these are as follows, namely:

1. **Through the Digestive Tract.** Bacteria gain entrance into the tissues from the digestive tract where they have been brought with the food or water. It is not clear in all cases how the invading organisms get into the tissues from the intestine. It has been demonstrated that mycobacteria will pass through the mucosa with fat globules in the process of digestion and absorption.
2. **Through the Respiratory Tract.** Bacteria are taken into the lungs with the inhaled atmosphere. Pulmonary tubercular affection is often brought about this way.

3. **Through Abrasions of the Skin or Intestinal Mucosa.** The high distribution of bacteria in nature renders it highly probable that in all wounds of the integument microorganisms will reach the fresh tissues. They may come from the cutting or tearing implement, the particles of dirt, which may fall into or upon the cut surface, or from the ducts of the glands of the skin itself.
4. **Through the Agency of Insects.** Some insects carry the virus of certain diseases from the infected and introduce it into the susceptible individuals.

Essential Terminology

channel of infection	шлях проникнення інфекції
non-infectious disease	неінфекційне захворювання
infectious disease	інфекційне захворювання
cardiovascular system	серцево-судинна система
pericarditis	перикардит, запалення зовнішньої оболонки серця
respiratory system	дихальна система
pneumonia	пневмонія
alimentary tract	травний шлях
digestive tract	травний шлях
hepatitis	гепатит
urinary system	сечова система
nephritis	нефрит
blood	кров
anaemia	анемія
skin	шкіра
eczema	екзема
metabolic disorder	метаболічне порушення
ketosis	кетоз

nutritional deficiency	нестача поживних речовин
poisoning	отруєння
chemical agent	хімічний чинник
fertilizer	добриво
fungus (pl. fungi)	гриб
fern	папороть
rickets	рахіт
tuberculosis	туберкульоз
botulism	ботулізм
rabies	сказ
living tissue	жива тканина
bacterium (pl. bacteria)	бактерія
invading organism	хвороботворний організм
intestine	кишечник
mucosa	слизова оболонка
fat globule	часточка жиру
digestion	травлення
absorption	всмоктування
inhaled atmosphere	повітря, що вдихається
pulmonary	легеневий
tubercular affection	туберкульозне ураження
abrasion	подряпина
intestinal	кишковий
integument	зовнішній покрив
duct of the gland	протока залози
susceptible	сприйнятливий

TASK 1. Answer the questions:

1. What groups of diseases do you know?
2. What organs and systems of the organism can they affect?

3. What may be the causes of poisoning?
4. What disease affects young animals?
5. What diseases are common to all the animals?
6. What are the main ways of introducing microorganisms into the living tissues?
7. In what way do the bacteria get into the digestive tract?
8. Is it clear how the invading organisms get into the tissues from the intestine?
9. How do bacteria get into lungs?
10. Describe the process of distribution of bacteria through abrasions of skin.
11. What do some insects carry from the infected individuals to the susceptible ones?

TASK 2. Complete the sentences:

1. Bacteria … entrance into the lungs.
2. Some diseases … … to all farm animals.
3. Microorganisms may be … into the living tissues of the animal …
4. Bacteria will pass through the mucosa with … … .
5. … are taken into lungs with the … … .
6. Some diseases … mainly the young.
7. They may come from the … implement.
8. Some … carry the … .
9. There are four … … … .
10. The diseases … … … … non-infectious and infectious ones.
11. The diseases … … any system of the body.
12. Some problems … … … metabolic disorders.

TASK 3. Fill in the sentences with a suitable modal or semi-modal word *(can, may, should, must, have to, need, could, might, would, dare, ought, will, shall)*:

1. Your pet doesn't look well. You … take it to the vet.
2. How … you treat animals in such a way?

3. Animals … to be protected.
4. … I help you to examine the horse?
5. You … to wear medical gloves when you operate on animals.
6. The professor said: “I am sure there … be a medicine for cancer one day”.
7. The symptoms are not very clear. It … be tuberculosis, though I am not sure.
8. You … to consult your colleagues if you don’t know exactly what disease it is.
9. This vet is very professional. He … treat any disease.
10. … I be present when you operate on animals? This experience … be very valuable for me.
11. … you comment on the problem with that calf, please?
12. You … revise this material. You don’t remember it well.

TASK 4. Distinguish between *must (mustn’t) and have to (won’t have to, don’t have to, had to, will have to, didn’t have to)*:

1. The professor: “You … learn the symptoms by heart”.
2. The professor said that I … study this problem.
3. I … look the term up in the dictionary because I didn’t remember it well.
4. The students … take an exam in Anatomy in June.
5. You … give this medicine to the animal. It is not certified.
6. You … come to the University today. It is Saturday.
7. He … explain it to me. I understood it myself.
8. We … go to the laboratory next week. The professor is at the conference.

Topic 15. BOVINE TUBERCULOSIS

The disease caused by *Mycobacterium bovis* is characterized by the progressive development of tubercles in any of the organs in most species.

Tuberculosis occurs in every country of the world and is of major importance in dairy cattle. The relative importance of environment in causation of the disease is suggested by the high incidence in those countries in which animals are housed indoors during the winter months. Amongst beef cattle the degree of infection is usually much lower because of the open range conditions under which they are kept.

However, individual beef herds may suffer a high morbidity if infected animals are introduced and large numbers of animals have to drink from stagnant water holes, especially during dry seasons. Apart from actual deaths, it is estimated that infected animals lose 10 to 25 per cent of their productive efficiency.

All species and age groups are susceptible to *Myco bovis*, with cattle, goats and pigs most susceptible and sheep and horses showing a high natural resistance.

Although the organism does not form spores, it is moderately resistant to heat, desiccation and many disinfectants. It is readily destroyed by direct sunlight, unless it is in a moist environment. In warm, moist, protected positions, it may remain viable for very long periods.

BOVINE TUBERCULOSIS. TRANSMISSION

The main source of infection is the infected animal. Organisms are excreted in the exhaled air, in sputum, faeces, milk, and urine, vaginal and uterine discharges from open peripheral lymph nodes. Commonly, entry is affected by inhalation or ingestion. Inhalation is more probable when animals are housed indoors. On the other hand, ingestion is more common route of infection when animals are at pasture and contaminate the feed and communal drinking water. Under natural conditions, stagnant drinking water may cause infection up to 18 days after its last use by a tuberculous animal.

Separation of infected and susceptible animals by a fence provides practical protection against the spread of disease.

The drinking of infected milk by young animals is one of the commonest methods by which tuberculosis is spread.

Essential Terminology

tuberculosis	туберкульоз
to cause	спричинити
causation	спричинення
tubercle	туберкула, вузлик
to occur	зустрічатися, траплятися
dairy cattle	молочна худоба
beef cattle	м’ясна худоба
herd	стадо
stagnant water	непроточна вода
resistant	стійкий
desiccation	висушування
viable	життєздатний
to excrete	виділяти
to inhale	вдихати
to exhale	видихати
sputum	слина
faeces	фекалії
urine	сеча
vaginal	вагінальний
uterine	маточний
discharges	виділення
node	вузол
ingestion	проковтування
referable	що стосується
lesions	пошкодження; ураження
contaminate	заражати
separation	відокремлення
spread of disease	поширення хвороби

TASK 1. Fill in a preposition:

To be caused … bacteria	Спричинятись бактеріями
Development … tubercles	Розвиток туберкул
To be characterized … development	Характеризуватись розвитком
To be introduced … the living tissues	Потрапляти в живі тканини
To be … major importance … dairy cattle	Бути важливим для молочної худоби
To be resistant … heat	Бути стійким до тепла
To be brought …food	Заноситись з їжею
To remain viable … long periods	Залишатись життєздатним протягом тривалого часу
The relative importance … environment … the causation … the disease	Відносна важливість навколишнього середовища у спричиненні хвороби
To get … tissues … the intestine	Потрапляти до тканин з кишечника
To be susceptible … bacteria	Бути чутливим до бактерій
The degree … infection is lower because …	Ступінь інфікування нижчий через …
To pass … the mucosa … fat globules … the process … digestion	Пройти крізь слизову оболонку з часточками жиру в процесі травлення
To be kept … proper conditions	Утримуватись у належних умовах
The source … infection	Джерело інфекції
To be taken … lungs … the inhaled atmosphere	Потрапляти до легень із повітрям, що вдихається
To be excreted … the air	Видихатись у повітря
Separation … a fence	Відокремлення огорожею
Protection … the spread … disease	Захист від розповсюдження хвороби

The way … which tuberculosis is spread	Шлях поширення туберкульозу
Discharges … lymph nodes	Виділення з лімфатичних вузлів
To be brought … … this way	Спричинятись у цей спосіб

TASK 2. Find all the passive constructions in the text and underline them.

TASK 3. Write a Past Participle for each verb:
to introduce
to bring
to demonstrate
to take
to inhale
to distribute
to carry
to cause
to characterize
to drink
to spread
to infect
to excrete
to contaminate
to separate
to provide
to destroy
to estimate
to lose

TASK 4. Write sentences in the Passive Voice using the words from the brackets:

1. This disease (to cause) by unknown bacteria.
2. This virus (to carry) by insects.

3. The cows (to infect) while drinking from stagnant water holes last month.
4. Tuberculosis (to spread) by drinking infected milk.
5. The infected animals (to examine) by our best specialists in the afternoon.
6. Organisms (to excrete) into the atmosphere.
7. Unfortunately, several calves (to lose) because of improper care.
8. We promise that proper care (to provide) for the animals on our farm.
9. The examination showed that his cow (to keep) under good conditions.
10. The infected animals (to separate) from the herd till their full recovery.

BOVINE TUBERCULOSIS (CLINICAL FINDINGS)

Although signs referable to localization in a particular organ usually attract attention to the possible occurrence of tuberculosis, some general signs are also evident. Some cows with extensive tubercular lesions are clinically normal but progressive emaciation unassociated with other disease should always arouse suspicion of tuberculosis. A capricious appetite and fluctuating temperature are also commonly associated with the disease. The condition of the hair-coat is variable; it may be rough or sleek. Affected animals tend to become more docile and sluggish but the eyes remain bright and alert. These general signs often become more pronounced after calving.

Pulmonary involvement is characterized by a chronic cough due to bronchopneumonia. The cough is loud or paroxysmal, occurring only once or twice at a time and is low, suppressed and moist. It is easily stimulated by squeezing the pharynx or by exercise and is most common in the morning or in cold weather. In the advanced stages when much lung has been

destroyed, dyspnoea with increased rate and depth of respiration becomes apparent. At this stage, abnormalities may be detected by auscultation and percussion of the chest. Areas with no breath sounds and dullness on percussion are accompanied by areas in which squeaky râles are audible.

The most common signs of alimentary involvement are caused by pressure of enlarged lymph nodes on surrounding organs.

Tuberculous mastitis is of major importance because of the danger to public health, and because of the spread of the disease to calves and the difficulty of differentiating it from other forms of mastitis. Its characteristic features are marked indurations and hypertrophy which usually develops first in the upper part of the udder, particularly in the rear quarters. Palpation of the supramammary lymph nodes is essential in all cases of suspected tuberculous mastitis. Enlargement of the nodes with fibrosis of the quarter does not necessarily indicate tuberculosis but enlargement suggests either tuberculosis or lymphomatosis. In the early stages, the milk is not macroscopically abnormal but later very fine floccules appear which settle after the milk stands leaving a clear, amber fluid. Later still the secretion may be an amber fluid only.

Essential Terminology

emaciation	виснаження
to fluctuate	коливатися
sleek	лискучий
docile	спокійний
sluggish	повільний
involvement	ураження
suppressed	придушений
paroxysmal	судомистий; припадочний
pharynx	глотка
dyspnoea	задишка
auscultation	вислухування

percussion	вистукування
squeaky râles	сухі хрипи
mastitis	мастит
marked	помітний
indurations	затвердіння
hypertrophy	гіпертрофія
supramammary lymph nodes	лімфатичні вузли, що розміщені над вим'ям
lymphomatosis	лімфоматоз
floccules	осади

TASK 1. Answer the questions:

1. What are the signs of tuberculosis?
2. What is the condition of coat in tuberculous animals?
3. What are their appetite and behavior like?
4. Are the signs more pronounced after calving?
5. What are the characteristics of tuberculous cough?
6. How can abnormalities be detected?
7. What are the most common signs of alimentary involvement caused by?
8. Why is tuberculous mastitis dangerous?
9. What is the characteristic feature of tuberculous mastitis?

TASK 2. Turn the following sentences into the Passive Voice:

1. A chronic cough characterizes pulmonary involvement.
2. Squeezing stimulates coughing.
3. Tuberculosis destroys lungs.
4. We may detect abnormalities by percussion.
5. Pressure of enlarged lymph nodes causes alimentary signs.
6. The veterinary doctor suspects tuberculosis.
7. The students suggest mastitis.
8. One can hear squeaky râles.
9. One can notice strange behavior in infected animals.
10. Doctors should cure suffering animals.

11. We must give this medicine to the sick animal.
12. It is necessary to give animals enough clean water.

Topic 16. PNEUMONIA

Pneumonia is an acute or chronic inflammation of the lungs and bronchi. The usual cause is primary viral infection of the lower respiratory tract.

Canine distemper virus, adenovirus types 1 and 2, parainfluenza virus, and feline calicivirus cause lesions in the distal airways and predispose to secondary bacterial invasion of the lungs. Parasitic invasion of the bronchi may result in pneumonia.

Clinical Findings: The initial signs are usually those of the primary disease. Lethargy and anorexia are common. A deep cough is noted. Progressive dyspnoea, "blowing" of the lips, and cyanosis may be evident, especially on exercise. Body temperature is increased moderately, and there may be leukocytosis. Complications such as pleuritis, mediastinitis, or invasion by opportunistic organisms may occur.

Diagnosis: Analysis of bronchoalveolar lavage fluid is valuable for the diagnosis of bacterial infections. Cytologic examination can demonstrate the animal's immune response and indicate the intracellular or extracellular location of bacteria. Bacterial culture and sensitivity testing is required and may include anaerobe and mycoplasma culture, especially in refractory cases. A viral etiology generally results in an initial body temperature of 40-41°C. Leukopenia, often expected, may not be seen in many viral respiratory infections. A history of recent anesthesia or severe vomiting indicates the possibility of aspiration pneumonia. Acutely affected animals may die within 24 – 48 hr of onset.

Treatment: The animal should be placed in a warm, dry environment. Anemia, if present, should be corrected. If cyanosis

is severe, oxygen therapy may be used, administered by means of an oxygen cage, with a concentration of 30-50%.

TASK 1. Read the text and complete the sentences. Choose the correct answer: *a, b, c* or *d.*

1. Pneumonia is an acute or chronic inflammation of the …….
a trachea b pharynx and larynx c bronchi and lungs d lymphatic system
2. ……. can indicate the intracellular or extracellular location of bacteria.
a radiologic test b physical examination c genetic testing d cytologic examination
3. A viral etiology results in the initial body temperature of …….
a 36,6°C b 40-41°F c 40-41°C d 37-38°C
4. Acutely affected animals may die within …….
a 2-3 weeks b 1-2 hours c half a year d 24-48 hours
5. In a case of pneumonia the animal should be placed in a ……. environment.
a dry and warm b cold and harsh c noisy d extreme

TASK 2. Read the statements and write whether they are True (T) or False (F):

1. The usual cause of pneumonia is primary viral infection of the upper respiratory tract. T/F
2. Lethargy and anorexia are the common initial signs of pneumonia. T/F
3. The animal's immune response cannot be demonstrated by cytologic examination. T/F
4. Headache indicates the possibility of aspiration pneumonia. T/F
5. Oxygen therapy is used in the case of severe cyanosis. T/F

TASK 3. Complete the sentences with the help of the words from the list:

severe valuable for invasion results in pleuritis

1. Parasitic ……. of the bronchi may be the case of pneumonia.
2. ……. is one of the complications of pneumonia.
3. Analysis of bronchoalveolar lavage fluid is ……. the diagnosis of bacterial infections.
4. A viral etiology ……. an initial body temperature of 40-41°C.
5. If cyanosis is ……., oxygen therapy may be used.

TASK 4. Find and correct one mistake in each sentence:
1. Pneumonia is the chronical inflammation of the lungs and bronchi.
2. Adenovirus types 1 and 2 predisposes to primary bacterial invasion of the lungs.
3. Leukopenia is always seen in viral respiratorical infections.
4. Cytologic examination doesn't indicate the intracellular or extracellular location of bacteria.
5. If anemia is present, it cannot be correct.

TASK 5. Read the definitions and find the words in the text:
1. The body's immune response to harmful stimuli such as pathogens, damaged cells or irritants; it can be acute or chronic (noun) : i_ _ _ _ _ _ _ _ _ _ _
2. The inflammation of the pleura; one of the complications of pneumonia (noun) : p_ _ _ _ _ _ _ _
3. An infection caused by a virus (adjective) : v_ _ _ _
4. The cause of the disease or the scientific study (noun) : e_ _ _ _ _ _ _
5. An illness or disease which is very bad and serious (adjective): s_ _ _ _ _

Topic 17. BRUCELLOSIS

Brucellosis, also called Bang's disease, Crimean fever, Gibraltar fever, Malta fever, is a highly contagious zoonosis caused by ingestion of unsterilized milk or meat from infected animals or close contact with their secretions. Transmission from human to human, through sexual contact or from mother to child, is rare but possible. *Brucella* are small, Gram-negative, non-motile, non-spore-forming, rod shaped (coccobacilli) bacteria. They function as facultative intracellular parasites causing chronic disease, which usually persists for life. Symptoms include profuse sweating and joint and muscle pain. Brucellosis has been recognized in animals including humans since the 20th century.

Under the name Malta fever, the disease now called brucellosis first came to the attention of British medical officers in the 1850s in Malta during the Crimean War. The causal relationship between organism and disease was first established in 1887 by Dr. David Bruce.

In 1897, Danish veterinarian Bernhard Bang isolated *Brucella abortus* as the agent; and the additional name Bang's disease was assigned. In cattle, this disease is also known as contagious abortion and infectious abortion.

Species infecting domestic livestock are *B. melitensis* (goats and sheep), *B. suis* (pigs), *B. abortus* (cattle and bison), *B. ovis* (sheep), and *B. canis* (dogs). The bacterium *Brucella abortus* is the principal cause of brucellosis in cattle. The bacteria are shed from an infected animal at or around the time of calving or abortion. The most common clinical signs of cattle infected with *Brucella abortus* are high incidences of abortions, arthritic joints and retained after-birth. Brucellosis in humans is usually associated with the consumption of unpasteurized milk and soft cheeses made from the milk of infected animals.

TASK 1. Read the text and complete the sentences. Choose the correct answer: *a, b, c* or *d:*

1. Brucellosis is also called …….

a Bing's fever b European fever c Western fever d Bang's disease

2. Brucella are small ……. rod shaped bacteria.

a Gram-positive b motile c non-spore-forming d Gram-neutral

3. Brucellosis is caused by ingestion of unsterilized milk or ……. from infected animals.

a water b meat c vegetables d fruits

4. Brucellosis was discovered by British medical officers in the ……. in Malta during the Crimean War.

a 1850s b 1770s c 1910s d 1690

5. Brucellosis excludes the symptom of …….

a sweating b anorexia c joint pain d muscle pain

TASK 2. Read the statements and write whether they are True (T) or False (F):

1. Brucellosis is also called Bang's disease, Crimean fever, Gibraltar fever or Malta fever. T/F
2. Bang's disease is an acute disease which cannot persist for life. T/F
3. The causal relationship between organism and disease was first established by Danish veterinarian Bernhard Bang. T/F
4. Crimean fever infects domestic livestock: goats, sheep, pigs, cattle, bison and dogs. T/F
5. Brucellosis doesn't result in abortions, arthritic joints and retained after-birth. T/F

TASK 3. Complete the sentences with the help of the words from the box:

are shed from ingestion transmitted isolated came to the attention

1. Bang's disease is caused by ……. of unsterilized milk or meat from infected animals.

2. Brucellosis can be …….. from human to human, through sexual contact or from mother to child.
3. The disease first ……. of British medical officers in Malta.
4. Bernhard Bang ……. *Brucella abortus* as the agent.
5. The bacterium *Brucella* ……. an infected animal at the time of calving or abortion.

TASK 4. Find and correct one mistake in each sentence:

1. Brucellosis can be caused by close contact with the animals' secretions.
2. Brucella are small, Gram-positive, non-spore-forming, rod shaped bacteria.
3. Brucellosis has been recognized in animals since the 20th century.
4. The Bang's disease cannot be associated with the consumption of unpasteurized milk and soft cheeses.
5. In 1997, the additional name of Brucellosis occurred – Bang's disease.

TASK 5. Read the definitions and find the words in the text:
1. A disease that can be passed from person to person by touch (adjective) : c_ _ _ _ _ _ _ _ _
2. An infectious disease that can be transmitted between species from animals to humans or from humans to other animals (noun): z_ _ _ _ _ _ _
3. Full of germs or pathological microorganisms (used in connection with milk) (adjective) : u_ _ _ _ _ _ _ _ _ _ _
4. The process of giving birth to a calf (noun) : c_ _ _ _ _ _
5. Domesticated animals raised in an agricultural setting (noun): l_ _ _ _ _ _ _ _

Topic 18. RABIES

Rabies is an infectious disease that destroys the nerve cells of part of the brain and almost always causes death. Human beings and most other mammals can get the disease. The word *rabies* is Latin for *rage or fury.* The disease probably received its name because infected animals often become excited and attack any object or animal in their way. Because one of the symptoms of rabies is an inability by the infected animal to swallow water, the disease is sometimes called *hydrophobia,* which means *fear of water.*

Cause. Rabies is caused by a virus known as a *rhabdovirus.* Most mammals can carry this virus, which usually lives in the nerve cells and glands of the *host* (carrier). The rabies virus can be carried in the salivary glands for long periods of time. If the host bites another animal or a human being, or if some of its infected saliva enters an open wound, the victim may get rabies. Dogs, cats, and wild animals are common sources of infection for people. Research indicates that rabies virus can also enter mucous membranes, such as those lining the nose and eyes. People and other mammals can develop rabies after breathing the air in caves that house large numbers of bats, which may carry the virus.

When rabies virus enters the body, it travels along nerves to the spinal cord and up to the brain, producing inflammation. Symptoms of the disease generally develop about 10 days to 7 months after exposure.

Symptoms in human beings. Among the first symptoms are pain, burning, or numbness at the site of the infection. The victim complains of headaches and is extremely restless. Muscle spasms make the throat feel full, and swallowing becomes difficult. Later, the patient may have convulsions. After a day or two, a quiet period can occur, which can progress to unconsciousness and, finally, death. Symptoms generally last from 2 to 12 days.

Symptoms in animals. The development of rabies in animals follows the same pattern as in people. During the period of excitation, the animal may wander great distances. It vocalizes almost constantly, often becomes aggressive, and will attack without reason. The disease then usually progresses to paralysis of the jaw and throat muscles, followed by general paralysis and death. Some animals with rabies never show signs of excitation but only of paralysis. This form of the disease is sometimes called *dumb rabies.* Some animals that recover from rabies continue to carry and spread the virus.

Treatment. The first step in treating a person bitten by any animal should be to wash the wound with soap and water. The animal should either be caged and watched for signs of rabies, or killed and its brain tissue tested for rabies virus. If either procedure indicates the presence of rabies, a doctor should begin preventive treatment at once. If the animal cannot be found, the doctor may follow such treatment as a safety measure. Standard preventive treatment in the United States consists of one injection of antirabies globulin followed by five injections of rabies vaccine. Vaccinating all dogs and cats against rabies is an important means of controlling the disease.

TASK 1. Answer the questions:
1. What does rabies destroy?
2. Is rabies a lethal disease?
3. Are human beings susceptible to it?
4. What does the word “rabies” mean?
5. What is the main symptom of rabies?
6. What virus is the disease caused by?
7. What animals are common sources of infection for people?
8. What can you say about the behavior of infected animals?
9. What is dumb rabies?
10. What should a bitten person do first of all?
11. What is the preventive standard treatment?
12. Should all dogs and cats be vaccinated?

TASK 2. Decode the words:
Nbair, ufyr, thso, nladg, ialavs, nwudo, mvitic, oinlamainmft, npia, snubnesm, cifetinon, athotr, lusmce, ypralsisa, sviur, ttretmaen

TASK 3. Explain the new terms in English:

1. Rabies is…
2. Hydrophobia is…
3. Rhabdovirus is…
4. A host is …
5. Dumb rabies is …
6. Rage or fury is …

TASK 4. You have answers. Make up questions:

1. Nerve cells.
   _____ ?
2. Swallow water.
   _____ ?
3. In the glands of the carrier.
   _____?
4. Dogs, cats, and wild animals.
   _____?
5. 10 days to 7 months.
   _____ ?
6. Pain, burning, or numbness at the site of the infection.
   _____?
7. 2 to 12 days.
   _____ ?
8. To wash the wound with soap and water.
   _____ ?
9. One injection of antirabies globulin followed by five injections of rabies vaccine.
   _____?

TEXTS FOR INDIVIDUAL STUDIES

DISEASES OF ANIMALS (CONTINUATION)

Topic 1. FASCIOLOSIS

Fasciolosis is an important helminth disease caused by two trematodes *Fasciola hepatica* and *Fasciola gigantica*. The definitive host range is very broad and includes many herbivorous mammals, including humans. The life cycle includes freshwater snails as an intermediate host of the parasite. Recently, worldwide losses in animal productivity due to fasciolosis were conservatively estimated at over US$3.2 billion per annum. In addition, fasciolosis is now recognized as an emerging human disease.

Adult flukes of both species are localized in the bile ducts of the liver or gallbladder. *F. hepatica* measures two to three cm, *F. gigantica* measures four to ten cm in length.

Human and animal fasciolosis occurs worldwide. While animal fasciolosis is distributed in countries with high cattle and sheep production, human fasciolosis occurs, excepting Western Europe, in developing countries.

Clinical signs of fasciolosis in animals are always closely associated with infectious dose. In sheep, as the most common definitive host, clinical presentation is divided into 4 types: Acute I, Acute II, Subacute and Chronic Fasciolosis.

In blood, anemia, hypoalbuminemia, and eosinophilia may be observed in all types of Fasciolosis. Economical effect of fasciolosis in sheep consists in sudden deaths of animals as well as in reduction of weight gain and wool production. In goats and cattle, the clinical manifestation is similar to sheep. However, acquired resistance to *F. hepatica* infection is well-known in adult cattle. Calves are susceptible to disease. In the clinical case the disease is similar to sheep. Importance of cattle fasciolosis consist

in economic losses caused by condemnation of livers at slaughter and production losses.

TASK 1. Read the text and complete the sentences. Choose the correct answer: *a*, *b*, *c* or *d*:

1. Fasciolosis is a ……. disease caused by trematodes Fasciola hepatica and Fasciola gigantica.

a genetic b helminth c cancer d allergic

2. The host range of fasciolosis consists of not only the ……. mammals but also humans.

a omnivorous b carnivorous c herbivorous d insectivorous

3. The bile ducts of the liver or ……. are the exact location of adult flukes.

a gallbladder b kidney c stomach d bronchi

4. Animal fasciolosis is distributed in countries with high ……. production.

a horse b geese and cattle c ducks and hens d cattle and sheep

5. The clinical presentation of fasciolosis is divided into ……. types.

a two b three c four d six

TASK 2. Read the statements and write whether they are True (T) or False (F):

1. Worldwide losses in animal productivity due to fasciolosis were estimated at over $3.2 billion a month. T/F
2. Freshwater snail is the intermediate (or the secondary) host of the parasite. T/F
3. Fasciolosis is an emerging human disease. T/F
4. Human fasciolosis occurs, excepting Western Europe, in developed countries. T/F
5. In goats and cattle the clinical manifestation of fasciolosis is opposite to sheep. T/F

TASK 3. Complete the sentences with the help of the words from the box:

trematodes resistance to life cycle susceptible to infectious

1. The ……. includes freshwater snails as an intermediate host of the parasite.
2. Fasciolosis as the helminth disease is caused by two …….: *Fasciola hepatica* and *Fasciola gigantica*.
3. Clinical signs of fasciolosis in animals are closely associated with ……. dose.
4. Acquired ……. *Fasciola hepatica* infection is well-known in adult cattle.
5. Calves are also ……. fasciolosis.

TASK 4. Read the definitions and find the words in the text:

1**.** Something that is … can be passed from one animal/person to another, especially through the air (adjective) : i_ _ _ _ _ _ _ _ _

2. These mammals eat only plant material (adjective): h_ _ _ _ _ _ _ _ _ _

3. Oval or worm-like animals, usually no more than a few centimetres in length; synonym to the word “fluke” (noun) : t_ _ _ _ _ _ _ _

4. The killing of animals, usually that of domestic livestock, for food (noun) : s_ _ _ _ _ _ _ _

5. An illness or disease which quickly becomes very serious (≠ chronic) (adjective) : a_ _ _ _

Topic 2. ANTHRAX

Anthrax is an acute disease caused by the bacterium *Bacillus anthracis*. Most forms of the disease are lethal, and it affects both humans and other animals. There are effective vaccines against anthrax, and some forms of the disease respond well to antibiotic treatment.

Like many other members of the genus Bacillus, *Bacillus anthracis* can form dormant endospores that are able to survive in harsh conditions for decades or even centuries. Such spores can be found on all continents, even Antarctica. When spores are inhaled, ingested, or come into contact with a skin lesion on a host they may reactivate and multiply rapidly.

Anthrax commonly infects wild and domesticated herbivorous mammals that ingest or inhale the spores while grazing. Ingestion is thought to be the most common route by which herbivores contract anthrax. Carnivores living in the same environment may become infected by consuming infected animals. Diseased animals can spread anthrax to humans, either by direct contact (e.g., inoculation of infected blood to broken skin) or by consumption of a diseased animal's flesh.

Anthrax spores can be produced in vitro and used as a biological weapon. Anthrax does not spread directly from one infected animal or person to another; it is spread by spores. These spores can be transported by clothing or shoes. The body of an animal that had active anthrax at the time of death can also be a source of anthrax spores.

Until the twentieth century, anthrax killed hundreds and thousands of animals and people each year in Australia, Asia, Africa, North America, and Europe, particularly in the concentration camps during WWII. French scientist Louis Pasteur developed the first effective vaccine for anthrax in 1881.

TASK 1. Read the text and complete the sentences. Choose the correct answer: *a, b, c* or *d*:

1. Anthrax is an acute disease which is caused by …….

a bacteria Bacillus anthracis b bacterium Brucella
c bacterium Bacillus anthracis d trematode Fasciola hepatica

2. Anthrax as a disease responds well to …….

a homeopathy b acupuncture c blood transfusion
d antibiotic treatment

3. Anthrax spores can be used as a ……. weapon.

a biological b chemical c nuclear d radiological

4. The first effective vaccine for anthrax was developed by scientist ……..

a Dr. David Bruce b Louis Pasteur c Bernhard Bang d Dr. Robert Koch

5. The vaccine was discovered by French scientist in ……..

a 1881 b 1795 c 1915 d 1671

TASK 2. Read the statements and write whether they are True (T) or False (F):

1. Most forms of anthrax can be easily cured. T/F
2. *Bacillus anthracis* can form dormant endospores which are able to survive in harsh conditions only for 1 month. T/F
3. Spores can multiply if they are inhaled, ingested, or come in contact with a skin lesion on a host. T/F
4. Anthrax cannot infect carnivores. T/F
5. Anthrax spreads directly from one infected animal or person to another. T/F

TASK 3. Complete the sentences with the help of the words from the box:

vaccine route affects in vitro source of

1. Anthrax is an acute disease which ……. both animals and people.
2. Ingestion is the most common ……. by which herbivores contract anthrax.
3. Anthrax spores can be produced ……. and used as a biological weapon.
4. The body of the dead animal that had active anthrax can also be a ……. anthrax spores.
5. French scientist developed the first effective ……. for anthrax in the 19th century.

TASK 4. Find and correct one mistake in each sentence:

1. Anthrax is a chronic disease.
2. Most forms of anthrax are lethalic.
3. *Bacillus anthracis* can form active endospores.

3. When spores are exhaled, they may reactivate and multiply rapidly.

4. Anthrax commonly infects wild and domesticated omnivorous mammals.

5. Until the 19th century, anthrax killed hundreds and thousands of animals and people all around the world.

TASK 5. Read the definitions and find the words in the text:

1. Causing death, or able to cause death; synonym to the word "fatal" (adjective) : l_ _ _ _ _

2. A substance which contains a weak form of the bacteria or virus that causes a disease and is used to protect people from that disease (noun) : v_ _ _ _ _ _

3. Not active or not growing at the present time but able to be active later; is used in connection with endospores (adjective): d_ _ _ _ _ _

4. The air, water and land on Earth (noun): e_ _ _ _ _ _ _ _ _ _

5. An animal or plant on which a smaller organism is living as a parasite (noun) : h_ _ _

Topic 3. TUBERCULOSIS

TASK 1. Pre-reading activity 1. True or False:

1. Cattle are not susceptible to tuberculosis. T/F
2. Tuberculosis can be concentrated only in lungs. T/F
3. Tuberculosis occurs in every country of the world. T/F
4. Tuberculosis is more probable when animals are housed outdoors. T/F
5. Infected animals should not be isolated by a fence. T/F
6. Infected animals lose their productive efficiency. T/F

7. Animals can't be infected by drinking from stagnant water wholes. T/F
8. Cattle and goats are less susceptible to tuberculosis than horses and sheep. T/F
9. *Mycobacterium bovis* is easily destroyed by moist. T/F
10. Tuberculous cattle may infect swine. T/F
11. Hogs are not susceptible to the human type of tuberculosis. T/F
12. Tuberculous infection can't pass back to men. T/F
13. Avian tuberculosis usually localizes in the digestive tube of swine. T/F
14. Milk must be boiled before feeding it to swine. T/F
15. You needn't cook food before giving it to swine. T/F

TASK 2. Pre-reading activity 2:
What sentences contain modal verbs?
What are negative forms of verbs can, may, should, must, need?
Make up several questions with modal verbs.

TASK 3. You will read a text about tuberculosis. Before you read, answer and discuss the following questions:

- What do you know about tuberculosis?
- What kind of disease is it?
- Who discovered it? When did it happen?

WHAT IS TUBERCULOSIS?

Tuberculosis is an infectious disease that mainly affects the lungs but can also involve other organs. Tuberculosis is often called ***TB*** and was called ***consumption*** in the past. This disease once ranked among the most common causes of death in the world. Today, improved methods of prevention, detection, diagnosis, and treatment have greatly reduced both the number of people who get the disease and the number of people who die from it. However, tuberculosis remains a major concern in

developing countries where these improved methods are not widely available.

Tuberculosis strikes people of all ages but is more common among the elderly. Other people at greater risk of getting tuberculosis include those with weakened immune systems, such as AIDS patients, and people suffering from malnutrition. The disease can also afflict animals, especially such livestock as cattle, hogs, and poultry. The disease is caused by rod-shaped bacteria called ***tubercle bacilli***. The German physician Robert Koch discovered tubercle bacilli in 1882. Tubercle bacilli belong to a ***genus*** of bacteria called ***Mycobacterium***. They are ***aerobes*** – that is, they must have oxygen to live.

TASK 4. Read the text about tuberculosis and answer the questions 1-5:

1) Which organs does the tuberculosis mainly affect?
   a) heart
   b) lungs
   c) liver

2) Why was tuberculosis once so infamous worldwide?
   a) it was one of the easiest diseases to treat
   b) it was one of the rarest diseases
   c) it was among the most common deadly diseases

3) Why is tuberculosis nowadays a big problem in the developing countries?
   a) the pollution level is very high there
   b) people living there have very weak immune system
   c) improved methods of treatment are not widespread there yet

4) Who is especially liable to tuberculosis?
   a) cattle, hogs and poultry
   b) children and teenagers

c) elderly people and those with weakened immune system

5) What kind of bacteria are aerobes?
a) they are not able to live without oxygen
b) they can only afflict animals
c) AIDS patients can transmit them

TASK 5. Vocabulary practice:

a. Match the words/phrases from the text to their meaning;

b. Choose 4 words and make up sentences using them.

1 infectious	**a** to happen suddenly and have a harmful effect
2 concern	**b** be badly affected by
3 widely	**c** something that is important
4 strike	**d** can be passed easily from one person to another
5 weakened	**e** by a lot of people or in many places
6 suffer from	**f** to affect somebody in a harmful way
7 afflict	**g** less strong or powerful

TASK 6. Text Analysis:

What do the phrases in bold mean?
What language do they come from?
How are they pronounced?
Provide the Ukrainian translation to them.

1 … is often called **TB** and was called **consumption**…
2 … rod-shaped bacteria called **tubercle bacilli.**
3 Tubercle bacilli belong to a **genus** of bacteria called **Mycobacterium**.
4 They are **aerobes**.

TASK 7. You will read a text about tuberculosis and its influence on the body. Before you read, answer the following questions:

- Is tuberculosis infectious?
- Do you know how a person can become infected with tuberculosis?
- Do you know the way tuberculosis gets into the body?

TASK 8. Listen to the biography of Robert Koch and re-tell it:

ROBERT KOCH

Robert Koch was born in Clausthal, Hanover, Germany, on 11 December 1843, to Hermann Koch and Mathilde Julie Henriette Biewand. Koch excelled in academics from an early age. Before entering school in 1848, he had taught himself how to read and write.

He graduated from high school in 1862, having excelled in science and maths. At the age of 19, Koch entered the University of Göttingen, studying natural science. However, after two semesters, Koch decided to change his area of study to medicine, as he aspired to be a physician. During his fifth semester of medical school, Jacob Henle, an anatomist who had published a theory of contagion in 1840, asked him to participate in his research project on uterine nerve structure. In his sixth semester, Koch began to conduct research at the Physiological Institute, where he studied succinic acid secretion. This would eventually form the basis of his dissertation. In January 1866, Koch graduated from medical school, earning honors of the highest distinction.

In July 1867, following his graduation from medical school, Koch married Emma Adolfine Josephine Fraatz, and the two had a daughter, Gertrude, in 1868. After his graduation in 1866, he worked as a surgeon in the Franco-Prussian War, and following his service, worked as a physician in Wollstein (now

Wolsztyn, Poland). Koch's marriage with Emma Fraatz ended in 1893, and later that same year, he married actress Hedwig Freiberg. From 1885 to 1890, he served as an administrator and professor at Berlin University.

Koch suffered a heart attack on 9 April 1910, and never made a complete recovery. On 27 May, only three days after giving a lecture on his tuberculosis research at the Berlin Academy of Sciences, Robert Koch died in Baden-Baden at the age of 66. Following his death, the Institute named its establishment after him in his honor.

HOW TUBERCULOSIS AFFECTS THE BODY

In most cases, a person becomes infected with tubercle bacilli by inhaling tiny droplets of moisture that contain ***Mycobacterium tuberculosis*** bacteria. These droplets form when a person with tuberculosis coughs or sneezes. Infection also can result from eating food contaminated with bacteria or from drinking milk from cattle infected with ***Mycobacterium bovis*** bacteria. Such infection rarely occurs in developed countries, where milk is pasteurized and animals are routinely tested for disease.

The body expels many inhaled tubercle bacilli before they can do harm. Some bacilli settle into the layer of mucus that lines most of the respiratory system, including the nasal passages and the ***tracheobronchial tree*****.** The tracheobronchial tree is the branching system of tubes that brings air to and from tiny air sacs called ***alveoli*** in the lungs. It consists of the ***trachea*** (windpipe), two ***bronchi***, and hundreds of thousands of smaller airways called ***bronchioles*****.** It is lined with cells that can move the layer of mucus covering the upward. Bacilli trapped in the mucus layer are moved up the airways toward the throat, mouth, and nose. The bacilli may then be sneezed, spat, coughed, or blown out. They also may be swallowed and pass harmlessly through the digestive tract.

TASK 9. Read the text and answer the questions 1-4:

1) How does a person become infected with tubercle bacilli?
   a) by eating junk food
   b) by exhaling droplets of moisture that contain this bacteria
   c) by breathing in droplets of moisture that contain this bacteria
2) How do the droplets containing tuberculosis bacteria form?
   a) when an infected person coughs or sneezes
   b) when an infected person talks
   c) when an infected person eats contaminated food
3) Why does this infection occur rarely in developed countries?
   a) because both people and animals are vaccinated against tuberculosis
   b) because people do not drink milk from cattle
   c) because animals, which can also be infected with tubercle bacteria, are systematically examined
4) What is the function of tracheobronchial tree?
   a) it circulates the blood through the body
   b) it transports air to and from alveoli
   c) it help to lower the level of blood sugar

TASK 10. Vocabulary practice. Find the synonyms in the text to the words below:

breathe in – poisoned – happen – breathe out – comprise – absorb

TASK 11. Text analysis:

- What do the phrases in bold mean?
- Find out the appropriate way of pronunciation.
- What is the Ukrainian translation of these words?

1. … that contain ***Mycobacterium tuberculosis*** bacteria.
2. … cattle infected with ***Mycobacterium bovis*** bacteria.
3. … and the tracheobronchial tree.
4. … tiny air sacs called ***alveoli*** in the lungs.

5. It consists of the ***trachea*** (windpipe), two ***bronchi***, and hundreds of thousands of smaller airways called ***bronchioles.***

TASK 12. You will read a text about the methods that are used to diagnose tuberculosis. Before reading the text, tell what you know about such methods as:

- Skin Test
- Chest X rays
- Laboratory Test.

DIAGNOSIS OF TUBERCULOSIS

Physicians use several methods to detect tuberculosis. The chief methods are skin tests, chest X rays, and laboratory tests.

Skin tests can determine if a person has been infected with tubercle bacilli in the past. However, such tests do not tell the physician whether the active disease is present. All types of skin tests are based on specific allergic reactions to the tubercle bacilli. The body develops the allergy to the bacilli within a few weeks after the primary infection.

Chest X rays may reveal tubercles or other signs of tuberculosis in the lungs. Chest X-rays are usually done after a skin test has indicated a previous infection. However, chest X-rays are done for other reasons sometimes reveal the presence of tubercles.

Laboratory tests are normally the final step in the diagnosis of tuberculosis. A physician examines the patient's sputum under a microscope to determine if bacilli are present. If bacilli are present, they are cultured (grown in laboratory dishes or test tubes). Culturing determines if they are M. tuberculosis or other bacilli. It also helps find out which drugs will be most effective against the bacteria.

TASK 12. Read the text and then match the questions below to each of three methods:
Skin test – **A**
Chest X-rays – **B**
Laboratory test - **C**

Which method

- is usually the last one in the process of diagnosing tuberculosis?
- cultures bacilli in laboratory?
- may show the signs of tuberculosis in the lungs?
- can tell whether a person has ever been infected with tubercle bacilli?
- may be done for another purpose and at the same time reveal the tubercle bacilli?
- helps to prescribe the most effective treatment?
- does not detect whether disease is currently present?
- deals with the allergic reactions of the skin to tubercle bacilli?

TASK 13. Vocabulary practice. Match the verbs with their prepositions and explain the meaning of these words. Choose three words and make up sentences using them:

infected	out
based	to
reaction	against
allergy	for
reason	with
find	to
effective	on

TASK 14. Read the text and write short answers to the questions below:

1) What are the main methods used to detect tuberculosis?
2) What all the skin tests are based on?
3) Where do chest X-rays help to reveal the signs of tuberculosis?
4) What does a physician examines under microscope to find out whether bacilli are present?
5) Why are bacilli grown in the laboratory?

TASK 15. You will read a text about the treatment of tuberculosis. Before reading, answer the following questions:

- Do you know how tuberculosis can be treated?
- Which medications are effective against tuberculosis?
- Are there any rules the patients have to stick to while receiving treatment?

TREATMENT OF TUBERCULOSIS

The first effective treatment for tuberculosis was provided by health resorts called sanitariums. Sanitariums were developed during the later 1800's by physicians in Europe and the United States. At a sanitarium patients received bed rest, fresh air, and mild exercise. They also were isolated from the general public and thus kept from infecting other people. Sanitarium treatment helped many tuberculosis patients overcome the disease. However, most of them had to spend months or even years in a sanitarium before they recovered.

Today almost all tuberculosis patients can be treated successfully with drugs. Isoniazid (INH) is one of the most effective antituberculosis drugs. Others include rifampin, ethambutol, streptomycin, and pyrazinamide. These drugs stop the bacteria from multiplying in the body. They also allow the body's natural defenses to work against the disease. Doctors frequently prescribe two or more drugs at a time because tubercle bacilli may become resistant to only one medication.

Surgery was sometimes used in sanitariums to collapse a disease lung, both to rest the lung and to decrease its oxygen level to discourage the growth of tubercle bacilli. Doctors still perform surgery in some rare cases, but they remove the afflicted part of tubercular lung rather than collapse the lung. The remaining part continues to function normally.

TASK 16. Read the text carefully and then decide which of the sentences are true (T), which are false (F), according to the text:
1. Sanitariums provided first effective treatment for tuberculosis in the 18th century in Europe. **T/F**
2. Patients in sanitariums were treated with different types of medications. **T/F**
3. Patients in sanitariums usually recovered after 2 weeks. **T/F**
4. Nowadays there are many effective antituberculosis drugs. **T/F**
5. Patients usually have to take two or more drugs simultaneously. **T/F**
6. Surgeries are done very often nowadays. **T/F**

TASK 17. Vocabulary practice:
Find the words or phrases from the text that match the definitions below:
a not affected by something
b to get well again after being ill
c to make something available for the others to use
d with much contact with other people
e affected in a harmful way
f to succeed in dealing with something
g to tell somebody to take a particular medicine

TASK 18. Read the text and write short answers to the questions below:
1) When and where was the first effective medical treatment for tuberculosis provided?

2) How were the patients treated in sanitariums?
3) How are tuberculosis patients treated today?
4) How do the drugs against tuberculosis work?
5) What is the difference between the surgeries performed in the past and in the present?

DOMESTIC ANIMALS

Topic 4. CATTLE

Cattle are among the most important farm animals. We eat the meat of cattle, and we drink the milk of cattle; we use it to make butter, cheese, and ice cream. The hides of cattle provide leather for our shoes. Cattle also furnish materials for medicines, soap, and glue. In some countries, cattle do work. They pull plows, carts, and wagons.

All cattle have large bodies, long tails, and cloven hooves. Some cattle have horns. Cattle chew a cud. Beef cattle are raised for their meat. Dairy cattle are raised for their milk. Dual-purpose cattle provide both meat and milk.

People on every continent raise cattle. Cattle live in cold lands such as Iceland, and in hot countries such as India. Hindus in India believe cattle are holy animals. They do not kill cattle or eat their meat.

People sometimes give cattle names. But they rarely learn to respond to their names as horses and dogs do.

A cow is a female and a bull is a male. Steers are castrated males. A young cow is called a heifer until she gives birth to a calf. A calf is a young heifer or bull. A group of cattle is known as a herd.

Notes
for our shoes – для нашого взуття
cloven hooves – роздвоєні ратиці
chew a cud – жують жуйку

dual-purpose cattle – м’ясо-молочна худоба
Hindus in India – індуси в Індії
holy animals – священні тварини

Topic 5. THE BODY OF CATTLE

Cattle have muscular bodies. Most cattle reach a height of about 1.5 meters. Cows weigh from about 410 to 910 kilograms. Bulls may weigh 910 kilograms or more.

Many cattle have black, white, or red coats of hair. Others have coats that are various shades or combinations of shades of these colors. Most cattle have a coat of short hair that grows thicker and somewhat longer during the winter. A few breeds have long hair. Cattle also have a long tail, which they use to shoo away insects.

Adult cattle have 32 teeth – 8 in the front of the lower jaw and 12 each in the back of the upper and lower jaws. A cow cannot bite off grass because it does not have cutting teeth in the front of its upper jaw. It must tear the grass by moving its head. Cattle chew their cud with their molars.

The horns of cattle are hollow and have no branches, as do those of some other horned animals such as deer. Cattle born without horns are called polled cattle. Cattle owners have increased the number of polled animals through selective breeding. They dehorn (remove the horns of) most horned cattle to keep them from injuring other cattle or people. The horns are removed with chemicals, a hot iron, or a cutting tool. In most cases, dehorning occurs when a calf is less than 3 weeks old.

Cows have a suspended organ called an udder, which holds their milk. The udder hangs from the cow’s body between and in front of the hind legs. The udder has four sections that hold milk. Today, farmers rarely milk their cows by hand. They use electrically operated milking machines which use suction to draw the milk into a container.

Notes
coats of hair – волосяне вкриття
are various shades – є різними відтінками
to shoo away insects – щоб відганяти комах
by moving its head – повертаючи свою голову
which holds milk – у якому міститься молоко

TASK 1. Choose the appropriate answer:
1. The horns of cattle are … .
   A. Hollow B. Full
2. The udder has … sections that hold milk.
   A. Five B. Four C. Three D. Two
3. Adult cattle have … teeth.
   A. 33 B. 32 C. 31
4. The cow must tear the grass by moving its … .
   A. Tail B. Head C. Neck

TASK 2. Correct the mistakes in the words in bold (the Present Simple Tense):
1. Cattle **has** muscular bodies.
2. A cow **do not** have cutting teeth in the front of its upper jaw.
3. The horns **is** hollow and have no branches.
4. The udder **hang** from the cow's body.

TASK 3. Put in these words: long, polled, udder, muscular:
1. Cattle have … bodies.
2. A few breeds have… hair.
3. Cattle born without horns are called… cattle.
4. Cows have a suspended organ called an … .

TASK 4. Choose the correct explanation:

Udder	It is used to shoo away insects

Horns	A suspended organ which holds cow's milk
Polled cattle	They are hollow and have no branches
Tail	Cattle born without horns

TASK 5. Translate the sentences:

1. Cattle have muscular bodies.
2. A few breeds have long hair.
3. Cattle chew their cud with their molars.
4. The udder has four sections that hold milk.

Topic 6. FEEDING DAIRY COWS

A cow's food consists of concentrates and roughage. The concentrates are foods in which the nutritive energy is high in proportion to their weight and bulk, and they are from 75 to 100 per cent digestible. In roughages, the nutritive value is lower in proportion to weight, the digestibility being from 30 to 75 per cent.

The concentrates consist of grains and highly digestible materials produced from grains, while roughages are whole plants, with exception of the roots. Pasture and silage are also usually included under the head of roughage. In numerous experiments with cattle, the nutritive properties of grain and hay have been studied by feeding each kind of food separately for long periods. Cattle cannot be kept alive more than a year or so on grain alone. High-producing cow, however, cannot be kept anywhere near their maximum milk production on hay alone, because they are not able to eat and digest the enormous bulk of this kind of food which would be necessary to supply the nutritive energy required for heavy milk production.

In order to keep high-producing cows in good health and obtain maximum milk production, one should feed them both hay and grain – the hay to provide some nutritive energy, but

particularly certain nutritive essentials necessary to keep animals in good health; the grain – to provide a large amount of nutritive energy in such concentrated form that the cows can consume and digest enough of it for heavy milk production.

TASK 1. Answer the questions:

1. What does a cow's food consist of?
2. What are the concentrates?
3. What do the concentrates consist of?
4. What are roughages?
5. What has been studied in numerous experiments with cattle?
6. How should high-producing cows be fed?

TASK 2. Put the words in the correct order:

1. cannot/cattle/grain/kept/be/alone/on
2. nutritive/roughages/lower/value/is/the/of
3. should/one/feed/grain/both/hay/and/cattle
4. necessary/keep/animals/to/it/health/is/good/in
5. grain/cows/digest/able/not/eat/are/to/and/enormous/ bulk/the/of/

TASK 3. Put down all the adjectives from the text.

TASK 4. Write the degrees of comparison:

nutritive -
high –
digestible –
low –
numerous –
necessary –
good –
bad –
large –

Topic 7. BEEF CATTLE

Most beef cattle graze on large areas of open grassland that are unsuitable for growing crops. This method of feeding enables farmers to raise stock without using large numbers of workers and expensive feeds and equipment. Beef cattle have been bred to produce meat under such farming conditions.

Beef cattle have also been bred to mature earlier than dairy cattle and to produce less milk than dairy cattle. However, steers and heifers from dairy breeds also provide excellent beef and contribute to the supply of beef.

Meat from calves that are less than three months old is called veal. Meat from older animals is called beef. Butchers classify beef into various cuts, such as steaks and roasts. People also eat the brains, heart, kidneys, liver, pancreas and thymus, tongue, and tripe (stomach lining) of cattle.

There are six chief breeds of beef cattle. They are the Aberdeen Angus, Brahman, Charolais, Hereford, Polled Hereford, and Simmental.

Aberdeen-Angus cattle were developed in the Highlands of Northern Scotland. Brahman cattle thrive in the hot, humid climate. They were developed by crossing various kinds of Zebus, the humped cattle of India. Charolais cattle are a very large, white breed that originated in France. Hereford cattle have red bodies and white faces. They are often called whitefaces. The Hereford breed was developed in the county of Hereford in England. Polled Hereford cattle look much like Herefords but have no horns. Simmental originated in Switzerland and is found in many parts of Europe, where it is raised for beef, milk, and draft (pulling loads). Shorthorns and Polled Shorthorns are also used for beef production.

Notes
under such conditions – за таких умов
and contribute to – і сприяють

by crossing – у результаті схрещування
the humped cattle – горбата худоба
originated in – походить з
look much like – дуже подібна на

TASK 1. Answer the questions:

1. How many chief breeds of beef cattle are there?
2. Where do most beef cattle graze?
3. Do steers and heifers from dairy breeds provide excellent beef?
4. How do the butchers classify beef?

TASK 2. Is it True or False?

1. Meat from calves that are less than three months old is called veal.
2. Meat from older animals is called veal.
3. There are five chief breeds of beef cattle.
4. Most beef cattle graze on large areas of open grassland.
5. Aberdeen-Angus cattle were developed in France.

TASK 3. Choose the correct explanation:

Veal	They are often called whitefaces
Beef	They thrive in the hot, humid climate
Brahman cattle	Meat from calves that are less than 3 month old
Hereford cattle	Meat from older animals

TASK 4. Choose the appropriate answer:

1. … cattle were developed in the Highland of Northern Scotland.

A. Aberdeen-Angus B. Brahman C. Charolais D. Hereford

2. … cattle have red bodies and white faces.

A. Aberdeen-Angus B. Brahman C. Charolais D. Hereford

3. … cattle thrive in the hot, humid climate.
A. Aberdeen-Angus B. Brahman C. Charolais D. Hereford
4. … cattle are a very large, white breed.
A. Aberdeen-Angus B. Brahman C. Charolais D. Hereford

Topic 8. DIGESTION OF FOOD

Cattle have a stomach with four compartments. This kind of stomach enables them to bring swallowed food back into their mouth to be chewed and swallowed again. Animals with such stomachs are called ruminants. The compartments are the rumen, the reticulum, the omasum, and the abomasum. The stomach serves as a storage place for food, so that a large mass of food may be eaten at one time.

When cattle eat, they first chew their food only enough to swallow it. The food goes down the esophagus (food pipe) into the rumen. The rumen and the reticulum form a large storage area. In that area, the food is mixed and softened. At the same time, microorganisms that grow in the rumen break down complex carbohydrates into simple carbohydrates. Such simple carbohydrates as sugars and starches provide the major source of energy for the animal. The microorganisms also build protein and many B-complex vitamins.

After the solid food has been mixed and softened, stomach muscles send it back up into the animal's mouth. The animal rechews this cud and swallows it. The swallowed cud goes back to the rumen and reticulum, where it undergoes further chemical breakdown. The food and fluids then move down into the omasum, where much of the water is absorbed. The food then enters the abomasum. The walls of the abomasum produce digestive juices. These juices further digest the food. The abomasum is called the true stomach, because it functions in much the same way as the stomach of creatures that are not ruminants. From the stomach the food goes to the intestine, where digestion and absorption are completed.

Notes
to be chewed again – щоб знову пережовувати
at one time – за один раз
they first chew – вона спочатку жує
only enough to – тільки для того, щоб
rechews this cud – ще раз пережовує цю жуйку
the true stomach – власне шлунок
in much the same way as – майже так само, як

TASK 1. Choose the appropriate answer:
1. Cattle have a stomach with … compartments.
A. four B. three C. five
2. The food goes down the esophagus into the… .
A. rumen B. reticulum C. omasum
3. The abomasum is called the … stomach.
A. true B. false C. wrong
4. From the stomach the food goes to the … , where digestion and absorption are completed.
A. omasum B. intestine C. rumen

TASK 2. Order the sentences:
1. Cattle chew their food only enough to swallow it.
2. Stomach muscles send the food back up into the animal's mouth.
3. The food goes to the intestine, where digestion and absorption are completed.
4. The food goes down the esophagus into the rumen.
5. The food enters the abomasums.

TASK 3. Translate the sentences:
1. The animal rechews the cud and swallows it.
2. The juices digest the food.
3. The stomach serves as a storage place for food.
4. Cattle have a stomach with four compartments.

TASK 4. Choose the correct explanation:

An esophagus	They break down complex carbohydrates into simple
Carbohydrates	A food pipe
Microorganisms	They provide the major source of energy for the animal
Juices	They digest the food

Topic 9. BEE

Bee produce honey, which people use as food; and wax, which is used in such products as candles, and cosmetics. There are about 20,000 species of bees. Only the kinds known as honey bees make honey and wax in large amounts to be used by people. Flowers provide food for bees. The bees collect little grains of pollen and a sweet liquid called nectar from the blossoms they visit. They make honey from the nectar, and use both honey and pollen as food. During their flights, bees spread pollen from one flower to another, thus pollinating the plants they visit. This enables the plants to reproduce.

Like most insects, bees have three pairs of legs and four wings. They also have a special stomach, called a honey stomach, in which they carry nectar. All female bees have a sting, which they use for self-defense.

A typical honey bee colony is made up of one queen, tens of thousands of workers, and a few hundred drones. The queen is the female honey bee that lays eggs. The workers are the unmated female offspring of the queen. The drones are the male.

Notes
known as honey bees – відомі як медоносні бджоли
to be used by people – щоб їх використовували люди

they visit – котрі вони відвідують
from one … to another – від одної до іншої
thus pollinating – і таким чином запилюють
like most insects – подібно, як більшість комах
for self-defense – для самозахисту

Topic 10. THE HONEY BEE COLONY

As you know, a honey bee colony is made up of one queen, tens of thousands of workers, and a few hundred drones. Honey bees live in hives. The hive is a storage space, such as a hollow tree or a box, which contains a honeycomb. The honeycomb is a mass of six-sided compartments called cells. Worker bees build the honeycomb of wax produced by their bodies. They also collect a sticky substance called propolis, or bee glue, from certain kinds of trees. They use it to repair cracks in the hive.

The honeycomb is used to raise young bees and to store food. The queen bee lays one egg in each cell in part of the honeycomb. In general, the cells containing the eggs and developing bees are in the center of the hive. There the bees store pollen and honey. The same cells may be used for different purposes. During spring and summer, many cells are used to raise young bees. In autumn, brood production stops, and more cells are available for storing honey through the winter.

The content of the hive is a good food for many animals, including bees from other colonies. Several workers always guard the entrance to the hive. The bees in each hive have their own special odor. The guard bees can detect bees from other hives by their smell. The guard bees attack strangers, whether they are bees from outside the colony, bears, or human beings. When the threat to the hive is great, such as a bear that jars the hive, the guard bees give off a special pheromone (chemical substance). The scent of this pheromone, which smells like

bananas, alerts other bees in the hive to come to the aid of the guards.

Notes
six-sided compartments – шестигранні чарунки
in part – у частині
in general – у загальному
brood production – виведення розплоду
to come to the aid – щоб прийти на допомогу

Topic 11. LIFE OF THE HONEY BEE

From egg to adult. Bees develop from eggs laid by the queen. During mating, the drone places semen inside the queen's body. The semen contains sperm (male sex cells). The queen stores the sperm in a sac in her abdomen. If the queen releases sperm onto an egg, the egg hatches into a worker. If she does not release sperm, it develops into a drone.

A bee starts to develop as soon as the queen lays the egg. After three days, a tiny larva crawls out of the egg and eats larval food, called royal jelly. After five days the larva becomes a pupa. In 21 days the pupa develops into an adult.

Growth of the queen. A colony needs a new queen if the old queen disappears or becomes feeble. A new queen is also needed if the old queen and part of the colony decide to leave and build a new hive.

In some unknown way, the workers select a few larvae to become queens. They feed these larvae only royal jelly. Other workers build special cells for the queens to grow in.

Mating flight. The old queen may leave the colony, or she may fight with the young queen. After the young queen has killed her rival, she flies from the hive. She may mate with one or sometimes several drones. The young queen then returns to the hive and begins to lay eggs two or three days later. A queen

may live five years and produce up to a million eggs during her lifetime.

Swarming. When a colony becomes overcrowded, many of the workers and the old queen leave the hive as a swarm. They form a new colony after the workers called the scouts have found a location for it. “Streaker” bees who know where the hive is lead the way. The queen follows.

Notes
eggs laid by the queen – відкладених маткою
as soon as – як тільки
to grow in – щоб їх вивести
in some unknown way – якимсь невідомим чином
becomes overcrowded – переповнена

Topic 12. PARROT

Parrots are birds of the order Psittaciformes. There are roughly 372 species in 86 genera and they are found in most tropical and subtropical regions. The greatest diversity of parrots is found in South America and Australasia.

Parrots are intelligent birds. They have relatively large brains, they can learn, and they can use simple tools. Because some species have the ability to make sounds like human voices and have plumages with bright colors, many species are raised as pets. This includes some endangered and protected species.

Parrots have a heavy, in relation to their size, and compact body with a large head and a short neck. Their beaks are short, strong and curved. The two parts of the beak are very strong and used to break fruits and seeds. The tongue is large and strong.

They have strong legs, and clawed zygodactyl feet (with two toes facing forward and two toes facing back) that are very useful to climb up trees. Many parrots are vividly coloured, and some are multi-coloured. The plumage of cockatoos ranges from

mostly white to mostly black, with a mobile crest of feathers on the tops of their heads. Most parrots exhibit little or no sexual dimorphism.

They form the most variably sized bird order in terms of length. The smallest of the parrots is the pigmy parrot (*Micropsitta pusio*) with and adult weight of 11.5 g and a length of 8.6 cm. With a length (from the top of its head to the tip of its long pointed tail) of about 95 cm, the Hyacinth Macaw (*Anodorhynchus hyacinthinus*) is longer than any other species of parrot, although half that length is tail.

Notes
A parrot – папуга
Diversity – різноманітність
Tools – інструменти
Human voices – людські голоси
Plumages – оперення
Endangered species – види під загрозою вимирання
Curved beaks – вигнуті дзьоби
Clawed feet – лапи з кігтями

Topic 13. DOG

A new study shows that dogs really can smell cancer. This study was done in Germany. It says that dogs can detect certain odors of organic compounds. These compounds are associated with lung cancer. Dogs have a keen sense of smell and can be used for early diagnosis of the disease. Three kinds of dog breeds took part in the experiment: German Shepherd, Austrian Shepherd, and Labrador Retriever. Different test tubes containing breath samples of 220 patients were used. Some of the patients had lung cancer, while the others were completely healthy. Dogs had to lie down in front of the tube and try to recognize the smell of the tubes, which was lung cancer. The dogs identified the infected tubes successfully.

The researchers also tested patients with chronic obstructive pulmonary disease, a disease similar to lung cancer. Dogs identified it very well too, though it is difficult to say whether they can differentiate between the two diseases. This study was published in the European Journal of Ways. The research can be a breakthrough in the field of cancer prevention. Lung cancer is a very dangerous disease that many people suffer from today. This study will help in early diagnosis.

This is one of the earliest researches in the area, says Dr. Len Lichtenfeld of the American Cancer Society. More research is needed, as it allows for a regular and healthy treatment of lung cancer.

Notes
cancer – рак
to detect odors – уловити запахи
organic compounds – органічні сполуки
to be associated with – бути пов'язаним з
a keen sense of smell – гостре відчуття запаху
samples – зразки
completely healthy – повністю здоровий
to identify successfully – розрізняти успішно
pulmonary – легеневий
to differentiate between – розрізняти
a breakthrough – прорив
cancer prevention – запобігання раку
to suffer from – страждати на

Topic 14. FISH

All fish have two main features in common. First, they are vertebrates (have a backbone) that live in water. Secondly, they breathe mainly by means of gills.

Fish differ so in shape, colour, and size that it is hard to believe they all belong to the same group of animals. For example, some fish look like rocks, and other like worms.

The smallest fish is the Trimmaton nanus, a goby, which is about 1 centimeter long. The largest fish is the whale shark, which may grow more than 12 meters long and weigh over 14 tons. It feeds on plankton and is completely harmless to most other fish and to human beings. The most dangerous fish weigh only a few pounds or kilograms.

Fish live almost anywhere there is water. They are found in the cold waters of the Arctic and in the warm waters of tropical jungles. They live in mountain streams and in underground rivers.

Fish have great importance to human beings. They provide food for millions of people. In addition, fish are important in the balance of nature. They eat plants and animals and, in turn, become food for plants and animals.

Notes

in common – спільно
by means of gills – за допомогою зябер
differ in shape – відрізняються формою
weigh 14 metric tons – важать 14 тонн
it feeds on plankton – вона живиться планктоном
a few pounds – декілька фунтів
anywhere there is – всюди, де є

Topic 15. KINDS OF FISH

Scientists have named and described about 21,700 kinds of fish. Each year, they discover new fish species.

Scientists who study fish are called ichtyologists. They divide fish into two main groups: first, jawed and secondly, jawless. Almost all fish have jaws. The only jawless species are lampreys and hagfishes. Jawed fish are further divided into two groups according to the composition of their skeletons. One

group has a skeleton composed of a elastic substance called cartilage. Sharks, rays, and chimaeras make up this group. The other group has a skeleton composed of bone. Members of this group, called bony fish, make up the largest group of fish in the world.

Bony fish. They can be divided into two main groups according to the composition of their skeletons. One group consists of modem bony fish, whose skeletons are composed largely of bone. The second group consists of primitive bony fish, whose skeletons are partly bone and partly cartilage.

Modern bony fish include about 20,860 species. They make up about 95 per cent of all known kinds of fish. Some have bony skeletons. They are called teleosts, which come from two Greek words meaning *complete* and *bone.* They include such well-known groups of fish as bass, catfish, cod, herring, minnows, perch, trout, and tuna.

Today, the various species of teleosts differ from one another in many ways. For example, many teleosts have flexible, highly efficient fins and are excellent swimmers. Sailfish and tuna can swim long distances at high speed. Certain eellike teleosts are finless and so are poor swimmers.

Primitive bony fish include about 15 species of bichirs, coelacanths, and lungfish. They are related to fish that lived many millions of years ago.

Notes

according to the composition – відповідно до будови
partly ... partly – почасти,... почасти
differ in many ways – різняться у багатьох відношеннях
and so are poor swimmers – і тому є поганими плавцями
they are related to – вони споріднені з

Topic 16. THE BODY OF FISH

In some ways, the body of fish resembles that of other vertebrates. For example, fish, like other vertebrates, have an internal skeleton, an outer skin and such internal organs as a heart, intestines, and a brain. But in a number of ways, a fish's body differs from that of other vertebrates. For example, fish have fins instead of legs and gills instead of lungs.

Shape. Most fish have a streamlined body. The blood is somewhat rounded at the front. Fish have no neck. The trunk, in turn, narrows into tail.

Skin and colour. Most fish have a fairly tough skin. It contains blood vessels, nerves, and connective tissue. It contains certain special cells. Some of these cells produce a mucus. This mucus makes fish slippery. Other special cells, called pigment cells, give fish many of their colours. Pigment cells contain red, yellow, or brownish-black pigments. These colours may combine and produce other colours, such as orange and green.

Scales. Most jawed fish have a protective covering of scales. Teleost fish have thin, bony scales that are rounded at the edge. There are two main types of teleost scales – ctenoid and cycloid.

Fins are movable structures that help a fish swim and keep its balance. A fish moves its fins by means of muscles. Except for a few finless species, all modern bony fish have rayed fins.

Skeleton. A fish's skeleton provides a framework for the head, trunk, tail and fins. The central framework for the trunk and tail is the backbone. It consists of many vertebrae, to which the ribs are attached.

Systems of the body. The internal organs of fish are grouped into respiratory, digestive, circulatory, nervous and reproductive systems.

Notes
in some ways – певним чином
in a number of ways – у багатьох відношеннях
a streamlined body – тіло обтічної форми
narrows into tail – звужується до хвоста
keep its balance – втримувати рівновагу
except for a few – окрім декількох

Topic 17. HOW FISH LIVE

When fish become adults. Every fish begins life in an egg. In the egg, the undeveloped fish, called an embryo, feeds on the yolk until ready to hatch. The fish reaches adulthood when it begins to produce sperm and eggs. Most small fish become adults within a few months after hatching. But some small fish become adults only a few minutes after hatching. Large fish require several years. The longest-lived fish are probably certain sturgeon, some of which have lived in aquariums more than 50 years.

How fish get food. Most fish are carnivores (meat-eaters). They eat shellfish, worms, and other kinds of water animals. Above all, they eat other fish. They sometimes eat their own young. They chiefly eat algae and other water plants. But most plant-eating fish probably also eat animals. Some fish five mainly on plankton. They include many kinds of flying fish and herring and the three largest fish of all - the whale shark, giant manta ray, and basking shark. Some fish are scavengers. They feed mainly on waste products and on the dead bodies of animals that sink to the bottom.

Many fish have body organs specially adopted for capturing food. They are flashing lures, long jaws, sharp teeth, electricity- producing organs, etc.

How fish swim. Most fish move by swinging the tail fin from side to side and by curving the rest of the body to the left and to the right. Fish maneuver by moving their fins. To make a

left turn, for example, a fish extends its left pectoral fin. To stop, a fish extends both of its pectoral fins. Most fast swimmers, such as swordfish and tuna, have a deeply forked tail fin and sickle-shaped pectorals.

Notes
until ready to hatch – поки не вилупиться з нього
above all – передусім
electricity-producing – що виробляють електрику
by swinging – маханням (хвостовим плавцем)
from side to side – з боку на бік
by curving – згинанням
to the left and to the right – наліво і направо
to make a left turn – щоб зробити лівий поворот
a forked tail fin – роздвоєний хвостовий плавець

ANIMAL PRODUCTS

Topic 18. MILK

Milk is the most nutritive of all foods and a favourite drink of people throughout the world. Milk has almost all the nutrients in large amounts and in such proportions that people need for growth and good health.

All female mammals produce milk to nourish their young. But when we think of milk, we generally think of the milk that comes from cows. Cows provide most of the milk used in Europe, the United States, Canada, and many other countries. In some parts of the world, however, other animals produce the main supply of milk. Goat milk is popular in some parts of Europe, Latin America, Africa, and Asia. Camels provide milk in the desert lands of Arabia, Central Asia, and northern Africa. Some South Americans drink llama milk. In Arctic regions, people get milk from reindeer. Sheep provide much of the milk

in Greece, Iran, and Turkey. Water buffalo supply milk in Egypt, India, and Pakistan.

Butter, cheese, ice cream, yogurt, and several other foods are made from milk. Milk – or one of its products – is also an ingredient in many foods, such as cakes, puddings, and sauces. Milk is also used in making industrial goods.

Notes
throughout the world – у цілому світі
female mammals – самки ссавців
their young – своїх малят
used in Europe – котре споживають у Європі
the main supply of milk – головну частку молока
in many foods – у багатьох кулінарних виробах
industrial goods – промислові товари

Topic 19. MEAT

Meat is animal flesh that is eaten as food. Meat consists largely of muscles, but fat and other animal tissues are also considered meat. The most commonly eaten meat in Europe, in the United States and Canada comes from animals that are raised for food. These animals and the meat that come from them are cattle (beef and veal), hogs (pork), sheep (lamb and mutton), and poultry (chicken, duck, and turkey). Game, which is meat from wild animals, is also frequently eaten. In addition, fish is included among meat-producing animals.

Humans are omnivorous. They eat both vegetables and meat. Meat is a food of high nutritive value because it provides energy and essential nutrients for men.

About 14 billion kilograms of red meat is eaten in the United States each year. That averages 54 kilograms of red meat per year for each person. About 34 kilograms is beef; 20 kilograms is pork; 0.9 kilogram is veal; and 0.45 kilogram is lamb and mutton. Canadians eat an average of 47 kilograms of

red meat per person each year. Only the people of Argentina, New Zealand, and Uruguay eat more red meat than North Americans.

Notes
animal flesh – тіло тварини
commonly eaten meat – м'ясо, яке часто їдять
lamb – *мут*: м'ясо молодого баранчика
game – дичина (м'ясо)
in addition – крім того
per year per each person – на рік на одну особу
eat an average of – їдять у середньому

Topic 20. HONEY

Honey is a sweet, thick fluid made by bees from flower nectar, a sugar-filled, watery liquid. Worker bees sip nectar from flower blossoms and carry it to their hives. Each bee has a pouch in her body, called a honey stomach, where the nectar is stored. In the pouch, enzymes produced by the bee mix with the nectar. An enzyme is a protein molecule that speeds up chemical reactions. The enzymes in the stomach promote inversion, a process in which the sugar in the nectar breaks down into two simple sugars, fructose and glucose.

After inversion is complete, the bees use their mouth-parts to expose the nectar to the hive's warm air. Some water in the nectar evaporates. The bees then deposit the nectar in a honeycomb, a mass of six-sided compartments called cells. In the cells, water continues to evaporate from the nectar. Nectar becomes honey when it contains less than 19 per cent water.

The color and flavor of honey depend upon the kinds of flowers that supply the nectar. Honey ranges in color from white through dark amber, and it can have a mild or strong flavor. Most honey sold in stores is mild.

The most common honey plants are alfalfa, clover, sunflower, buckwheat, and various wild flowers.

Most honey will eventually granulate because honey is made primarily of sugar and water. Bakers heat honey to delay granulation. Granulated honey may be turned back into liquid by placing a container of honey into warm water.

Honey is an excellent energy food because it contains simple sugars that the body can use quickly. Honey also contains small amounts of minerals and other materials used by the body.

Notes
enzymes produced by the bee – ферменти, що вироблені бджолою
after inversion is complete – після завершення інверсії
some water – частина води
most honey sold – більша частина меду, що продається
by placing – якщо поставити
used by the body – що потрібні для організму

TYPES OF NUTRIENTS. NUTRIENTS IN ANIMAL PRODUCTS

Topic 21. FAT

Fat is one of three main classes of nutrients that provide energy to the body. The others are carbohydrates and proteins.

Fats are found in animals and plants. They are composed of carbon, hydrogen, and oxygen.

An animal fat that is liquid at room temperature is called an oil. Fats and oils are insoluble in water, but they can be dissolved in alcohols, chloroform, ether, and gasoline. Beef tallow and some other fats are hard at room temperature. Such fats as butter, lard, and margarine, are soft at room temperature.

Fat has many important uses. It is a source of energy for animals and plants. Fat is stored under the surface of the skin of

many kinds of animals, including human beings. These fat deposits act as insulation against heat loss. Deposits of fat around the eyeballs and other organs of animals serve as cushions against injury.

Fat is an important energy source in the diet and is a more efficient fuel than carbohydrates or proteins. It can produce 9 calories of energy per gram. Fat is the body's most efficient form of stored fuel. The body can store fat that is almost dry, but large amounts of water are necessary to store carbohydrates and proteins. The body converts carbohydrates and proteins into fatty tissue for storage. When extra fuel is needed, the body draws on this stored fat.

Fats are composed of substances called fatty acids, and an alcohol called glycerol. Certain fatty acids, known as essential fatty acids, are necessary for the growth and maintenance of the body. The body cannot manufacture essential fatty acids, and so they must be included in the diet.

Notes
including human beings – а також людей
per gram – на один грам
for storage – як запас
the body draws on – організм використовує
and so – і тому

Topic 22. PROTEIN

Protein is one of the three main classes of food that provide energy to the body. The others are carbohydrates and fats. Proteins exist in every cell and are essential to plant and animal life. Plants build proteins from minerals in the air and the soil. Human beings and animals obtain protein from foods. Foods high in protein include cheese, eggs, fish, meat, and milk.

All proteins contain carbon, hydrogen, nitrogen, and oxygen. Some proteins also contain iron, phosphorus, and sulphur. Proteins are large, complex molecules made up of

smaller units called amino acids. The amino acids are linked together into long chains called polypeptides. A protein consists of one or more polypeptide chains.

Twenty common amino acids are combined into the thousands of different proteins required by the human body. Nine of them, called essential amino acids, cannot be produced by the body. Therefore, they must be supplied by various foods. The remaining amino acids, called non-essential amino acids, can be made by the body in sufficient amounts.

The best source of proteins are cheese, eggs, fish, meat, and milk. The proteins in these foods are called complete proteins because they contain adequate amounts of all the essential amino acids. Cereal grains, legumes, nuts, and vegetables also supply proteins. These proteins are called incomplete proteins because they lack adequate amounts of one or more of the essential amino acids.

Insufficient protein in the diet may cause lack of energy, stunted growth, and lowered resistance to disease.

Notes
foods high in – продукти, котрі багаті на
some proteins – деякі білки
in sufficient amounts – у достатній кількості
they lack adequate – вони не мають достатньої
incomplete proteins – неповноцінні білки
insufficient protein – неповноцінний білок

Topic 23. CARBOHYDRATES

Carbohydrates are a term applied to a group of substances which includes sugars, starches, cellulose and many other related substances. This group of compounds plays a vitally important part in the lives of plants and animals, both as structural elements and in the maintenance of financial activity. All the carbohydrates contain the same elements: carbon,

hydrogen, and oxygen. The carbohydrates as a group are comparable in importance with proteins and fats.

Cane and beet sugars, glucose, fructose, starch, and cellulose are typical representatives. The group of carbohydrates is very numerous. The properties of its representatives differ enormously from one substance to another. The sugars, such as glucose or sucrose, are easily soluble, sweet-tasting and crystalline. The starches are colloidal and paste-forming. Cellulose is completely insoluble. Yet chemical analysis shows that they have a common basis. The starches and cellulose may be degraded by different methods to the same crystalline sugar, glucose. Among the undertakings dependant on carbohydrate materials are cotton industry, certain branches of explosives, brewing, and alcohol manufacture.

Notes

starch	крохмаль
cellulose	целюлоза
related substances	споріднені речовини
vitally important	життєво важливий
maintenance	підтримка
functional activity	функціональна активність
comparable	що порівнюється
cane sugar	тростинний цукор
beet sugar	буряковий цукор
glucose	глюкоза
fructose	фруктоза
representative	представник
to differ	відрізнятися
sucrose	цукроза
sweet-tasting	солодкий на смак
crystalline	кристалічний
colloidal	колоїдний
paste-forming	що утворює

	клейстер
insoluble	нерозчинний
dependant on	залежний від
cotton	бавовна
brewing	пивоваріння
manufacture	виробництво

Topic 24. Nutrients in milk (part I)

The body needs six kinds of nutrients for energy, growth, and the replacement of worn-out tissue. These nutrients are water, carbohydrates, fats, proteins, minerals, and vitamins. Milk has been called “the most nearly perfect food” but milk is not “the perfect food” because it lacks enough iron and does not provide all vitamins.

Water is the most vital nutrient. The body needs water to carry out all its life processes. Cow’s milk is about 87 per cent water.

Carbohydrates are a major source of energy for the body. The carbohydrate content of milk is mainly lactose, or milk sugar. In addition to providing energy, lactose helps the body absorb calcium and phosphorus that are present in milk. Our bones and teeth consist largely of these minerals. Lactose also gives milk its sweet taste.

Fats, like carbohydrates, provide energy. They also supply certain fatty acids that the body must have. Fat gives milk its rich flavor. Milk fat also contains vitamins A, D, E, and K and several other substances. One of these substances, carotene, gives milk its golden tint. Milk fat appears as tiny globules. A drop of milk contains about 100 million of such globules.

Proteins help the body grow and maintain itself. They also supply energy. The proteins in milk are complete proteins – that is, they contain all the amino acids (protein parts) needed for building blood and tissue. Only egg proteins and the proteins in some meats have a higher food value than milk proteins have.

Casein makes up about four-fifths of the protein content of milk. It is found only in milk.

Notes
the most nearly perfect – майже ідеальна
it lacks enough iron – воно має досить мало заліза
gives its golden tint – надає золотистого відтінку
that is – тобто
four-fifths – чотири п'ятих
in addition – крім того

Nutrients in milk (part II)

Minerals, like proteins, help the body grow and remain healthy. Calcium and phosphorus are the most important minerals in milk. In fact, milk is the chief food source of calcium. Other minerals in milk include potassium, sodium, sulphur, smaller amounts of aluminum, copper, iodine, manganese, and zinc.

Vitamins are essential for growth, maintaining body tissue, and the prevention of such diseases as beriberi and rickets. Milk provides more vitamins – and in larger amounts – than do most other natural foods. Milk is an excellent source of vitamins A and B_2, and a good source of vitamin B_1. Vitamin A is present in milk as an emulsion and passes into the body via the lymph ducts. Other vitamins in milk include vitamins B_6, B_{12}, C, E, and K and niacin. Milk also has vitamin D, but the quantity is low. Vitamin D is important for babies and children chiefly because it prevents rickets. There is a simple and safe way of rickets prophylaxis: a baby's diet should be supplemented with vitamin D by the direct addition of vitamin D_2 or D_3 to milk. Therefore most dairies add extra vitamin D to milk.

Investigations show that milk and milk products give the following proportions to the total vitamin intake : vitamin A, 12-

14 per cent; D_1, 6-20 per cent; riboflavin, 35-70 per cent; vitamin D, 5-20 per cent.

All milk – human and animal – contains the same nutrients. The amounts differ, however. Compared with cow's milk, for example, the milk from a water buffalo has three times as much fat and 1½ times as much protein. Human milk has fewer proteins and minerals than cow's milk.

Notes
in fact – справді
via the lymph ducts – через лімфатичні протоки
should be supplemented – треба додавати
3 times as much – у три рази більше
human milk – людське молоко

Topic 25. VITAMINS IN MEAT

In muscles and organs of animals the high metabolic processes take place. This means that they must contain great amounts of important nutrients, such as essential amino acids, vitamins, minerals and fatty acids. They also store some carbohydrates, mostly glycogen, as energy source.

Food components which are in amounts higher than a few micrograms or milligrams per 100 g of food are called macronutrients. In meat, they make up more than 98 per cent of the edible portion, water included.

Some meat components are needed only in low amounts (in milligrams or micrograms) per person per day. They are vitamins. Many kinds of vitamins can be detected in all meats but the amount of a particular vitamin differs considerably depending on type of meat and whether the meat is cooked or raw. The fat-soluble vitamins A and D are nearly absent in lean meat (LM) of animals, but liver is particularly rich in vitamin A. Ascorbic acid (vitamin C) is detectable in lean meat in relatively

small amounts in comparison with fruits and vegetables. Organs, especially liver, have a high ascorbic acid content.

B-vitamins are the principal vitamins in all animal tissues except the bones. The difference in B-vitamins content between different muscles and organs is low. Again, liver is especially high in each B-vitamin. But the most striking fact is that pork contains three to ten times more vitamin B_1 (thiamin) than other meat foods. This high concentration of vitamin B_1 is reached only by some plant concentrates, such as soy flour or dry yeast.

Notes
take place – відбуваються
per 100 g of food – на 100 г їжі
water included – разом з водою
per person per day – для людини на день
in all meat – у всякому м'ясі
in comparison with – порівняно з

ANIMAL PRODUCTS AND DISEASES

Topic 26. MEAT AND DISEASE

In developed western countries, approximately 50 per cent of humans die from cardiovascular diseases (CVD). Numerous researchers determine the reasons for this in order to reduce the incidence and deaths from CVD. They assume that reducing CVD mortality and morbidity will also reduce the overall morbidity and mortality in these countries.

One thing is clear that there are connections between meat consumption and these diseases as well as with gout and cancer. We can state that the saturated fat and cholesterol of meat products lead to lipid concentrations in human serum. Therefore the elevated serum lipids are considered "risk factors" for the occurence of CVD. For this reason, it is recommended to consume only small amounts of animal fat and cholesterol,

namely 30 per cent of fat in the entire diet and no more than 300 mg of cholesterol daily. One should remember that organ meat, especially liver is rich in cholesterol. Other researchers say that reduced CVD automatically will not mean reduced overall sickness and mortality for the population.

In West and Middle Europe, most consumers demand lean meat (LM), from which all fat is removed. Animal producers follow this demand and produce young slaughter animals with an extremely high LM content. Lean meat is obtained from young slaughter animals which live no more than 200 and sometimes less than 170 days. It contains a very high amount of protein and water and very little fat. But breeding for the purpose to obtain great quantities of lean meat leads to the occurence of great numbers of stress-susceptible animals, especially swine.

Notes
one thing is clear – одне ясно
for this reason – через те
elevated serum lipids – збільшена кількість ліпідів
one should remember – треба пам'ятати
animal producers – *тут*: фермери-тваринники
leads to the occurence of – веде до появи
great numbers of – велика кількість

VETETINARY MEDICINE IN THE WORLD

Topic 27. CAREER IN VETERINARY MEDICINE IN THE USA

People who want to become veterinarians must have at least two years of pre-veterinary college work, followed by four years of study in a college of veterinary medicine. In veterinary school, students study such subjects as anatomy, physiology, microbiology, pathology, and surgery.

There are 27 colleges of veterinary medicine in the United States and 4 in Canada that are accredited by the American Veterinary Medical Association. These schools offer courses of study that lead to the degree of Doctor of Veterinary Medicine (D.V.M. or V.M.D.). After earning a degree, the graduate must comply with the license regulations of the state in which he or she plans to practice.

After receiving a license, the veterinarian may go into private practice. Veterinarians may also be employed in government service. A veterinarian interested in research may want to work with the United States Public Health Service, the United States Department of Agriculture, an agricultural experiment station, or a college. Some veterinarians teach at colleges of veterinary medicine or work in commercial laboratories that produce serums and vaccines. Other career opportunities for veterinarians include working at animal shelters, race tracks, or zoos, or serving in programs sponsored by such agencies as the Peace Corps and the World Health Organization (WHO). The American Veterinary Medical Association works to maintain the professional standards of veterinary medicine. Headquarters are in Schaumburg.

Topic 28. DR. YARBROUGH'S STORY

I grew up on a ranch and my mom was a human nurse. I had always admired veterinarians, but never really thought about doing that myself. I always had pets growing up.

When I was in high school, we got a chocolate lab puppy named "Chilli". He and I were inseparable. We spent every afternoon and weekend together hiking, running, training, etc. When Chilli was 4 years old, he was involved in a car accident which left him paralyzed from the neck down. Chilli was rushed to our local vet in Laramie, WY. My mom called me that night at college and told me the news. She had already arranged a flight for me to get to him. I still remember lying with him at that vet

hospital. We all thought he would never walk again. He layed there with no sign of improvement and little hope of survival.

One day, someone mentioned that we might look into the veterinary school in Ft. Collins. They said that this facility had all of the best medical and diagnostic equipment. We had little to lose at that point so we transported our 90 pound paralyzed lab from Laramie, Wyoming to Fort Collins, Colorado.

They performed a myelogram (a special X-ray of the spine, spinal cord and surrounding structures) and found a blood clot pushing against his spine. Chilli had neurosurgery that next day and the surgery was a huge success! Chilli regained function in all but one leg. After he had recovered from the neurosurgery, Chilli had another surgery to remove the paralyzed leg. Chilli was placed in a cart for rehabilitation and physical therapy. The vet students put signs on his cart "Will Walk For Food!" He made the local newspaper hopping around the hospital wagging his tail in his new cart.

After he came home, it wasn't long before he was out of his cart and taking his first few steps to try to make it to a treat. That summer I returned home from college and Chilli and I were back together. He had regained so much strength and agility, we were back to running and hiking together! I changed my major the next semester to pre-vet and never looked back. Chilli lived nine more amazing years on those remaining three legs. I will never forget him. He changed my life, and I knew that if I could ever give that much back to an animal and his family, I would love my career.

Topic 29. VETERINARY MEDICINE IN THE UNITED KINGDOM

Veterinary medicine in the United Kingdom is the performance of veterinary medicine by licensed professionals. It is strictly regulated by statute law, notably the Veterinary Surgeons Act of 1966. Veterinary medicine is led by veterinary

physicians, termed 'veterinary surgeons' (with a different meaning to how it is used in some other Anglophone countries, where it denotes a surgical specialist), normally referred to as 'vets'.

Vets are often assisted by registered veterinary nurses, who are able to both assist the vet and to autonomously practice a range of skills on their own, including minor surgery under direction from a responsible vet.

Other professionals are also permitted to perform some animal treatment, through exemptions in the law, and these include manipulation techniques such as physiotherapy, chiropractic and osteopathy. Other alternative medicine therapies, such as homeopathy, acupuncture, phytotherapy and aromatherapy may only be performed by a licensed veterinary surgeon.

The practice of veterinary medicine in the United Kingdom is regulated by the Royal College of Veterinary Surgeons (RCVS), who license both veterinary surgeons and veterinary nurses.

Veterinary surgeons require both a degree in veterinary science or veterinary medicine, and must hold a current registration with the RCVS in order to practice. Veterinary surgeons without postgraduate doctorate degrees are titled Mr., Ms or Mrs., which is different from many other countries such as the United States where the qualifying degree is a doctorate (hence the title used is Dr).

Veterinary medicine degree courses are usually five years in length, although Cambridge University's degree takes six, and in some cases, a four year accelerated course is available. There are a limited number of places on veterinary courses each year, with only seven British Universities offering the degree (Bristol, Cambridge, Edinburgh, Glasgow, Liverpool, Nottingham and the Royal Veterinary College, London).

Continuing professional development (CPD) is a mandatory and key part of career development. The RCVS

recommends a minimum of 105 hours CPD over a three-year period.

Vets may choose to specialize in any of a number of areas of veterinary medicine, through certificate qualifications, modular certificates or diplomas, with each specialty taking around two years to complete. Certificates cover a wide range of areas, including small animal medicine, small animal surgery, large animal medicine, welfare ethics and law, public health, cardiology and orthopedics. A certificate is also available in advanced veterinary practice (Cert AVP).

Some vets also undertake the training to become a Local Veterinary Inspector (LVI), which authorizes them to carry out tasks on behalf of the Department for Environment, Food and Rural Affairs, such as testing cattle for tuberculosis or issuing of documentation for the export of animals and animal products.

Most veterinary surgeons work in private practice, either in a general practice, or specializing in one type of animal (small animal, equine, zoo animal etc.). Newly qualified veterinary surgeons usually work as assistants for some time before being offered the opportunity to become a partner or a principal. Becoming a partner involves increased responsibility, the need for more business and management skills and a financial input into the practice.

Some vets are also employed by animal welfare charities who offer treatment to the public, such as Royal Society for the Prevention of Cruelty to Animals (RSPCA), the People's Dispensary for Sick Animals (PDSA) and The Blue Cross.

There are also opportunities to work for government services, including the State Veterinary Service (SVS) who are responsible for the control and eradication of major diseases, animal welfare, promotion of international trade and certain public health functions related to residues in meat and investigation of food safety incidents, the Veterinary Laboratories Agency or the Veterinary Medicines Directorate (VMD) who license veterinary medicines.

It is also possible to pursue a research and/or teaching career within universities or research bodies.

TASK 1. Answer the questions:
1. Who are veterinary surgeons?
2. What legislative documents regulate the veterinarian activity in the UK?
3. What do veterinary nurses do?
4. How long does it take to become a veterinarian if you study at Cambridge?
5. How many British Universities offer the degree of a veterinary doctor?
6. How long does continuing professional development take?
7. What do local veterinary inspectors do?
8. What British charity organizations for animals can you name?
9. What does the State Veterinary Service do?

TASK 2. Read the text again and find:
- three manipulation techniques;
- four alternative medicine therapies;
- seven British Universities offering the degree of a veterinary doctor;
- seven specialties in veterinary medicine.

TASK 3. List all the spheres where a British veterinarian works.

TASK 4. Fill in a preposition if necessary:
to be referred … as vets, the practice … veterinary medicine, to be assisted … nurses, to assist … the vet, to treat … one's own, … direction, a degree … veterinary medicine, five years … length, to specialize … any … a number … areas, available … advanced veterinary practice, to test cattle … tuberculosis, to offer treatment … the public, to be responsible … the control.

АНГЛО-УКРАЇНСЬКИЙ СЛОВНИК

A

abbey n	абатство, монастир
abdomen n	зобик (медовий)
ability n	здатність, уміння
abomasum n	сичуг
about	приблизно, майже
abrasion n	тертя; садно
absorb v	усмоктувати
absorption n	усмоктування
academic	навчальний
academy n	академія
acid n	кислота
acquire v	набувати
activate v	активувати
acupuncture n	голкотерапія
acute adj	гострий
add v	додавати
addition n	додаток
administer v	здійснювати
adopt v	приймати
adult adj	дорослий
affect v	впливати; уражати
affection n	вплив; ураження
afflict v	уражати
after-birth n	послід, плацента
agent n	фактор, чинник
agricultural	сільськогосподарський

air raids pl	повітряні нальоти
airway n	авіалінія
alert v	насторожувати
alfalfa n	люцерна
alga n	морська водорость
alimentary tract	травний тракт
alveoli n	pl від
alveolus n	альвеола
amber n	бурштин
amino acids pl	амінокислоти
amount n	кількість
anaemia n	анемія
anaerobe n	анаероб
anatomical adj	анатомічний
Anatomy n	анатомія
ancient	давній
anesthesia n	анестезія
animal shelter	притулок для тварин
anorexia n	анорексія
anthem n	гімн
anthrax n	сибірка, антракс
appearance n	вигляд
approach v	наближатись
aquatic adj	водний, водяний
architectural adj	архітектурний
arms pl	герб
arthritic adj	артричний
article n	стаття
artificially adv	штучно

artist n	художник
aspiration n	дихання
assign v	призначати
assist v	допомагати
associate v	пов’язувати
assumption n	припущення
attend v	відвідувати
attract v	приваблювати
auscultation n	вислухування
available adj	наявний; придатний
average v	в середньому дорівнювати

B

bacillus	бацила, паличка
bacilli	pl від bacillus
backbone n	спинний хребет
bacterial adj	бактеріальний
bacterium n	бактерія
bacteria pl	pl від bacterium
basking-shark n	гігантська акула
bass n	морський окунь
bat n	кажан
be fond of	любити (щось)
beak n	дзьоб
bear v	носити
beat v	збивати
bee n	бджола
beef cattle n	м’ясна худоба

beef cow n	м’ясна корова
beef n	яловичина
behavior n	поведінка
believe v	вірити, думати
belong to v	належати
bichirs pl	біхіри (риби)
bile n	жовч
bite off v	відкушувати
blend with v	зливатися
blood n	кров
blossom n	цвіт
body n	тіло, організм
bone n	кістка
bony	костистий
Botany n	ботаніка
bottom n	дно
botulism n	ботулізм
bovine adj	коров’ячий, бичачий
brain n	мозок
break down v	розщеплювати
break n	перерва
breathe v	дихати
breed n	порода
breed v	розводити
breeding n	розведення
bronchi pl	бронхи
bronchoalveolar adj	бронхоальвеолярний
brucellosis n	бруцельоз
buckweat n	гречка

bulk n	об’єм
bull n	бугай
burning n	спалювання
butcher n	м’ясник
buttermilk n	маслянка
by-products pl	побічні продукти

C

cage v	клітка
canine adj	собачий
calf n	теля, телятина
camel n	верблюд
canteen n	їдальня
capacity n	місткість
carbohydrates pl	вуглеводи
carbon n	вуглець
cardiovascular adj	серцево-судинний
care (for) v	турбуватися про
carnivore n	м’ясоїдна тварина
carnivorous adj	м’ясоїдний
carriage n	перевезення, екіпаж
carry out v	виконувати
cartilage n	хрящ
case n	випадок
castrated	кастрований
catfish n	звичайна зубатка
catgut n	кетгу́т
cattle n	худоба

cattle plague n	чума ВРХ
causal adj	хвороботворний
causation n	спричинення
cause n	причина
cave n	печера
cell n	комірка; клітина
cereal	злаковий, хлібний
chair n	крісло, кафедра
channel n	канал
charity n	благдійність
chemical adj	хімічний
chemicals pl	хімічні препарати
Chemistry n	хімія
chest n	грудна клітка
chew a cud	жувати жуйку
chew v	жувати
chiefly adv	головним чином
chimaera n	химера (риби)
chinchilla n	шиншила
chiropractic n	підрізання кігтів
chitterlings pl	тельбухи
cholesterol	холестерин
chop n	м’ясо на котлети
Christmas n	Різдво
chronic adj	хронічний
churn v	збивати (масло)
circle n	гурток
circulatory	циркулюючий
claim n	скарга

classes pl	заняття (пара)
claw n	лапа з кігтями
clinic n	клініка
clover n	конюшина
coat n	покрив
cod n	тріска (риба)
coelacanths pl	целаканти (риби)
cold-blooded	холоднокровний
collapse v	руйнуватися
collect v	збирати
college n	коледж
coloration n	забарвлення
colostrum n	молозиво
combat v	побороти
combine v	поєднувати
common	загальний
compartment n	відділ (шлунку)
complain v	скаржитись
complete	завершувати; проводити
complex adj	складний
complication n	ускладнення
compose v	складати
composition n	склад, структура
compound a	сполука
concern n	стурбованість
condemnation n	осуд
condition n	умова
connective tissue n	сполучна тканина

consider	вважати
consideration n	увага; *тут:* ставлення
consist in v	полягати у
consist of v	складатися з
consume v	споживати
consumption n	споживання
contagious adj	заразний
contain v	містити
contaminate v	забруднювати; заражати
content n	вміст
contribute to v	сприяти
convert v	перетворювати
convulsion n	конвульсія
copper n	мідь
cough v	кашляти
county n	графство
cover v	охоплювати
covering n	покрив
cow n	корова
crack n	тріщина
cracker n	сухе печиво
cream n	вершки
creamery n	маслоробня
credit test n	залік
crepuscular adj	присмерковий
crop n	культура (зерно)
crossbread	гібридний

crossbreed n	гібрид
crossing n	схрещування
crowd n	натовп
cruelty n	жорстокість
ctenoid adj	ктеноїдний
cud n	жуйка
cure v	засолювати
curve v	вигинатися
cushion n	подушка
cut n	відруб (м’яса)
cut v	кусати, різати
cutting teeth	різці
cut off	обрізувати
cyanosis n	ціаноз, синюха
cytologic adj	цитологічний

D

dairy	молочний, дійний
dairy cattle n	молочна худоба
dairy cow n	молочна корова
dairy n	молочарня
dairy products	молочні продукти
damage n	пошкодження
damage v	пошкоджувати
dangerous	небезпечний
dead	мертвий
dean n	декан
decrease v	зменшувати
deep adj	глибокий

deer n	олень
defence n	захист
defend v	захищати
deficiency n	недостатня кількість
definitive adj	остаточний; цілком розвинений
dehorn v	обрізати роги
delay v	затримка, затримувати
demonstrate v	показувати
deposit v	відкладати
descend v	походити
desert	пустинний
deserve v	заслуговувати
desiccation n	висушування
destroy v	знищувати, руйнувати
detect v	виявляти
detection n	виявлення
determine v	визначити
devastation n	спустошення
develop v	виводити (породу)
die out v	вимирати
digest v	перетравлювати
digestible adj	легкотравний
digestion n	травлення
digestive adj	травний
direction n	напрям
discharge n	виділення

discover v	відкривати, виявляти
discourage v	*тут:* перешкоджати
disease n	хвороба
disorder n	безлад
dispensary n	безкоштовна амбулаторія
diseased adj	хворий
dissolve v	розчиняти
distemper n	собача чума
distinguish v	відрізняти
distribute v	поширювати
divide v	поділяти
division n	*тут:* факультет, відділ
docile adj	слухняний
domestic adj	домашній
domesticate v	приручати
donkey n	осел
dormant adj	сплячий
draft n	тягло
draw on v	добувати
dress v	одягатися
drone n	трутень
droopy adj (ears)	висячий
drop n	крапля
droplet n	крапля
dry adj	*тут:* холодний
dry v	сушити

duck n	качка
duct n	протока
dumb adj	німий
during	протягом
duty n	обов’язок

E

ecology n	екологія
eczema n	екзема
edge n	край
edible adj	їстівний
education n	освіта, навчання
eel n	вугор
efficient	ефективний
Egypt n	Єгипет
elect v	обирати, вибирати
emaciation n	виснаження
embryo n	зародок
emerge v	з’являтися
empire n	імперія
employee n	службовець
enable v	давати можливість
enemy n	ворог
enormous	величезний
enter v	вступати (до)
entirely	цілком, зовсім
environment n	середовище, оточення
enzyme n	фермент, ензим

eosinophilia n	еозинофілія
epizootics ν	епізоотія
equipment n	обладнання
eradicate v	викорінювати
erect adj	піднятий
escape v	врятуватися
esophagus n	стравохід
essential adj	дуже важливий, незамінний
estimate v	оцінювати
ether n	ефір
evaporate v	випаровувати
evaporation n	випаровування
evident adj	очевидний
ewe n	вівцематка
except v	за винятком, крім
excitation n	збудження
excrete v	виділяти
exemption n	звільнення
exercise n	прогулянка; *тут:* фізичне зусилля
exhale v	видихати
exhibit v	виставляти
exist v	існувати, бути
expel v	виганяти; викидати
explorer n	дослідник
expose to v	піддавати дії
exposure n	виставляння; піддпвання

extracellular adj	позаклітиний
extra-mural adj	заочний
extremely adv	надзвичайно
eyeball n	очне яблуко
eyelid n	повіка

F

facultative adj	факультативний
faculty n	факультет
faint adj	слабкий
fair n	ярмарок
farm animals pl	сільськогосподарські тварини
farrier n	коновал
fasciolosis n	фасциольоз
fat n	жир, товщ
fatty acids pl	жирні кислоти
feather n	пір’я
feature n	риса, ознака
feeble	кволий
feed n	корм
feed v	годувати
feed on v	живитися
felid n	тварина з родини котячих
feline n	котячий
female n	самка
feral adj (cat)	дикий, неприручений
fern n	папороть

fertilizer n	міндобриво
fever n	гарячка
fin n	плавець
flavour n	приємний смак
flesh n	м’ясо, плоть
flexible	гнучкий
flour n	борошно
flow v	текти
fluctuate v	коливатися
fluid n	рідина
flying fish n	літаюча риба
for	для
foreign	іноземний
former	колишній
fossil adj	скамПянілий
found v	засновувати
fountain n	фонтан, водограй
French n	французька мова
frequency n	частота
frequently	часто
freshwater adj	прісноводний
front adj	передній
frozen	заморожений
fry v	смажити
fuel n	паливо, пальне
full-time department n	денне відділення
fun n	забава
fungus n	гриб, грибок

fungi pl	πλ від fungus
furnish v	постачати
furry adj	хутряний
fury n	лють

G

gallbladder n	жовчний міхур
game n	дичина (м’ясо)
gain v	здобувати
gasoline n	бензин (*амер.*)
genera pl	πλ від genus
genus n	рід
gestation n	вагітність
giant manta ray n	скат морський диявол
gills pl	зябри
give birth v	народити
gland n	залоза
globule n	кулька
glorious	славетний
glycogen n	глюкоген
goat n	коза
goby n	бичок (риба)
God n	Бог
govern v	правити, керувати
government n	уряд
graduate from	закінчувати
grain n	зерно
graze v	пасти(ся)

grow v	вирощувати, рости
growl v	гарчати
growth n	наріст, ріст
grunt v	рохкати
guard v	стерегти

H

hagfishes pl	міксини (риби)
ham n	шинка, окіст
handicapped adj	що має фізичні вади
harmless	нешкідливий
harsh adj	жорсткий
hatch v	вилуплюватися з яйця, виводити
hay n	сіно
headache n	головний біль
healing herb	цілюща трава
health n	здоров’я
healthy	здоровий
heat v	нагрівати
heifer n	телиця, ялівка
helminth adj	глист
hen n	курка
hepatitis n	гепатит
herbivorous adj	травоїдний
herd n	стадо
herder n	пастух
herring n	оселедець
hide n	шкіра

hide v	ховати(ся)
hind adj	задній
hiss v	шипіти
hive n	вулик
hog n	свиня
hollow adj	порожнистий
homeopathy n	гомеопатія
honey βεε ν	медоносна бджола
honey ν	мед
honeycomb n	стільники (медові)
hoof n	копито, ратиця
horn n	ріг
hornless adj	нешкідливий
horseshoeing n	підковування коней
horse shows pl	виставка коней
horseshoe n	підкова
host n	хазяїн
household αδφ	домашній
human being n	людська істота
human n	людина
humane adj	людяний
humid adj	вологий
humped cattle	горбата худоба
hunter n	мисливець
hybrid n	гібрид
hydrogen n	водень
hypertrophy n	гіпертрофія

I

ichtyologist n	іхтіолог
impact n	вплив
improved adj	удосконалений
incidence n	охоплення
incipient adj	початковий; що зароджується
income n	прибуток
increased stipend	підвищена стипендія
independence n	незалежність
indicate v	указувати
induration n	затвердіння
industrial adj	промисловий
infectious adj	інфекційний
inflammation n	запалення
ingestion n	приймання їжі
ingredient n	складник
inhale v	вдихати
injury n	пошкодження
initial adj	початковий
inoculation n	посів (мікробів)
insect n	комаха
insoluble adj	нерозчинний
inspect ϖ	оглядати
insulation n	ізоляція
intake n	споживання
integument n	зовнішній покрив
intermediate adj	проміжний
intestinal adj	кишковий

intestine n	кишечник, кишка
intracellular adj	внутрішньо-клітинний
invadɛ v	*тут:* уражати
invasion n	навала, вторгнення
invertebrate adj	безхребетний
investigation n	дослідження
involve v	*тут:* залучати
iodine n	йод
iron horse n	“залізний кінь” (поїзд)
iron n	залізо

J

jaw n	щелепа
jawed	щелепний
jawless	безщелепний
joint adj	суглоб
jungle n	джунглі, нетрі

K

keen adj	гострий (зір)
kidney n	нирка
kill v	убивати, різати (худобу)
kind n	вид

L

laboratory n	лабораторія
lack v	не мати

lactation n	лактація
lamb n	ягня, баранина
lampreys pl	міноги (риби)
language n	мова
lard n	сало, смалець
larva n	личинка
last for v	тривати
lavage n	промивання
law n	закон, право
laxative adj	проносний
lay eggs	відкладати яйця
lead v	керувати
leader n	лідер, керівник
lean	пісний
leather n	шкіра (вичинена)
leave for v	покидати, від'їжджати
lecture n	лекція
lecture-hall	аудиторія
leg n	задня гомілка, нога
legumes pl	бобові
lesion n	ушкодження
lethal adj	смертельний
lethargy n	млявість; ступор
leucocytosis ν	лейкоцитоз
line v	вистилати
lineage n	родовід
link v	з'єднувати, сполучати

liquid n, adj	рідина, рідкий
live on v	живитися
liver n	печінка
livestock n	домашня худоба
llama n	лама
load n	тягар, вантаж
location n	розташування
loss n	втрата
lung n	легеня
lungfishes pl	двоякодихаючі риби
lymph duct n	лімфатичний прохід

M

mainly	головним чином
maintain v	підтримувати
major adj	головний
make up v	*тут:* складати
male n	самець
malnutrition n	недоїдання
mammal n	ссавець
management n	менеджмент
manganese n	марганець
manifestation n	прояв
marketing n	маркетинг
master v	опановувати
mastitis n	мастит
mate v	спаровувати(ся)
mating n	парування
mature v, adj	дозрівати, дозрілий

means pl	засоби
measure v	визначати, мати розміри
meat n	м’ясо
medication n	лікування
medicine n	ліки
meeting n	*тут:* засідання
metabolic adj	що стосується обміну речовин
mew v	нявчати
mile n	миля (1609 м)
military	військовий, воєнний
milk v	доїти
mink n	норка
minnow n	мілька (риба)
mix v	змішувати
moisture n	волога
molar n	кутній зуб
morning exercises pl	ранкова гімнастика
mouth-parts pl	ротові придатки
move v	рухатися
movement n	рух
mucus n	слиз
mucous adj	слизовий
mud n	бруд, багно
mule n	мул
multiply v	розмножуватися
muscle n	м’яз

muscular adj	м’язовий
mutton n	баранина

N

namely	а саме
narrow	вузький
nasal adj	носовий
national adj	національний
National emblem n	державний герб
native adj	рідний
nearly	майже
neck n	шия
need v	потребувати
needle-fish n	голка-риба
nephew n	племінник
nephritis n	нефрит
nerve n	нерв
nickname n	прізвисько
nitrogen n	азот
node n	вузол
non-essential adj	замінний
non-motile adj	нерухомий
northwestern adj	північно-західний
nostril n	ніздря
note v	помічати
noticeable adj	помітний
nourish v	годувати
now	тепер, зараз
numbness n	нечутливість

nut n	горіх
nutrients pl	поживні речовини
nutritional adj	харчовий
nutritive adj	поживний

O

obey v	виконувати
observe v	помічати
obtain v	одержувати
occupation n	заняття
occupy v	займати
occur v	траплятися
odour n	запах
offspring n	нащадок
omasum n	книжка
order n	ряд
ordinary stipend	звичайна стипендія
originate v	походити
orthopedics n	ортопедія
osteopathy n	остеопатія
outbreak n	спалах
outward adφ	зовнішній
overcome v	подолати
oxygen n	кисень

P

packaging n	фасування
pain n	біль
pancreas n	підшлункова залоза
parasitic adj	паразитичний

parliament n	парламент
paroxysmal adj	судорожний
particle n	частинка
pass v	проходити
pasteurization n	пастеризація
pasture n	пасовище
pattern n	візерунок
pavement n	тротуар
pearl n	перлина
pedigree adj	родовід
perch n	окунь
percussion n	вистукування
perform v	*тут:* виступати
pericarditis n	перикардит
persist v	зберігатися
pest n	шкідник
pet n	домашній улюбленець
pharynx n	зів
phylum n тип	тип
physician n	лікар
pink	блідо-рожевий
pleuritis n	плеврит
plow n	плуг
pneumonia n	пневмонія
poisoning n	отруєння
poisonous adj	отруйний
political adj	політичний
polled adj	безрогий, шутий

pollen n	пилок
pollinate v	запилювати
porcupine fish n	дикобраз (риба)
pork n	свинина
pork chop	свиняча відбивна
potassium n	калій
pouch n	мішечок, кошик
poultry n	свійська птиця
pound n	фунт = lb (453,6 г)
predator n	хижак
predatory adj	хижацький
predispose (to) v	схиляти до
prehistoric adj	доісторичний
prescribe v	призначати
prevent v	відвертати, запобігати
prevention n	профілактика
preventive adj	запобіжний
previous adj	попередній
prey n	жертва
primary n	перший; початковий
principal adj	основний
print n	*тут:* брикет
privacy n	самотність
produce v	виробляти
produce v	*тут:* дати (світові)
product n	вироблятu
profuse adj	рясний
promote v	сприяти

propel v	рухати, штовхати
property n	власність
prophylaxis n	профілактика
protect v	захищати
protection n	захист, охорона
protective	захисний
protein n	білок, протеїн
provide v	постачати, забезпечувати
pull v	тягти
pulmonary adj	легеневий
pupa n	лялечка
purpose n	намір, мета
purr v	муркотати
pursue v	продовжувати

Q

quality n	якість
quantity n	кількість
queen n	матка (бджола)
queen n	королева

R

rabies n	сказ
races pl	гонки
raise v	вирощувати
ram n	баран
rage n	лють
range n	ряд, низка
range v	коливатися в межах

rank n	ряд
rate n	*тут:* ступінь
raw adj	сирий
raw materials pl	сировина
ray n	1. скат (риба), 2. промінь
rayed	променевий
razor fish n	двійчастий молюск
recent adj	недавній
recognize v	упізнавати; усвідомлювати
recreation n	розвага
reduce v	зменшувати
reduction n	зниження
refer to ϖ	посилатися на
referable adj	пояснимий
reflect v	відбивати
refractory adj	невиліковний
refrigerate v	охолоджувати
regain v	одержувати назад
regularly adv	регулярно
reindeer n	олень
relatively adv	відносно
remain v	залишатися
remains pl	рештки
remedy n	лікувальний засіб
rename v	перейменовувати
replace v	заміняти
report n	доповідь

reproduce v	розмножуватися
reproduction n	розмноження
reproductive adj	відтворювальний
require v	вимагати
research n	дослідження
resemble v	бути схожим на
residue n	осад; шлам
resistance n	опір(ність)
resistant adj	стійкий
resort n	курорт
respiratory adj	дихальний
respond v	відповідати
response n	відповідь
restless adj	неспокійний
result from v	виникати внаслідок
retail trade n	торгівля на роздріб
retain ϖ	утримувати
reticulum n	сітка
retractable adj	що ховається (складається)
return v	повертатися
reveal v	виявити
rickets n	рахіт
ride v	їхати верхи
right n	право
rival n	суперник
roast n	м’ясо на печеню
rock n	скеля, камінь
roll about v	*тут:* заривати

root n	корінь
roughage n	грубий корм
royal adj	королівський
royal jelly n	„молочко”
run v	*тут:* керувати
rumen n	рубець
ruminant adj	жуйний
ruminant n	жуйна тварина

S

sailfish n	парусник (риба)
safety n	безпека
sale n	продаж
saliva n	слина
salivary adj	слинний
sanitary adj	санітарний
sanitation n	санітарія
sauce n	соус
sausage n	ковбаса
save v	берегти
scale n	луска
scavenger n	тварина, що живиться падлом
scent n	запах
scholar n	учень, вчений
school n	школа, косяк (риби)
schoolgilr n	школярка
scientific adj	науковий
scientist n	вчений

scorpion-fish n	скорпіон (риба)
scout n	*тут*: розвідниця
sea-horse n	морський коник
seal v	герметично закривати
seaport n	морський порт, портове місто
secondary adj	другорядний
secondary school n	середня школа
security n	безпека
selective αδφ	селективний
self-criticism n	самокритика
self-defence n	самооборона
semen n	сім'я, сперма
sense (of smell) n	відчуття
sensitivity n	чутливість
separate v	відділяти
separately adv	окремо
separation n	відокремлення
serum n	сироватка
serve v	слугувати
session n	сесія
set up v	засновувати
severely adv	суворо
shade n	відтінок
shape n, v	форма, формувати
shark n	акула
sharp	гострий
sheep n	вівця

shelf n	полиця
shellfish n	істота з черепашкою
shield n	щит
shire n	шайр (ваговоз)
shoe n	черевик, взуття
show n, v	виставка, показувати
sights pl	визначні місця
silage n	силос
sink v	опускатися
size n	розмір
skeleton n	скелет
skin n	шкіра
sleek adj	лискучий
sluggish adj	ледачий
smell n	запах
snail n	слимак
sneeze v	чхати
social work n	громадська робота
sodium n	натрій
soften v	пом’якшувати
soil n	ґрунт
solid adj	твердий
solitary adj	*тут:* самітний
sour cream n	сметана
source n	джерело
specialist n	фахівець
species n	вид, рід
speed n	швидкість
sperm n	сперма

spicy	пікантний
spinal cord	спинний мозок
spine n	голка
spoil v	псуватися
spot n	*тут:* місце
spread v	поширюватись
sputum n	слина
squeaky râles	сухі хрипи
St. Paul	св. Павло
stagnant water	непроточна вода
starch n	крохмаль
state n	держава
steak n	м’ясо на біфштекс
steer n	бик, бичок
sting n	жало
stipend n	стипендія
stir v	перемішувати
stock n	худоба
stomach n	шлунок; черевце
stone n	камінь
stonefish n	риба-камінь
storage n	зберігання, схов
store v	запасати
stranger n	чужинець
strength n	сила
stretch v	простір
strike v	бити; уражати
studies n	навчання
stunted	чахлий

sturdy adj	сильний, міцний
sturgeon n	осетер
subacute adj	підгострий
subject n	предмет
substance n	речовина
substitute n	замінник
successfully adv	успішно
sudden adj	раптовий
suffer v	страждати
sufficient	достатній
suited	придатний
sulphur n	сірка
supply n	постачання
suppressed adj	придушений
surgery ν	хірургія
surgical adj	хірургічний
surroundings pl	середовище існування
survive v	лишитися живим
susceptible adj	сприйнятливий
suspended adj	висячий
swallow v	проковтнути
swarm n	рій
swarming n	роїння (бджоли)
swine n	свиня
switch on v	вмикати (струм)

T

tail n	хвіст
take care for v	піклуватися про
take examinations	складати іспити
tallow n	лій, жир, сало
tame v	приручати
taste n	смак
technological	технологічний
technologist n	технолог
technology n	технологія
teleosts pl	костисті (риби)
tempering n	дозрівання
tender	ніжний
tentatively adv	експериментально
term n	семестр; …
terrestrial adj	наземний
texture n	текстура
thaw v	розморожувати
the young	молодняк
threat n	загроза
threaten v	загрожувати
thrive v	добре рости
throat n	горло
throughout adv	скрізь
thymus n	загрудинна залоза
tint n	відтінок
tiny adj	крихітний
tissue n	тканина
toe n	палець (ноги)

tongue n	хоботок, язик
tooth n (teeth)	зуб (зуби)
top	*тут:* найвищий
tough	щільний
tower n	башта, вежа; Тауер
trade n	торгівля
Trafalgar	мис Трафальґар
train v	привчати до чогось, готувати (фахівців)
to transmit v	передавати
travel v	*тут:* переміщатися
treat v	обробляти, лікувати
treatise n	трактат
treatment n	лікування
trill v	виводити трелі
tripe n	тельбухи, рубці
trout n	форель
trunk n	тулуб
tubercle n	туберкул
tubercular adj	туберкульозний
tuberculosis n	туберкульоз
tularemia n	туляремія
tuna n	тунець
turkey n	індик
twice	два рази, двічі

U

ubiquitous adj	повсюдний
udder n	вим’я

Ukraine n	Україна
unconsciousness n	непритомність
undergo v	зазнавати
underground adj	підземний
unmated adj	неплідна
upheaval n	зрушення, переворот
unsuitable n	непідхожий
urinary adj	сечовий
urine n	сеча

V

vaccine n	вакцина
vaccinate ϖ	щепити
vaginal adj	вагінальний
value n	цінність
value v	дорожити, цінувати
variety n	різноманітність
various adj	різноманітний
vary v	змінювати(ся)
veal n	телятина
vermin n	*збірн.* паразити
vertebrate n	хребетна тварина
vessel n	судно, корабель
veterinarian n	ветеринар
veterinary adj	ветеринарний
veterinary doctor n	ветеринарний лікар
viable adj	життєздатний
victim n	жертва
viral adj	вірусний

virus n	вірус
visit v	відвідувати
vocalization n	вокалізація
vocalize v	видавати звуки
vomit v	блювати

W

warm-blooded adj	теплокровний
waste products	відпрацьовані продукти
water v	напувати; поливати
water buffalo n	буйвол
wattle n	борідка (у півня)
wax n	віск
weakened adj	ослаблений
weapon n	зброя
weigh v	важити
weight n	вага
welfare n	добробут
well-educated	освічений
Western Ukraine n	Західна Україна
whale shark n	китова акула
whitefaces pl	білоголові (худоба)
wild	дикий
windpipe n	трахея
wing n	крило
wipe out ϖ	знищити
wit n	розум
wither ϖ	в’янути

wool n	вовна, шерсть
world n	світ
worm n	черв’як
worn-out	зношений
wound n	рана
wrap v	обгортати

Y

yeast n	дріжджі
yield v	давати (плоди, врожай)
yogurt n	йогурт
yolk n	жовток

Z

zooengineering	зооінженерний
Zoology n	зоологія
Zoonosis	зооноз

СПИСОК ВИКОРИСТАНОЇ ЛІТЕРАТУРИ

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