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ДЕРЖАВНИЙ БІОТЕХНОЛОГІЧНИЙ УНІВЕРСИТЕТ

Кафедра мовної підготовки

Методичні розробки для самостійної роботи з дисципліни
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Метою викладання навчальної дисципліни «Ділова іноземна (англійська) мова» є забезпечення та формування у студентів професійної мовної компетенції, що сприятиме їхньому ефективному функціонуванню у культурному розмаїтті навчального та професійного середовища. Основною метою вивчення навчальної дисципліни студентами є практичне оволодіння іноземною мовою на базі професійно-орієнтованого навчання в обсязі тематики, яка визначена навчальною програмою.

Головним завданням вивчення дисципліни «Ділова іноземна (англійська) мова» є удосконалення та подальший розвиток набутих у школі знань, умінь та навичок з англійської мови в різних видах мовленнєвої діяльності. Вивчення англійської мови передбачає володіння загальноповсякденною та термінологічною лексикою, граматику англійської мови, набуття навичок читання та усного і письмового перекладу науково-технічних текстів за фахом, вміння розуміти англійську мову як при безпосередньому спілкуванні, так і у аудіо запису, діалогічно та монологічно спілкуватися в межах тем, зазначених програмою.

Метою самостійної роботи студентів з навчальної дисципліни «Ділова іноземна (англійська) мова» є підготовка до практичних занять та екзамену з навчальної дисципліни, а також розвинення й удосконалення навичок самостійної роботи, створення особистого підходу до пізнання й самостійного опрацювання навчального матеріалу.

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Unit 1. MY FUTURE PROFESSION.FOOD TECHNOLOGIST

1. Read and translate the text. Use a dictionary if necessary.

Food technologists develop and improve existing food products and set standards for producing, packaging and marketing food.

Food technologists may perform the following tasks:

- ensure safe and hygienic conditions are maintained during processing, storage and packaging of food;
- check raw ingredients for nutritional value, safety and quality;
- check foods for colour, texture and taste to ensure products meet government regulations and standards;
- develop and ensure food standards;
- demonstrate products to clients;
- develop new products ;
- compare products with those of other brands and analyse market trends;
- supervise the transportation of foodstuffs such as fruit, vegetables and milk, as well as inspect for spoilage and quality deterioration;
- develop quality control procedures for the manufacture of products in plants or factories;
- analyze results and experimental data;
- supervise and coordinate the work of technicians.

Personal Requirements:

- enjoy scientific activities;
- able to take initiative;
- good problem-solving skills;
- aptitude for mathematics, science and technology;
- able to work as part of a team;
- strong reading and writing abilities;
- good observation and communication skills;
- a high level of accuracy;
- good physical health.

2. Answer the following questions.

1. Is it difficult to be a Food Technologist? Why?
2. What are the main tasks of a Food Technologist?
3. What are the main personal requirements of a Food Technologist?
4. Do you want to be a Food Technologist? Why?

3. Give the Ukrainian equivalents to the English ones.

Food products, set standards, packaging, perform, ensure, safe, hygienic, processing, storage, nutritional value, quality, texture, marketing, marketing food, government regulations, develop, market trends, supervise, foodstuffs, inspect, spoilage, quality deterioration, control procedures, manufacture, analyze, experimental data, coordinate, technician, personal requirements, good problem-solving skills, strong reading and writing abilities, good observation and communication skills, a high level of accuracy, science and technology.

3. Match the word with its Ukrainian equivalents.

1. set standards	a) зберігання
2. marketing food	b) спостерігати за
3. perform	c) якість
4. ensure	d) санітарний
5. safe	e) поживна цінність
6. hygienic	f) забезпечувати, гарантувати
7. maintained	g) підтримувати, зберігати
8. storage	h) установлювати норми
9. nutritional value	i) безпечний
10. quality	j) виконувати
11. texture	k) тенденції ринку
12. government regulations	l) перевіряти
13. develop	m) державні норми , державні правила
14. market trends	n) текстура; структура
15. supervise	o) комплекс заходів з вивчення попиту та оптимального збуту продукції
16. inspect	p) удосконалювати, розвивати, розробляти

4. Match the word with its English equivalent.

1. зіпсований товар, брак	a) good observation and communication skills
2. погіршення якості	b) personal requirements
3. процедури контролю	c) aptitude for
4. виробництво	d) supervise
5. експериментальні дані	e) scientific
6. перевіряти спостерігати, керувати	f) manufacture
7. координувати, організувати, узгоджувати	g) health

8. професійні якості, вміння та навички	h) quality deterioration
9. науковий	i) experimental data
10. здатність до самостійного вирішення проблем, прийняття рішень	j) good problem-solving skills
11. здібний до	k) control procedures
12. той, хто легко вивчається	l) a high level of accuracy
13. спостережливість та вміння працювати з людьми	m) spoilage
14. високий ступінь точності (скрупульозність)	n) strong reading and writing abilities
15. здоров'я	o) coordinate

5. Match the sentence parts.

1. Food technologist should enjoy	a) to take initiative.
2. Food technologist should be able	b) scientific activities.
3. Food technologist should have	c) writing abilities.
4. Food technologist should have a high level	d) good physical health.
5. Food technologist should be able to work as	e) of accuracy.
6. Food technologist should possess strong reading	f) part of a team.

6. Make up sentences.

- the /tasks / perform / may / food / following / technologists
- and / existing / develop / food / technologists / products / food / improve
- for / technologists / check / food/ raw /value / ingredients/ nutritional
- to / food / demonstrate / clients / technologists / products
- quality / and / raw / food / for / check / technologists / safety / ingredients / value / nutritional
- of / packaging / food / during / ensure / food / and / processing / and / safe / hygienic / conditions / maintained / storage / technologists / are
- quality / in / food / develop / plants / procedures / or / products / technologists / manufacture / factories / control / for / the / of
- as / quality / deterioration / spoilage / for / as / inspect/ of/ well/ fruit/ food/ and/ as/ supervise/ transportation/ the/ foodstuffs/ technologists/ milk/ vegetables/ such/ and
- products/ food/ regulations/ technologists/ texture/ taste/ government/ standards/ meet/ colour/ check/ foods/ and/ to/ for/ ensure/ and

7. Compose your own story “My future profession”.

Unit 2. AGRICULTURE IN UKRAINE

1. Read and translate the text.

Farming plays an important role in the national economy. Ukraine has favourable conditions for the development of agricultural production: temperate climate, **fertile soils**, adequate rainfall and a well-developed industry processing agricultural raw materials. Land is the main wealth of the society. The lands of Ukraine exceed 60 million hectares. Arable land makes up 42 million hectares.

Crop growing and **livestock breeding** are the most important branches in the farming of Ukraine.

All the principle areas of plant cultivation are: grain and industrial crops, fodder plants (forage plants), fruit and vegetable rising.

Such **grain crops (cereals)** as winter **wheat, rye, oats, barley** and **maize**, among which wheat takes the first place, are widely grown in Ukraine. Winter wheat is sown mainly in the Steppe and Forest-Steppe zones. Maize is grown mostly in Transcarpathia and Steppe zones. Such cereals as **buckwheat, millet** and **rice** are also grown in our country.

Among the industrial crops such as **sugar-beet, sunflower, flax**, the leading position is occupied by sugar-beet. Today early varieties of sugar-beet are successfully cultivated and the area under sugar-beet is steadily expanding.

Close to 40 types of vegetable crops are grown in Ukraine: **cabbage, tomato, cucumber, red beet, carrot, onion, garlic**, etc. Melon-growing is practiced mainly in the south. Potatoes occupy 6% of total area under cultivation.

Animal husbandry is the second largest component of agriculture. The abundance of fodder plants favours its development. Like plant cultivation, livestock production is divided into branches. The most widespread branch is cattle breeding. The most productive pedigree and **dairy cattle** are raised on the vast pastures of the **non-black soil** zone. Pig rising is another important area. Sheep farming is also practiced.

The **poultry** industry is spread through all the regions. Birds farmed include **chicken, duck, goose, turkey**. There are large mechanized poultry factories to produce eggs and meat.

Fish farming is growing in importance, with carp, being the most common fish. **Trout**, which is to be found in the Mountain Rivers, is of commercial interest.

Bee-keeping is spread through all zones. It is extensively practiced on private plots.

Fur animals' farms raise (rear) such animals as silver and blue fox, mink and nutria.

2. Give the translation of the highlighted words.

3. Answer the following questions.

1. What are two main branches of agriculture?
2. What conditions has Ukraine for the development of agriculture?
3. How many hectares of arable land are there in Ukraine?
4. What are the principle areas of plant cultivation?
5. What grain crops are grown in Ukraine? What is a chief grain crop among them?
6. What vegetable crops are cultivated in our country?
7. What is the most important industrial crop?
8. Does Ukraine go in for stock farming on a very large scale?
9. What favours the development of animal husbandry?
10. What branches is livestock production divided into?
11. Where is the poultry industry spread?
12. What types of fish are farmed in Ukraine?
13. What types of fish are farmed in Ukraine?
14. Where is bee-keeping extensively practiced?

3. Find the synonyms.

1) Abundant <i>adj</i>	a) Field <i>n</i> , area <i>n</i>
2) Cultivate <i>v</i>	b) Grain crops <i>n</i>
3) Maize <i>n</i>	c) Farming <i>n</i>
4) Branch <i>n</i>	d) To go in for
5) Cereals <i>n</i>	e) Animal husbandry <i>n</i>
6) Widely <i>adv</i>	f) Crop <i>n</i> , harvest <i>n</i>
7) Livestock breeding <i>n</i>	g) Corn <i>n</i>
8) Agriculture <i>n</i>	h) Grow <i>v</i>
9) Yield <i>n</i>	i) Rich <i>adj</i>
10) to be engaged in	j) Extensively <i>adv</i>

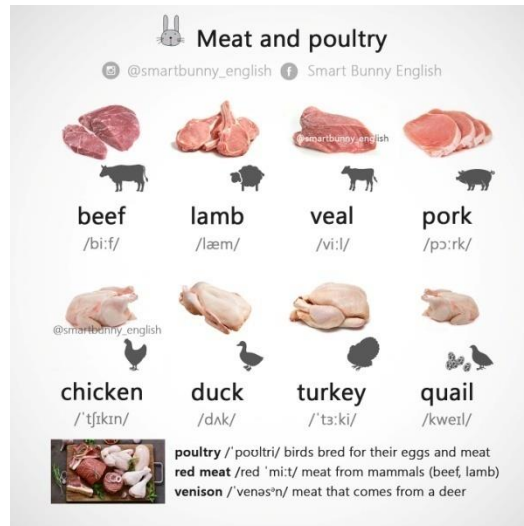
4. Translate into Ukrainian:

1. Farming plays an important role in the national economy.
2. Our country has abundant agricultural resources, including favourable climate, adequate rainfall and rich soils.
3. The lands of Ukraine exceed 60 million hectares.
4. Grain crops are widely grown in Ukraine.
5. The area under sugar-beet is steadily expanding.
6. These farmers cultivate early varieties of sugar-beet.
7. Ukraine goes in for stock farming on a very large scale.
8. The most productive pedigree and dairy cattle are raised in our country.
9. The abundance of fodder plants favours the development of animal husbandry.

Unit 3. ANIMAL PRODUCTS

Before you read the passage, talk about these questions.

1. What types of meat come from animals?
2. What other products come from animals?



1. Read and translate the magazine article.

More than a meal

We rely on animals for a number of products. Some are more obvious than others. Animals` milk and meat provide us with protein. We make clothing and furniture with wool and leather. In addition, there is a long list of animal by-products. We use them every day. But we don't always know it.

We render fat or tallow into tires, soaps, and candles. Marshmallows, buttons, and tape include bones and hooves. Wool is often used in carpet. Even baseballs use animal products.

Animal by-products are found in unexpected places. Thanks to rendering, very little goes to waste. Meat is just one of many products that we take from animals.

2. Read the magazine article. Then choose the correct answers.

1. What is the article mainly about?
 - A. Animals that only produce meat
 - B. The most popular types of meat
 - C. Products made from animals
 - D. Waste products of rendering
2. Which of the following is NOT a by-product?
 - A. fat

- B. bone
- C. hooves
- D. protein

3. What is true of rendering?

- A. It limits waste.
- B. It is a by-product.
- C. It provides protein.
- D. It is in marshmallows.

3. Read the sentence pair. Choose where the words best fit the blanks.

1. wool/milk

- A. _____ is an important food source.
- B. Many clothes are made of _____ .

2. protein / leather

- A. _____ is often used to cover furniture.
- B. Plant products and meat contain _____ .

3. meat / by-products

- A. Humans have always used animals for _____.
- B. _____ are used in many common products.

4. Write a word that is similar in meaning to the underlined part.

1. Too much oily substance from plants and animals is unhealthy.

2. Hard materials that give a body structure are a by-product.

_o _ _ s

3. The hard feet of animals are used to make tape.

h _ _ v _ _

4. Soap is made by melting animal fat.

r _ _ _ _ _ ing

5. Fat that is used to make candles is also used in soap.

_a _ _ ow

5. Listen to a conversation between a manager and a developer at a meeting. Mark the following statements as true (T) or false (F).

- 1. ____ The new product has no extra chemicals.
- 2. ____ The all-natural soap will be expensive.
- 3. ____ Tallow is rarely used in soap.

Listen again and complete the conversation.

listen up do you mean chemicals expensive I'm sorry most soaps

Manager: 1 _____ . We have a new product to sell. Miss Smith will tell us about it.

Developer: Okay. Customers want natural products, right? So we made an all-natural soap.

Manager: What 2 _____ by "all-natural"?

Developer: There are no extra 3 _____ . It's just the basic ingredients.

Manager: Sounds interesting. Will it be 4 _____ ?

Developer: No. After all, the main ingredient is tallow.

Manager: 5 _____ . What's tallow?

Developer: Oh, tallow is basically animal fat. It's used in 6 _____ .

Manager: And it's cheap?

Developer: Very. It's a by-product that few people use.

Unit 4. NUTRITION

1. Study the nutrition terms.

Nutrition (noun)

Process by which animals receive a proper and balanced food and water ration so it can grow, maintain its body, reproduces, and perform.

Nutrient (noun)

Substance or part of feedstuff that is necessary for an organism to live and grow.

Also known as a single group of foods of the same general chemical composition that supports animal life.

Required nutrients include water, carbohydrates, fats, protein, minerals, and vitamins.

Nutritional (adj.)

relating to the substances in food that help you to stay healthy (e.g. nutritional deficiency,

nutritional therapy, nutritional value).

Nutritious (adj.)

Efficient as food; nourishing; something that provides nutrients — vitamins, minerals, and protein, for example (e.g. nutritious products, nutritious ration, nutritious breakfast).

Nutritionally (adv.)

In a way that is connected with the process by which living things receive the food necessary for them to grow and be healthy.

2. Complete the sentences with the following words.

nutrition nutritional nutrients nutritious nutritionally

1. The papaya is a wondrous fruit - abundant, tasty, and_____.
2. Every junk food manufacturer is expending large amounts of money on research to improve the _____ content of their foods.
3. Acorns are _____ valuable, being rich in starch and oil.
4. A healthy diet should provide all your essential _____.
5. Good _____ is essential if patients are to make a quick recovery.

3. Read and translate the text.

MINERALS

Minerals essential for animal life include *common salt* (sodium chloride), calcium, phosphorus, sulphur, potassium, magnesium, manganese, iron, copper, cobalt, iodine, zinc, molybdenum, and selenium. The last six of these are poisonous to animals if excessive amounts are eaten.

All farm animals generally need more common salt than is contained in their *feeds*, so they are supplied with it regularly and should have free access to it at any time.

Of the other *essential minerals*, phosphorus and calcium are the most important, because they are required to produce bones, milk, and egg shells. Moreover, the latter are nearly pure calcium carbonate. Good phosphorus supplements are bone meal, dicalcium phosphate, and *defluorinated phosphates*. Calcium may readily be supplied by *ground limestone*, ground *shells*, or *marl* that is high in calcium. To provide *livestock* with both calcium and phosphorus a farmer may allow animals to have free access to such a mixture as 60 per cent *dicalcium phosphate* and 40 per cent common salt. Small amounts of iodine are needed by animals for the formation of thyroxine, a compound containing iodine. The latter is usually secreted by the *thyroid gland* in the organism. A *serious deficiency* of iodine may cause *goitre*, a disease in which the thyroid gland enlarges greatly. In certain regions goitre has caused heavy losses of newborn pigs, lambs, kids, calves, and foals. Goitre can be prevented by supplying small amounts of *iodised salt* to the mother before the young are born. In some areas, soil and forage are deficient in copper and cobalt, which are needed along with iron for the formation of haemoglobin. In these areas, farm animals may suffer from anaemia if the deficiency is not corrected.

Iron, used in *haemoglobin formation*, is abundantly supplied in most animal feeds, except milk. The only practical problem with *iron deficiency* occurs in young suckling pigs before they start to consume other feeds in addition to milk.

Manganese is essential for animals, but the usual rations for all farm animals, except *poultry*, supply sufficient quantities of this element. A lack of manganese may cause the *nutritional disease* of chicks and young turkeys called *slipped tendon* and also may cause failure of eggs to hatch. Normal rations for swine are often deficient in zinc, especially in the presence of excess calcium. Adding 100 parts per million of zinc carbonate cures *zinc-deficiency symptoms*, which include slower growth rate and severe *scaliness and cracking* of the skin. A trace of selenium is necessary for normal health of animals; excessive amounts found in forages in some regions poison animals and may cause death. Very small amounts of *mineralized salt* are used when copper or cobalt may be required by animals.

4. Give the Ukrainian equivalents to the words in italics from the text.

e.g. common salt – *кухонна сіль*

essential minerals – *суттєво важливі мінерали*

5. Complete the table and use it to make an oral presentation about the role of minerals in animal nutrition.

Mineral	The significance of the mineral	The source of the mineral
Calcium	for animal bones; egg shell; milk production...	ground limestone, ground shells, marl...

6. Read and translate the text.

VITAMINS

The vitamins are classified as fat-soluble and water-soluble. The fat-soluble group includes vitamins A, D, E and K and the water-soluble group – vitamin C and the numerous members of the vitamin B complex.

Vitamin A is a colourless substance of known chemical constitution which is found in the liver oils of fish and animals. It is formed in the animal body from pigments called carotenoids associated in the plant with the green colouring material chlorophyll. Carotene is not very stable and is quickly destroyed in the presence of oxygen. Dried grass of high quality is the best source of the vitamin. Vitamin A

deficiency in young cattle is not uncommon. The main signs are failure to thrive, night blindness and, later, total blindness due to damage of the optic nerves. In all animals secondary bacterial infections occur where the deficiency is prolonged, and it may lead to the death of an animal.

Vitamin D was first identified as a substance, present in cod-liver oil, which was essential to the prevention of rickets. Vitamin D, in fact, is often called the anti-rachitic factor. Rickets, the disease due to vitamin D deficiency, is characterized by a failure of the animal to lay down calcium and phosphorus in its bones. Rickets can occur as a result of a deficiency of calcium or phosphorus in the diet.

Vitamin E is a dietary ingredient essential for the reproduction of rats.

Vitamin C is required only by guinea-pigs, humans, and the higher apes, where a lack causes scurvy. Farm animals and birds manufacture the vitamin in their systems.

Vitamin B complex. The remaining water-soluble vitamins are all grouped under this one name. No member of the vitamin B complex is required by adult ruminants, the reason being that the microorganisms of rumen, besides transforming food proteins and breaking down the fibrous constituents of feeds, manufacture the vitamins of B complex in sufficient amounts to meet the needs of their host. Before the rumen of the young animal is fully established it needs a source of these B complex vitamins in its ration, but once the rumen flora is established the need comes to an end. Recent experiments have shown that horses do require some member of the vitamin B complex, but it does not appear likely that practical rations would ever be deficient. Hence pigs and poultry, and the farm dog, are the only farm animals which are ever likely to suffer from major deficiencies.

7. Answer the following questions.

1. How are the vitamins classified?
2. What vitamins does the fat-soluble group include?
3. What substances does the water-soluble group include?
4. What is vitamin A like? Where is it found?
5. What are the main signs of vitamin A deficiency?
6. How was first vitamin D identified? Where is it found?
7. What is rickets characterized by?
8. What is vitamin E?
9. Do farm animals and birds require vitamin C and vitamin B complexes?

8. Group the following words into parts of speech.

Noun	Verb	Adjective
vitamin	classify	soluble

includes, numerous, complex, colourless, chemical, liver, is destroyed, stable, uncommon, failure, thrive, lead, was identified, is called, anti-rachitic, is characterized, deficiency, lay down, dietary, scurvy, is required, fibrous, appear, sufficient, suffer, deficient.

9. Fill in the gaps using the words in brackets.

(is prolonged, manufacture, is found, is formed, are likely, is destroyed, includes, occur, is required, is established).

1. The water-soluble group ... vitamin C and the numerous members of the vitamin B complex. 2. Vitamin A ... in the liver oils of fish and animals. 3. Vitamin A ... in the animal body from pigments called carotenoids. 4. Carotene ... in the presence of oxygen. 5. Secondary bacterial infections ... in all animals, where the deficiency of vitamin A 6. Vitamin C ... only by guinea-pigs, humans, and the higher apes. 7. Farm animals and birds ... the vitamin in their systems. 8. Before the rumen of a young animal ... it needs a source of B complex vitamins. 9. Pigs, poultry and farm dogs ... to suffer from major deficiencies.

10. Match the term with its definition.

1. vitamin	a) a chemical substance which is found in certain foods, and is important for growth and good health
2. substance	b) the quality of having none or not enough
3. constitution	c) the way in which something is put together, formation
4. deficiency	d) to experience pain, difficulty or loss
5. manufacture	e) to make or produce
6. suffer	f) a material type of matter

11. Use the following table to make a report about the role of vitamins in animal nutrition.

Vitamin	The importance of vitamin for animal's health	The source of vitamin
Vitamin A	growth, reproduction, milk production, resistance to respiratory infections	animals may convert carotene into vitamin A; green-growing grasses are rich in carotene
Vitamin D	enables animals to use calcium and phosphorus; a deficiency causes rachitis in young growing animals	the ultraviolet rays of sunlight produce vitamin D from the provitamin in the skin; feeding hay crops; certain fish oils
Vitamin E	for normal hatching of eggs; in preventing muscle stiffness and dystrophy in lambs, calves, and chicks	in certain plant oils and the leaves of green vegetables
Vitamins B: thiamine, riboflavin, niacin, biotin, Pantothenic acid, choline, folic acid, B ₆ , B ₁₂	less important for ruminant animals; but very young calves, poultry, swine, and other simple-stomached animals require the B vitamins in their diets	the bacteria in the rumen synthesize these vitamins
Vitamin C	unimportant for animals, but prevents scurvy in humans and guinea pigs	can be synthesized in the bodies of other animals
Vitamin K	usually unimportant	is synthesized by bacteria in the intestinal tract

UNIT 5. PROTEINS

1. Read and translate the text.

Proteins molecules are very large and complex and due to this complexity convey to living matter a great deal of its variability and specificity. The smallest protein molecule has a molecular weight of about 5,000 and the molecular weight of some proteins is as high as 40,000,000. The protein molecule is composed of amino acids which in turn are composed primarily of carbon, hydrogen, and nitrogen. In some proteins, phosphorous and sulfur are also present.

All living material, plant and animal alike, contains protein, but the type of protein varies considerably, not only from species to species but even between individuals.

Proteins consist of amino-acid molecules bonded by the so-called peptide bond. Each amino acid molecule is composed of a carboxyl group ($=\text{COOH}$) and an amino group ($=\text{NH}_2$) bonded to a radical (a group of atoms that acts as a unit but that does not normally exist in a free state) of some kind that contains a carbon skeleton. Twenty-four different amino acids exist in nature. The peptide bond which links one amino acid to another is formed between the carboxyl group of one amino acid and the amino group of another. In the formation of this bond, one molecule of water is given off. When the two amino acids are linked together, they constitute a dipeptide; three, a tripeptide; and a large number, a polypeptide. Protein molecules are composed of large numbers of polypeptide chains.

The number of different proteins which exist in nature is almost unbelievable, since the 24 amino acids can combine in any number and in any sequence to form a protein molecule.

Recently developed techniques permit the determination of the number and sequence of amino acids within an entire protein molecule. Because of these techniques involve an enormous amount of work and time, however, only a few proteins have been studied extensively. Insulin, a hormone secreted by the pancreas, was the first protein to be fully analyzed in this way. It is now known that the insulin molecule consists of two amino acid chains of unequal length. One chain contains only 21 units. These two polypeptide chains are held together by bonds involving two sulphur atoms.

Another protein which has been studied extensively is hemoglobin, the red pigment responsible for the colour of blood. Despite the complexity of its chemical formula the hemoglobin molecule is small- to medium-sized when compared to other

proteins. Interest in determining the amino acid sequence within this molecule originated in the study of a pathological condition known as sickle-cell anemia, a condition common in populations in Africa, around the Mediterranean, and in areas where malaria is prevalent. Investigations of this condition soon centered upon the structure of the hemoglobin molecule itself because in affected persons it appears to occupy less space, thus allowing the red blood cells to collapse into sickle-shaped structures. The number and sequence of the 19 amino acids in the hemoglobin molecule have now been determined. The difference between normal hemoglobin and hemoglobin from individuals with sickle-cell anemia involves only one amino acid. In the sickle-cell hemoglobin, valine is substituted in one place for glutamic acid in the normal hemoglobin molecule. The position of this one amino acid thus makes the difference between a normal condition and a condition which is often fatal.

Proteins are universally present in protoplasm and are primarily responsible for the structural and functional characteristics of living material. For example, all structural membranes associated with the cell have a protein component. The antibodies that help to inactivate and render harmless foreign proteins are themselves proteins. The special characteristics of some protein found in muscle tissue enable muscle cell to contract.

2. Answer the following questions.

1. What is the molecular weight of the smallest protein molecule?
2. What is the protein molecule composed of?
3. Which elements are also present in some proteins?
4. Do all living material, plant and animal contain protein?
5. How many amino acids are there in nature?
6. The peptide bond links one amino acid to another, does not it?
7. What hormone is secreted by the pancreas?
8. How many amino acid chains does insulin consist of? Are there polypeptide?
9. What is hemoglobin responsible for?
10. What is the size of hemoglobin?

3. Give the Ukrainian equivalents to the English ones.

protein, complex, due to, to convey, living matter, molecular weight, amino acid, in turn, carbon, nitrogen, sulphur, bonded by, peptide bond, a radical, a free state, given off, polypeptide chains, to permit, determination, sequence, enormous amount.

4. Match the following words.

1.	Secrete	A	нерівна довжина
2.	Pancreas	B	середовище
3.	Unequal length	C	виділяти
4.	Extensively	D	підшлункова залоза
5.	Medium	E	широкий

5. Make up the sentences using the following words.

- living matter
- a pathological condition
- hemoglobin molecule
- red blood cells
- exist in nature
- associated with
- structural and functional

6. Match the term with its definition.

1.	Bond	A	blood vessel suddenly becomes flat because it does not have any blood in it anymore;
2.	Collapse	B	a substance produced by your body to fight disease;
3.	Hemoglobin	C	a red substance in the blood that contains iron and carries oxygen;
4.	Insulin	D	the force that holds atoms together in a molecule;
5.	Antibody	E	a substance produced naturally by your body that allows sugar to be used for energy;

7. Make up a plan and retell the text “Proteins” with the help of it.

UNIT 6. CARBOHYDRATES

1. Read and translate the text.

Carbohydrates are composed of the elements carbon, hydrogen, and oxygen in the ratio of one carbon to two hydrogens to one oxygen. The ratio of hydrogen to oxygen, which is the same as in the water molecule, accounts for the name carbohydrate (literally, “hydrate of carbon”).

Carbohydrates are present in protoplasm in a variety of forms, ranging from the simple sugars with their relatively small molecules to the starches and cellulose, which have large and complex molecules. The carbohydrates may be chemically bound to proteins or to fats, or they may be free (that is, not linked to any other kind of molecule). In some tissues, carbohydrates are present in very small quantities; in others (for example, in the liver), the amount ranges as high as 15 per cent by dry weight.

Monosaccharides, commonly referred to as simple sugars, consist of single carbon chains and are the smallest of the carbohydrate molecules. They are usually named according to the number of carbon atoms in each molecule, plus a characteristic “-ose” ending. A three carbon sugar is called a triose; a five-carbon sugar, a pentose; and a six-carbon sugar, a hexose.

The commonest of the simple sugars are glucose and fructose ($C_6H_{12}O_6$). These simple sugars all have the same number of carbon, hydrogen, and oxygen atoms within their molecules but possess different chemical properties because of the arrangement of the atoms within the molecules. Hexose serves as a primary source of energy for cells or organisms. Two other monosaccharides, ribose and deoxyribose, are important to biological system. These pentoses are constituents of the nucleic acids that will be discussed in later section of this chapter.

Disaccharide sugars (two-carbon chains) are formed by the bonding together of two monosaccharide molecules, usually hexoses. Because a water molecule is lost when two such molecules are bonded together, the disaccharide has a chemical formula of $C_{12}H_{22}O_{11}$. Sucrose, or cane sugar, is formed by the bonding of a glucose molecule to a molecule of fructose. Maltose, another disaccharide, is formed when two glucose molecules are bonded together.

A large number of monosaccharide molecules can be bonded to each other to form polysaccharides. As each monosaccharide molecule is added, one molecule of water is lost in the same way as in the formation of a disaccharide molecule. Starches and glycogen are polysaccharides which represent stored carbohydrates in plants and

animals, respectively. When energy is needed by an organism, these stored carbohydrates can be broken down into large numbers of glucose molecules. Cellulose, another polysaccharide found in plants, forms the tough cell wall that gives both support and protection to the individual cell.

In addition to serving as an energy source for an organism or as protection for the plant cell, carbohydrates can also supply the carbon skeletons (carbon atoms linked together and associated with hydrogen and oxygen) that are necessary in the synthesis of other basic components of protoplasm. For example, the hexoses can be split to form two compounds containing three carbon atoms each. The three-carbon compounds or units can then be used to synthesize other essential compounds that normally contain only three carbon atoms.

2. Answer the following questions.

1. What are carbohydrates composed of?
2. Where are carbohydrates present in a variety of forms?
3. What does monosaccharide consist of? What are they usually named?
6. What is a three-carbon sugar called?
6. The most common of the simple sugars are glucose and fructose, are not they?
7. What are disaccharide sugars formed by?
8. What is the chemical formula of the disaccharide?
9. Which polysaccharides are mentioned in the text?
10. Where is cellulose found? What does it form? What does it give?

3. Give the English equivalents to the Ukrainian ones.

вуглеводи, протоплазма, різноманітність форм, крохмаль, целюлоза, хімічно зв'язані, білки, жири, тканини, мала кількість, суха маса, моносахариди, трьох валентний цукор, тріоза, пентоза, гексоза, глюкоза, розташування атомів, первинне джерело енергії, рибоза, дезоксирибоза, нуклеїнові кислоти, дисахариди, сахароза, мальтоза, полісахариди, формування, накопичувати, розпадатися, синтез основних компонентів.

4. Match the following words.

1.	Two-carbon sugar	A	pentose
2.	Three-carbon sugar	B	hesose
3.	Four-carbon sugar	C	triose

4.	Five-carbon sugar	D	disaccharide
5.	Six-carbon sugar	E	tetrose

5. Give the definitions of the following terms.

1.	To range	
2.	To bound	
3.	To store	
4.	To break down	
5.	To supply	

6. Form the adverbs from the following adjectives by means of the suffix *-ly* and translate them.

relative, common, usual, primary, respective, slight, great, especial, abundant, high, absolute, economical.

UNIT 7. NUCLEIC ACIDS

1. Read and translate the text.

The nucleic acids (deoxyribonucleic acid, or DNA, and ribonucleic acid, or RNA) are undoubtedly the most significant of the chemical compounds found in protoplasm. On the nucleic acid molecule is coded the genetic information that controls and directs all of the activities of protoplasm. Electron microscope studies indicate the nucleic acid molecule to be a threadlike molecule with a diameter so small that ten million molecules lying side would occupy only one inch. The molecule is extremely long, however. DNA is a compound of very high molecular weight (over one million).

Just as proteins are composed of amino acids, the nucleic acids are made up of hundreds of nucleotides, each nucleotide being composed of a five-carbon sugar, a phosphate group (PO_4), and a nitrogen base. The nitrogen base may be either a pyrimidine (Thymine, cytosine, or uracil) or a purine (adenine and guanine). Nucleotides are classified as ribose nucleotides or deoxyribose nucleotides according

to the sugar which they contain. Both ribose and deoxyribose are five-carbon sugars, but the deoxyribose molecule contains one less oxygen atom than ribose.

The designation of a nucleic acid molecule as RNA or DNA corresponds to the type nucleotide of which it is composed, each type molecule containing only one kind of nucleotide.

The accepted concept of the structure of the DNA molecule was proposed by Watson and Crick in 1953. In their model, an alternating sugar and phosphate arrangement forms the outside boundaries of the DNA molecule, while base pairs link the two sides together, the bases being attached to the sugar molecule on each side. The bases are not randomly arranged, but adenine and thymine are always paired, as are guanine and cytosine. The double chain which forms the nucleic acid molecule results when the purines and pyrimidines of one chain of nucleotides are bonded through hydrogen bonds to the purines and pyrimidines of the other chain. Each purine-pyrimidine combination is referred to as a base pair. X-ray diffraction studies of the molecular arrangement reveal that DNA is a double helix or a sort of “spiral ladder”, with the alternating sugar-phosphate groups forming the sides and the base pairs forming the rungs of the ladder. Each DNA molecule may have several thousand turns in its spiral configuration and many times this number of base pairs.

There seems to be no restriction on the number or sequence of these particular combinations of purines and pyrimidines within a nucleic acid molecule, and it is the number and sequence of the base pairs which codes the genetic information.

The component parts of the DNA molecule are, in a sense, an “alphabet”. It is the number of base pairs and the arrangement of these base pairs along the polynucleotide chain which convey to the cell the information which is utilized, through RNA, at the ribosome for synthesizing protein molecules. The portion of the DNA molecule on which is coded a single piece of information is the gene. The size of this segment no doubt is variable in length, depending upon the information coded.

Unlike the DNA molecule, RNA is a single-stranded. Also unlike the DNA molecule, uracil is substituted for thymine in the RNA molecule, so that uracil is paired with adenine. Guanine remains paired with cytosine. Three main types of RNA have been identified: messenger (mRNA), ribosomal (rRNA), and transfer (tRNA). These three types coded information on the DNA molecule.

2. Answer the following questions.

1. What are the nucleic acids?

2. What is DNA?
3. What is RNA? Where are they found?
4. Where is the genetic information coded?
5. What is the molecular weight of DNA?
6. What is the composition of one nucleotide?
7. How are nucleotides classified?
8. Who proposed the accepted concept of the structure of DNA?
9. What do X-ray diffraction studies of molecular arrangement reveal?
10. Is the RNA molecule single-stranded?

3. Give the Ukrainian equivalents to the English ones.

nucleic acids, chemical compounds, is coded, a threadlike, inch, molecular weight, nucleotides, a five-carbon sugar, phosphate group, a nitrogen base, a pyrimidine, a purine, designation, concept, outside boundaries, base pairs, are bonded, X-ray diffraction, double helix, spiral ladder, gene, segment, single-stranded, messenger, ribosomal, to transfer.

4. Match the translations to the following adverbs.

1.	Undoubtedly	A	на відміну від
2.	Extremely	B	проте
3.	However	C	довільно
4.	Randomly	D	надто
5.	Unlike	E	безсумнівно

5. Match the term with its definition.

1.	Concept	A	a series of rings, usually made of metal, connected together in a line, used as jewelry or for fastening things, supporting weights etc.;
2.	Arrangement	B	a series of related events, actions etc. which have a particular order and usually lead to a particular result
3.	Chain	C	an idea of how smth is or how smth should be done;
4.	Sequence	D	a line that curves and rises around a central line;

5.	Helix	E	smth that has been organized or agreed on;
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6. Complete the sentences using the following word combinations:

- DNA and RNA
- molecular weight
- hundreds of nucleotides
- five-carbon sugars
- Watson and Crick
- “alphabet”
- spiral ladder

Unit 8. GENERAL FACTS ABOUT MILK

1. Read and translate the text.

Milk is known to be highly nutritious, versatile food that has been used by humans since the beginning of recorded time. People enjoy drinking milk in its natural form and also use it to make a wide range of food products, including cream, butter, yoghurt, cheese, and ice-cream.

Humans drink the milk produced from a variety of domesticated mammals including cows, goats, sheep, camels, reindeer, buffaloes, and llama. Cow milk is the main type of milk used for commercial production and consumption throughout the world. However, the goat is believed to be an important milk producer in China, India, and other Asian countries and in Egypt. Although goat’s milk is also produced in Europe and North America but, compared to cow’s milk, goat’s milk is relatively unimportant. Dairymen know buffalo’s milk to be produced in commercial quantities in some countries, particularly India. In general, whether the milk is obtained from a cow or other species, the technology to be used for its processing will be the same.

It is interesting that the milk of all species contain the same nutrients, varying only in proportions. Although milk is a liquid composing of 80 to 90 per cent water and most often considered to be a drink, it contains between 12 and 13 per cent total solids and perhaps should be regarded as a food. The solid part of milk consists of an abundance of the major nutrients needed by the body for good health, including fats, carbohydrates, proteins, minerals, and vitamins.

Cow milk has been found to contain about 3.5 to 5 per cent fat, which is dispersed throughout the milk in *globules*. In addition to providing milk’s characteristic taste and texture, fat supplies vitamins A, D, E, and K, as well as certain fatty acids that the body cannot produce on its own.

Scientists consider sweet taste of milk to be due to *lactose*, a kind of sugar found only in milk. Making up about 5 per cent of milk’s content, lactose is a carbohydrate that is broken down by the body to supply energy. The most important

protein in milk is *casein*, accounting for 80 per cent of milk protein. Casein is known to be a complete protein, which means that it contains all the essential amino acids. Other proteins present in milk include albumin and globulin.

Milk contains many minerals, the most abundant of which are calcium and phosphorus, as well as smaller amounts of potassium, sodium, sulphur, aluminium, copper, iodine, manganese, and zinc.

Milk is likely to be the best dietary source of calcium, for the amount of this mineral in one litre of milk is quite enough to supply as much calcium as 21 eggs, 12 kg of lean beef, or 2.2 kg of whole wheat bread. Milk has been proved to be an excellent source of vitamins A and B2. Besides, all other vitamins are present also, though in lower amounts. The milk to be sold commercially should be fortified with vitamin D. Vitamin A found in the globules of fat is removed when fat is skimmed away to make low-fat or skim milk. Generally, vitamin A is also added during the production of commercially sold low-fat milk.

Many factors influence the composition of milk, including breed, genetic constitution of the individual cow, age of the cow, stage of lactation, interval between milkings, and certain disease conditions. In general, the type of feed only slightly affects the composition of milk.

2. Find proper equivalents in your native language. Learn them.

to be used for commercial production and consumption _____
to be produced in commercial quantities _____
to be obtained from a cow _____
a liquid composing _____
an abundance of the major nutrients _____
the best dietary source _____
to be an excellent source _____
to be sold commercially _____
the composition of milk _____
low-fat or skim milk _____
to be broken down by the body _____
to be fortified with vitamin D _____
milk's characteristic taste and texture _____

3. Choose True or False.

1. Cow milk is the main type of milk used for commercial production and consumption throughout the world. _____
2. Scientists consider sour taste of milk to be due to lactose, a kind of sugar found only in milk. _____
3. The most important protein in milk is casein, accounting for 50 per cent of milk protein. _____
4. Milk contains between 12 and 13 per cent total solids and perhaps should be regarded as a food. _____

5. Milk contains many minerals, the most abundant of which are iodine and manganese. _____

4. Make up phrases.

1. a wide range of	A. commercial quantities
2. milk contains	B. the major nutrients
3. to be produced in	C. milk's characteristic taste and texture
4. an abundance of	D. food products
5. to provide	E. many minerals

5. Match the words with their synonyms.

1. commercial (adj.)	A. formation; constitution; content.
2. composition (n.)	B. copiousness; plenteousness; generosity.
3. consumption (n.)	C. especially; notably.
4. abundance (n.)	D. profit-making; money-oriented; profitable.
5. particularly (adv.)	E. using up; ingestion.

6. Explain the following words.

Texture

Low-fat milk

Mammal

Dairyman

Milking

7. Answer the following questions.

1. What is milk?
2. What mammals are the main producers of milk?
3. Why does milk have sweet taste?
4. What nutrients is milk rich in?
5. How many per cent of fat does cow milk contain?
6. What minerals and vitamins does milk contain?

Unit 9. TYPES OF MILK AND MILK PRODUCTS

1. Read and translate the text.

Milk in its natural form, directly from a cow, is called *raw milk*. It is an extremely versatile product from which a countless number of commercial products

are derived. Varying amounts of fat to be removed from the raw milk, it is possible to obtain different kinds of milk. If the fat content is lowered to 3.25 per cent, the milk is sold as *whole milk*. *Low-fat milk* typically has 1 per cent or 2 per cent fat. *Skim milk*, or nonfat milk, is the liquid that remains after removing all the cream; it contains about half a per cent of milk fat.

Condensed, evaporated, and powdered milk are produced by evaporating some or all of the water in milk. Whole, low-fat, and skim milk, as well as whey and other dairy liquids, can be efficiently concentrated by the removal of water, using heat under vacuum. Whether the milk is condensed or powdered, the obtained products are sure to have long shelf lives.

For a product to be labeled as *cream*, it must contain 18 per cent milk fat or more.

When chilled cream is churned gently, the fat globules gather together to form *butter*, leaving buttermilk as the by-product. Butter is supposed to contain at least 82.5 per cent fat.

Ice cream, a popular frozen dessert, is made of milk, cream, sugar, and flavouring. The mixture is slowly beaten while chilled until it is partially frozen, then packed into containers, and chilled until firm. Variants of ice cream include ice milk, which contains less fat; sherbet, which has even less fat; and French ice cream, which is enriched with egg yolks.

Fermented milk products, including *yoghurt and cheese*, are formed when bacteria break down lactose to produce lactic acid, which makes the milk sour. Yoghurt is usually made from milk that has been fortified by the addition of nonfat powdered milk to improve its texture and taste. The two most popular types of yoghurt sold in many countries are Swiss-style, with added fruit mixed throughout, and sundae-style, with fruit on the top or bottom.

Cultured buttermilk and sour cream, like yoghurt, are produced by the breakdown of lactose by bacteria. In the past, cultured buttermilk proved to have been made from buttermilk, but now dairymen more commonly make cultured buttermilk from skim milk. Sour cream is made from cream. Both buttermilk and sour cream have a sour taste due to lactic acid.

Cheese is thought to be one of the world's oldest and most versatile foods in the world. Nutritionists say cheese to be a concentrated source of almost all the valuable nutrients found in milk, such as protein, vitamins, and minerals, as well as the less desirable fat and cholesterol, substances that may lead to health problems when consumed in excess. The fat content in cheese varies depending on whether the whole or skim milk is used. Cheese to be made with whole milk, or milk enriched with cream will have the highest amount of fat, cholesterol, and calories but cheese made from skim milk has the lowest one. Many cheeses are now made from pasteurized milk, decreasing the likelihood that harmful bacteria will contaminate cheese during the ripening process.

2. Find proper equivalents in your native language. Learn them.

raw milk _____

whole milk _____

skim milk _____

condensed, evaporated, and powdered milk _____

cultured buttermilk and sour cream _____

to be produced by the breakdown of lactose by bacteria _____

using heat under vacuum _____

to have a sour taste due to lactic acid _____

to be a concentrated source of nutrients _____

3. Guess the word.

something that is added to food or drink to give it a particular taste **f** _ _ _ _ _

to separate (something, such as a chemical compound) into simpler substances

b _ _ _ _ _

the visual or tactile surface characteristics and appearance of something **t** _ _ _ _ _

the ability to tell the difference between flavors in your mouth **t** _ _ _ _

4. Match to make expressions.

- | | |
|---------------|----------------------------|
| 1. to improve | A. to health problems |
| 2. to obtain | B. lactic acid |
| 3. to lead | C. long shelf lives |
| 4. to produce | D. its texture and taste |
| 5. to have | E. different kinds of milk |

5. Match to make expressions.

- | | |
|---------------------|---|
| 1. versatile (adj.) | A. possibility; probability; prospect; tendency; trend; direction |
| 2. evaporate (verb) | B. advantageous; advisable; beneficial; profitable |
| 3. likelihood (n.) | C. damaging; destructive; detrimental; disadvantageous |
| 4. harmful (adj.) | D. many-sided; universal; multifunctional; general-purpose |
| 5. desirable (adj.) | E. disappear; melt; vanish; dissolve |

Unit 10. MEAT AND MEAT PRODUCTS

1. Read and translate the text

Meat and meat products are an important part of many people's diets, providing a valuable source of protein, vitamins, and minerals. However, the *production and consumption* of meat and meat products have become increasingly *controversial* in recent years, with concerns ranging from *animal welfare* and *environmental impact* to *health implications*.

However, the intensive farming practices used to produce meat have raised concerns about animal welfare, with many people advocating for more humane and *sustainable farming methods*. Additionally, the environmental impact of meat production, including *greenhouse gas emissions* and *deforestation*, has led to calls for reduced meat consumption or alternative protein sources.

In addition to fresh meat, there are many different meat products available, including sausages, bacon, and *deli meats*. These products are often highly processed and can contain additives and preservatives, raising concerns about their health implications.

When buying and preparing meat and meat products, it is important to consider both the quality and safety of the product. *Proper storage, handling, and cooking techniques* can help to prevent the growth of harmful bacteria and ensure that the meat is safe to eat.

In conclusion, meat and meat products remain a popular and important part of many diets, but it is important to consider the ethical, environmental, and health implications of their production and consumption. By making informed choices and supporting sustainable and humane farming practices, we can continue to enjoy the benefits of meat while minimizing its negative impacts.

2. Translate the words and word-combinations.

production and consumption _____

environmental impact _____

health implications _____

animal welfare _____

sustainable farming methods _____

greenhouse gas emissions _____

deforestation _____

controversial _____

deli meats _____

proper storage _____

handling _____

cooking techniques _____

3. Choose True or False.

1. Meat and meat products provide a valuable source of protein, vitamins, and minerals. _____
2. The production and consumption of meat and meat products have become less controversial in recent years. _____
3. Different types of meat, such as beef, pork, chicken, and lamb, have similar nutritional profiles. _____
4. Intensive farming practices used in meat production have raised concerns about animal welfare. _____
5. Meat products, including sausages and bacon, are typically minimally processed and free of additives. _____
6. Proper storage, handling, and cooking techniques can help prevent the growth of harmful bacteria in meat. _____
7. Meat and meat products should be consumed without any consideration for their quality and safety. _____

4. Make up phrases.

- | | |
|----------------|---|
| 1. to enjoy | a) additives and preservatives |
| 2. to provide | b) the growth of harmful bacteria |
| 3. to consider | c) a valuable source of protein, vitamins, and minerals |
| 4. to contain | d) the benefits of meat |
| 5. to prevent | e) both the quality and safety of the product |

5. Guess the word.

- a) the action or method of storing something for future use **s**_____
- b) the act of using, eating, or drinking something **c**_____
- c) have a strong effect on someone or something **i**_____
- d) the general health, happiness and safety of a person, an animal or a group
w_____

6. Match the words with their synonyms.

1. controversial (adj.)
 2. welfare (n.)
 3. sustainable (adj.)
 4. quality (n.)
 5. handling (n.)
-
- a) continuous, renewable, supportable, unending
 - b) standard, class, condition, value, classification
 - c) administration, care, running, approach

- d) polemic, difficult, problematic, argumentative
- e) well-being, health, happiness, comfort

7. Answer the following questions.

1. What do meat and meat products provide in people's diets?
2. Have the production and consumption of meat and meat products become increasingly controversial in recent years?
3. How are different types of meat typically classified?
4. What concerns have been raised about animal welfare in relation to meat production?
5. What are some environmental impacts associated with meat production?
6. Are there concerns about the health implications of processed meat products?
7. What measures can help prevent the growth of harmful bacteria in meat?
8. Why is it important to consider the ethical and environmental impact of meat production?
9. Should the quality and safety of meat and meat products be considered when purchasing and preparing them?
10. What can individuals do to minimize the negative impacts of meat production?

Unit 11. MEAT PROCESSING TECHNOLOGY

1. Read and translate the text.

Meat processing technology means turning raw meat into safe and tasty food products. There are different stages involved in transforming meat from animals into the meat products that we find in stores and enjoy on our plates.

1. Slaughtering and Dressing: The first step in meat processing is the humane and careful slaughter of animals. This ensures that the animals are treated respectfully. After the animals are slaughtered, they undergo dressing. Dressing involves removing the insides, blood, and skin from the animal, preparing it for further processing.

2. Aging and Inspection: After dressing, the meat is aged under controlled conditions. Aging helps to make the meat more tender and tasty. During this time, the meat is also inspected to make sure it meets the quality and safety standards set by the authorities.

3. Cutting and Portioning: Once the meat has aged, it is cut into different pieces. Skilled workers, called butchers, use their expertise to cut the meat into smaller parts. These parts can include things like steaks, roasts, and chops, which are the pieces we cook and eat.

4. Meat Preservation and Enhancement: Preservation methods are used to make sure the meat stays fresh for a longer time and to enhance its flavor. Some common preservation methods include chilling, freezing, smoking, and curing.

Chilling and freezing help to keep the meat fresh by slowing down the growth of bacteria. Smoking and curing add special flavors to the meat.

5. Meat Processing Techniques: There are different techniques used to process meat. One technique is grinding, which turns larger pieces of meat into ground meat. Ground meat is often used to make things like sausages and meatballs. Another technique is marinating, where the meat is soaked in a seasoned liquid to make it more flavorful and tender. Tenderizing is another technique that makes the meat more tender by breaking down its tough parts. Seasoning with spices and herbs adds delicious flavors to the meat.

6. Packaging and Quality Control: After the meat is processed, it is packaged to keep it fresh and safe. The packaging includes labels with important information, such as the expiration date and nutritional content. Quality control is also done throughout the process to make sure the meat is of good quality and safe to eat.

Meat processing technology involves different stages, from slaughtering and dressing to cutting, preservation, and packaging. By understanding these basic concepts, we can appreciate the work that goes into making meat products safe and tasty. Next time you enjoy a delicious meat dish, you'll have a better understanding of the process that brought it from the farm to your plate.

2. Translate the words and word-combinations.

slaughtering and dressing _____
aging and inspection _____
cutting and portioning _____
meat preservation and enhancement _____
meat processing techniques _____
packaging and quality control _____
respectfully _____
ground meat _____
butchers _____
seasoned liquid _____
delicious flavors _____
to undergo _____

3. Choose True or False.

1. Meat processing technology involves transforming raw meat into safe and tasty food products. _____
2. Aging helps to make the meat more tender and flavorful. _____
3. Slaughtering and dressing are the final stages in meat processing. _____
4. Freezing is a preservation method used to slow down bacterial growth in meat. _____
5. Grinding is a technique used to turn larger pieces of meat into ground meat. _____
6. Packaging is not important in meat processing. _____

7. Marinating involves soaking the meat in a seasoned liquid to enhance its tenderness. _____
8. Quality control measures are not implemented throughout the meat processing process. _____
9. Chilling and freezing are preservation methods that add distinct flavors to the meat. _____
10. Ground meat is often used to make things like sausages and meatballs. _____

4. Complete the table with the processing step in the column A according to its description in the column B.

A	B
	To give the labels with important information, such as the expiration date and nutritional content.
	The humane and careful slaughter of animals; removing the insides, blood, and skin from the animal, preparing it for further processing.
	Grinding, marinating, tenderizing, seasoning with spices and herbs adds delicious flavors to the meat.
	The meat is aged under controlled conditions that help to make the meat more tender and tasty.
	Chilling, freezing, smoking, and curing. Chilling and freezing help to keep the meat fresh by slowing down the growth of bacteria. Smoking and curing add special flavors to the meat.
	Skilled workers, called butchers, use their expertise to cut the meat into smaller parts. These parts can include things like steaks, roasts, and chops, which are the pieces we cook and eat.

5. Explain the meat processing techniques.

Grinding _____
 Marinating _____
 Tenderizing _____
 Seasoning _____

6. Make up phrases.

- | | |
|---------------|-------------------------------------|
| 1. to meet | a) special flavors to the meat |
| 2. to cut | b) the meat for further processing |
| 3. to keep | c) the quality and safety standards |
| 4. to add | d) the meat fresh |
| 5. to prepare | e) into different pieces |

7. Match the words with their synonyms.

1. tender (adj.)
 2. flavor (n.)
 3. respectfully (adv.)
 4. expertise (n.)
 5. preservation (n.)
-
- a) skill, proficiency, competence, expert knowledge
 - b) delicate, gentle, sensitive
 - c) conservation, protection, maintenance, safeguarding
 - d) politely, considerately, graciously
 - e) taste, savor, essence, aroma

8. Answer the following questions.

1. What is the purpose of the aging process in meat processing?
2. What are common preservation methods used in meat processing?
3. Who is responsible for cutting the meat into smaller portions?
4. What is the role of marinating in meat processing?
5. How does tenderizing contribute to the quality of meat?
6. What are some examples of primal cuts in meat processing?
7. Why is packaging important in meat processing?
8. What are some quality control measures implemented in meat processing?
9. What happens during the dressing stage of meat processing?
10. What is the significance of inspecting the meat during the processing?

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