

**MINISTRY OF EDUCATION AND SCIENCE
OF UKRAINE
National Aviation University**

COMMODITY SCIENCE

**GUIDE TO PRACTICAL CLASSES
for higher education seekers
of bachelor's degree
specialty 075 «Marketing»**



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Kyiv 2023

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Практикум містить короткий виклад теоретичного матеріалу до тем дисципліни, тестові питання та практичні завдання для закріплення пройденого матеріалу.

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Guide to practical classes contains a brief information on theoretical part of the discipline, test questions and practical tasks to consolidate the material covered.

Intended for higher education seekers of bachelor's degree, specialty 075 "Marketing".

INTRODUCTION

At the present stage of Ukraine's economic development, the issue of continuous supply and effective growth of the consumer goods market is becoming increasingly important. The growth of the number of trade enterprises and the development of industrial production leads to positive trends in improving their business activities and increasing sales of various groups of goods. In the conditions of economic development, the market of food and non-food goods is constantly expanding, which in turn requires constant and effective state control of product quality and safety of all types of products to ensure the interests of the population.

Commodity science is a science that systematically studies goods at all stages of the life cycle, namely: methods of cognition of their consumer value; regularities of assortment formation; qualitative aspects; circulation and consumption. In modern conditions, research in the field of commodity science and high professional training can solve problems related to the supply of high quality and relevant goods.

Requirements for commodity science as a discipline are the following components: the formation of students' strong knowledge of classification, range, standardization of goods, their useful properties, quality, modern conditions and methods of preservation, developing skills to assess the quality of goods.

The purpose of studying this discipline is the formation of modern knowledge and specific skills in the study of the basic characteristics of the product, which constitute its consumer value, as well as their changes at all stages of trade, which they need for practical work in trade and industrial enterprises of all forms of ownership.

The main objectives of the discipline "Commodity Science" are:

- acquisition by applicants of knowledge about the principles and methods of commodity science, which determine its scientific basis;
- formation of a clear definition of the basic characteristics of the components of consumer value;
- systematization of many goods through the rational use of methods of classification and coding;
- study of properties and indicators of assortment for the analysis of assortment policy of the industrial or trade organizations;
- formation of skills in managing the range of organizations;

- acquisition by applicants of knowledge and skills on the requirements for the quality of goods, methods of quality control of goods that ensure the objectivity of the results, the minimum cost of resources and time;

- to help applicants to acquire skills and abilities for independent application and improvement of quality and quantity of goods at different stages of their technological cycle by considering the factors responsible for the formation, regulation and preservation;

- to form in applicant's knowledge of the theory of information support of the movement of goods from producer to consumer;

acquisition by applicants of knowledge and skills for the development of recommendations for the supervision of goods in the process of storage and transportation.

The discipline "Commodity Study" is one of the profile disciplines for the training of marketing specialists. It is aimed at applicants who already have basic knowledge of marketing and will help to master the basic categories and provisions of the theory of commodity science; to acquire practical skills in the formation of the range, product identification, quality control and learn to apply the acquired theoretical knowledge in practical commodity research activities.

Practical lesson 1

SUBJECT, TASKS AND KEY CONCEPTS OF THE COURSE

Plan

1. History of commodity science development.
2. The purpose and objectives of commodity science as a science.
3. Principles of cargo science.
4. Methods of cognition in commodity science.

Basic theoretical information

The purpose of the lesson is to study theoretical issues of components of commodity science and the main factors that influenced its development.

After studying the theoretical issues of practical training 1 applicant must:

- *Know* the content of commodity science, its essence, tasks, principles and basic characteristics of commodity science, which affect the formation of commodity skills;
- *be able to* clearly and reasonably form the goals and objectives of commodity science, use knowledge of the basic characteristics and methods of cognition in commodity science.

A market economy is an economic system in which economic decisions and the pricing of goods and services are guided by the interactions of a country's individual citizens and businesses. There may be some government intervention or central planning, but usually this term refers to an economy that is more market oriented in general. In a market economy, the product determines the fate of the enterprise-manufacturer and enterprise-seller, whose commercial success depends on the availability of high quality and profitable for the buyer of goods [1]. The buyer from the manufacturer only needs to meet their needs. The main task of the entrepreneur-manufacturer and entrepreneur -seller is to choose the right product that the buyer needs at the moment.

Commodity science is knowledge about goods. Commodity study is a scientific discipline that studies the consumer properties and range of goods. State Standard of Ukraine 3993–2000 "Commodity Science. Terms and Definitions" provides the following definition of commodity

science as a scientific discipline: Commodity study is a scientific discipline that systematically studies goods at all stages of the life cycle, methods of knowing their consumer value, patterns of assortment and quality requirements to ensure the efficiency of their production, circulation and consumption.

An actually problem of commodity science is the development of scientific and theoretical foundations for the formation of trade range and quality management of goods in a market economy.

The object of commodity study is goods as products of labor to meet the needs of consumers and methods of their theoretical and practical knowledge.

Thus, the objects of commodity science are goods, as well as everything related to them: storage processes, movement of goods, preparation for sale, quality control, packaging, labeling.

The subject of commodity study is consumer value of goods, patterns of its manifestation and preservation. A commodity is a product of labor that has the ability to meet the specific needs of man, which is distributed in society through purchase and sale.

Subjects of commodity study are individuals and legal entities or organizations as bearers of certain rights and responsibilities that have the motivation to explore consumer prices. Entrepreneurs, consumers and the state are the subjects of commodity science.

– Entrepreneurs research and form the consumer value of goods in order to make a profit and determine what to produce, how much to produce, what quality, at what price to sell.

– Consumers research and shape the consumer value of goods in order to determine their consumer value to ensure their livelihoods: determine the usefulness and social significance of the goods, which determine the price that the consumer could pay for the goods.

– The State researches and forms the consumer value of goods in order to compromise the interests of entrepreneurs and consumers, ensure maximum taxes on business, ensure social obligations to the population, defined by the Constitution on quantity, quality and safety of goods, truthful and timely information about them, their availability.

The purpose of commodity study is to study the basic characteristics of the product, which make up its consumer value, as well as their changes at all stages of trade.

To achieve the goal of commodity study as a science and academic discipline must solve the following tasks:

- clear definition of the basic characteristics that make up consumer value;
- establishing the principles and methods of commodity science, which determine its scientific basis;
- systematization of many goods through the rational use of methods of classification and coding;
- study of the properties and indicators of the range for the analysis of the assortment policy of the organization, the management of the range of the organization;
- definition of the nomenclature of consumer properties and indicators of goods;
- assessment of product quality;
- information support for the movement of goods from producer to consumer and so on.

Goods as objects of commodity activity have four main characteristics: assortment, quality, quantity and value.

The subject of commodity science is the consumer value of goods.

Goods are anything that can satisfy a need or shortage and are offered to the market in order to attract attention, purchase or use.

A commodity is a product of labor capable of satisfying any human need and is intended for sale or exchange [6].

The formation of goods as an object of exchange necessitated its study and description.

The development of production of goods has led to an increase in the range of goods produced and, as a result, there is a need to improve and study the science of "Commodity Science", the formation of which can be divided into three main stages [3].

Commodity science is a scientific discipline, the subject of which is the consumer properties of goods that underlie their consumer value [10].

The subject of commodity science is the consumer values of goods, as well as methods of their knowledge and provision. Only consumer value makes products a commodity. If the consumer value of a product does not meet the real demands of consumers, it will not be in demand, will not be used.

Products are tangible and intangible results of activities designed to meet real and potential needs.

The purpose of commodity science is to study the consumer properties of goods and all the changes that occur with the goods at all stages of movement.

Goods as objects of commodity activity have four main characteristics: range; quality; quantitative; valuable.

The first three characteristics – commodity, meet the real needs of man, determining the consumer value of goods. Due to these characteristics, the product becomes useful for certain segments of consumers and becomes a commodity [13].

Thus, the product, as a product made for exchange or sale, due to the dual nature of labor expended on its production, is characterized by two sides: exchange and consumer value.

Consumer goods include goods of industrial, agricultural and small enterprises, intended for sale in circulation in order to meet the material and cultural needs of the population [15].

It is the study of consumer values of this group of goods and is engaged in modern commodity science.

Commodity science belongs to the group of applied economic disciplines, as part of which it develops in close cooperation with accounting and economic disciplines, marketing, etc.

Since commodity science belongs to the economic sciences, its methodology is the study of methods, especially the scientific method, in relation to economics, including the principles of inference knowledge.

Literature: [1]; [3]; [6]; [10]; [13]; [15].

Practical tasks

Prepare reports on the following topics:

1. The main components of commodity science.
2. The ratio of marketing and commodity, their unity and contradictions.
3. Discover the essence of the basic product characteristics.
4. Commodity science as a science: history of formation and development.

Tests

1. *The stage of development of commodity science, during which the description of goods in alphabetical order without their systematization is ... ?*

- A. Commodity-forming.
 - B. Commodity-descriptive.
 - C. Commodity-technological.
 - D. Commodity-functional.
 - E. Commodity-progressive.
2. *What are the basic characteristics of goods as objects of commodity activity?*
- A. Assortment, qualitative, quantitative, cost.
 - B. Assortment, quality, functional, operational.
 - C. Qualitative, quantitative, functional, environmental.
 - D. Quantitative, functional, environmental.
 - E. Cost, operational, functional.
3. *The principle of commodity science, the essence of which is the absence of unacceptable risk associated with the possibility of harm to life, health and property is ...*
- A. Systematization.
 - B. Security.
 - C. Compatibility.
 - D. Efficiency.
 - E. Interchangeability.
4. *What is the characteristic of the product as an object of commodity activity, which product has a price?*
- A. Assortment.
 - B. Qualitatively.
 - C. Valuable.
 - D. Quantitatively.
 - E. Functional.
5. *What method of researching the level of quality is to collect and analyze the views of consumers?*
- A. Sociological.
 - B. Expert.
 - C. Registration.
 - D. Experimental.
 - E. Economic and statistical.

Questions and tasks for self-test

1. What does the science of "commodity" study? Name the subject and purpose of the discipline.
2. What are the three main periods of development of commodity science as a science identified by scientists?

3. Explain the meaning of the main terms used in commodity science.
4. What are the four main characteristics of goods as objects of commodity activity?
5. What is a product and its consumer value?
6. Name and describe the basic principles of commodity science.
7. What are the methods of cognition in commodity science?

Practical lesson 2

GOODS AS AN OBJECT OF COMMODITY STUDY AND COMMERCIAL ACTIVITIES

Plan

1. Subjects and objects of cognitive activity goods.
2. Consumed cost of goods and its characteristics.
3. Goods as a tool for reconciling the economic interests of producers and consumers.

Basic theoretical information

The purpose of the lesson is to study theoretical aspects of the basic concepts of commodity and commercial activities.

After studying the theoretical issues of practical lesson 2, the applicant must:

- *Know* and understand the product as an object of commodity and commercial activities, taking into account its consumer value, which affects the process of reconciling economic interests;
- *be able to* clearly and thoroughly formulate the goals and objectives of the consumer value of goods to reconcile the economic interests of both consumers and producers.

Subject is the carrier of subject-practical activity and knowledge, the source of activity aimed at the object.

Subjects of commodity research activities are divided into two groups [3]:

- Commodity experts are specialists who ensure the promotion of goods from producers to consumers, taking into account the basic characteristics of the product, as well as the needs of potential buyers.
- consumers, the needs of which are aimed at all commodity research activities.

An object is an object (phenomenon) to which any activity is directed [6].

The objects of commodity activity are goods. Goods are an exchange item, not limited in turnover, freely alienable and one that passes from one person to another under a contract of sale [1].

There is also a statement that the object of commodity science is the products of labor, which are distributed through purchase and sale, i.e. acquire the form of goods, and meet personal and social needs [10].

Goods as an object of commercial activity are characterized primarily by the concept of "utility".

Usefulness is a combination of rational economic factors and characteristics of the product, as well as subjective assessment of its image.

As for the concept of "consumer value of goods", it is the difference between the total usefulness of goods and consumer spending on its purchase.

Thus, the consumer value of goods acts as a measure of their usefulness and is manifested through the basic commodity characteristics.

The economic interests of market participants are characterized by their contradiction, which manifests itself primarily as a mismatch between the interests of enterprise and consumer. This situation is explained by the opposite position of the producer and consumer in the chain "production - exchange - consumption" [13].

Literature: [1]; [3]; [6]; [10]; [thirteen].

Practical tasks

Prepare reports on the following topics:

1. The difference between consumer properties and consumer value of goods.
2. General definition of objects of commodity activity.
3. Goods as an object of commodity science.
4. The relationship between the concepts of "goods" and "products".
5. Basic characteristics of the product.
6. The relationship between the concepts of "goods" and "human needs".
7. Classification of human needs.
8. Consumer value of goods and human needs: the relationship and contradictions.
9. Relationship between the main characteristics of the product and its competitiveness.
10. Relationship between price and product quality.

Tests

1. *What are the objects of commodity science?*
 - A. Goods, as well as the processes of their storage, movement, preparation for sale, quality control, packaging, labeling.
 - B. Only the processes of storage of goods.
 - C. Only the process of production (goods, works, services).
 - D. Only goods.
 - E. Consumer characteristics of goods.
2. *What is the principle of commodity science, which is to achieve the most optimal result in the production, packaging, storage, sale and consumption of goods?*
 - A. Interchangeability.
 - B. Security.
 - C. Compatibility.
 - D. Efficiency.
 - E. Timeliness.
3. *What is the name of the method of determining the level of quality, based on the perception of the senses without the use of technical measuring or recording means?*
 - A. Experimental.
 - B. Estimated.
 - C. Economic and statistical.
 - D. Organoleptic.
 - E. Expert.
4. *What methods allow using instruments, reagents to determine the physical, chemical, microbiological, physiological properties, energy value, etc.?*
 - A. Estimated.
 - B. Mathematical.
 - C. Laboratory.
 - D. Sensory.
 - E. Sociological.
5. *The subject of commodity science is:*
 - A. Goods as products of labor to meet consumer needs and methods of their theoretical and practical knowledge.
 - B. Consumer value of goods, patterns of its manifestation and preservation.

C. Scientific discipline that studies consumer properties and product range.

D. The product of labor, which has the ability to meet the specific needs of man, which is distributed in society through purchase and sale.

E. There is no correct answer.

Questions and tasks for self-test

1. Provide a thorough description and give examples of product range characteristics.

2. Provide a thorough description and give examples of qualitative characteristics of goods.

3. Provide a thorough description and give examples of quantitative characteristics of goods.

4. Describe the consumer function of goods.

5. Describe the marketing function of goods.

6. Describe the commercial function of goods.

7. Describe the legal function of goods.

8. Describe the financial function of goods.

9. Provide a thorough description and give examples of subjects of commodity activity.

Practical lesson 3

CONSUMER PROPERTIES OF GOODS

Plan

1. Requirements for goods.

2. Concept on consumer properties of goods.

3. Classification of consumer properties of goods.

Basic theoretical information

The purpose of the lesson is to study theoretical aspects of basic concepts of consumer properties of goods.

After studying the theoretical issues of practical lesson 3, the applicant must:

– *Know* and understand the main objectives of consumer properties of goods, their requirements and classification;

– *be able to* clearly formulate requirements for consumer properties and operate with the classification features of goods.

Requirements for goods are a set of qualitative and quantitative characteristics of the goods, which reflect the perception of consumers about the required value of the goods in the case of its intended use in the established conditions of circulation and consumption [13].

The nature and degree of requirements for goods depend on: material and cultural standard of living; purpose of the goods; availability of raw materials; technical and economic capabilities of production; degree of awareness of the product [3].

Requirements for the quality of goods can be current and future, general and specific.

As for the properties of goods, they depend primarily on the natural properties of raw materials and components, as well as the structure and properties acquired in the technological process of production [15].

It is convenient to evaluate natural properties in the product by quantitative and qualitative characteristics.

Quantitative characteristics are one of the main. When determining it, a distinction should be made between the following quantitative gradations: single copies of goods and their totality - consignments, complex packaging units and sets of goods [1].

All goods (single copies and consignments) have general and specific quantitative characteristics.

An important task of commodity science is to identify the maximum set of product properties that are responsible for its quality.

Consumer value and usefulness are acquired properties in the process of conscious consumer choice and are characterized by an objective-subjective component.

Properties are signs that are inherent in material objects and determine their differences or commonalities with other objects and are manifested in relation to each other.

The set of properties and indicators that determine the satisfaction of real or anticipated needs is called the nomenclature of consumer properties and indicators. In fact, this nomenclature determines the qualitative characteristics of consumer goods.

Within the nomenclature, consumer properties and quality indicators of goods are divided into groups and subgroups depending on their characteristics and needs [6].

The nomenclature of quality indicators must correspond to the nomenclature of consumer properties. The structure of consumer

properties and quality indicators may vary depending on the purpose of the product, the functions it performs, the level of scientific and technical achievements and knowledge about the product.

Literature: [1]; [3]; [6]; [thirteen]; [15].

Practical tasks

Prepare reports on the following topics:

1. Classification of natural properties of goods by nature.
2. Discover the essence of the following concepts: single copies, complex packaging unit, set of goods, consignment.
3. Consumer properties of goods and groups into which they are divided.
4. Functional properties of goods.
5. Indicators of aesthetic properties and their main characteristics.
6. Basic types of product safety.

Tests

1. Which of the following properties of the product are not natural?

- A. Chemical.
- B. Biological.
- C. Operational.
- D. Physical.
- E. Physico-chemical.

2. What properties are characterized by indicators of mass, specific gravity, optics, electricity?

- A. Sensory properties.
- B. Biological properties.
- C. Geometric properties.
- D. Chemical properties.
- E. Physical properties.

3. Which of the following properties of the product do not apply to consumers?

- A. Functional.
- B. Ergonomic.
- C. Security.
- D. Aesthetic.
- E. Biological.

4. *What consumer properties of the product determine the use of products for their intended purpose as a consumer, i.e. characterize their ability to meet certain human needs?*

- A. Operational.
- B. Functional.
- C. Ergonomic.
- D. Aesthetic.
- E. Environmental.

5. *What properties of the product characterize the conformity of the design of the product and its elements to the shape and weight of the human body?*

- A. Psychophysiological.
- B. Anthropometric.
- C. Sanitary and hygienic.
- D. Psychological.
- E. Environmental.

6. *Social properties of the product characterize:*

- A. Behavior of the product during its operation (consumption).
- B. Convenience and comfort of operation of products at all stages of the functional process in the system "man-goods-environment".
- C. The level of harmful has an effect on the environment that can be caused by the operation of the product.
- D. Conditions that in the process of operation of the product affect the body and human performance.
- E. Conformity of products to socially necessary needs, their social significance for different groups of consumers.

7. *The main indicators of product reliability are:*

- A. Rationality of form, informational expressiveness, integrity of composition.
- B. Hygiene, aesthetics.
- C. Style, fashion, composition, shape, colors, shades.
- D. Faultlessness, durability, maintainability.
- E. There is no correct answer.

8. *What indicators characterize the ergonomic properties of the product?*

- A. Sanitary and hygienic, information expressiveness, functionality, psychological.
- B. Sanitary and hygienic, anthropometric, psychological, maintainability.
- C. Sanitary and hygienic, anthropometric, psychological, psychophysiological;

D. Reliability, maintainability, hygiene, rationality of form.

E. Reliability, reliability, durability.

9. *What properties characterize the level of harmful effects on the environment that can cause the operation of the product?*

A. Ergonomic.

B. Aesthetic.

C. Environmental.

D. Functional.

E. Operational.

Questions and tasks for self-test

1. Explain the essence of the concept of "requirements for goods".
2. What are current, future, general and specific product requirements?
3. Provide a list of product requirements.
4. Describe the functional properties of goods.
5. What is the essence of ergonomic properties?
6. Do you agree to the statement: "Safety is the most important quality property that all consumer goods should have"?
7. Describe the main types of product safety.

Practical lesson 4

CLASSIFICATION OF COMMODITIES, ITS ESSENCE AND METHODS

Plan

1. Commodity ideas and modes of its classification.
2. Methods of structuring commodity classification.
3. Classification of products and services in marketing

Basic theoretical information

The goal of work is to study theoretical aspects of commodity classification, its essences and methods. After the study of theoretical information in task for student has to:

– *Know* the main concepts, perspectives and methods of commodity classification;

– *Be able to* use attainments of classic commodity models building.

Classification is the sequential division of a large number of objects into separate classes, groups and other subdivisions and groupments according to the most general features for each level [6]. The purpose of classification in commodity science is to promote the study of consumer properties, quality, range of goods and their management.

Obviously, the number of features that are selected and the order of their use are determined by the purpose of classification [3].

Classification of goods reside in dividing them into separate categories or degrees from higher to lower. Higher levels of classification are characterized by the terms "Section", "Subdivision", "Class", "Subclass", medium – "Group", "Position", "Type". Despite those, auxiliary terms sometimes can be used: "Subgroup", "Variety" [12].

The most important question of classification is the correct choice of the criterion by which a product will be assigned to a particular groupment. The attribute of classification is a property by which a given set is divided into subsets.

Depending on the order of classification group formation, there are decimal, hundredth, arbitrary classification systems.

Depending on the purpose, the classification of goods can be trade, educational and economical-statistical.

The method of classification is a set of rules for creating a system of classification groups and their relationships with each other [10].

In modern commodity science among the various methods hierarchical and faceted methods of classification of goods are used.

Hierarchical classification method is the sequential division of a large number of objects into subordinate classification groups. The peculiarity of this method is the close relationship between the individual classification groups, which is manifested through the commonality and difference of the main features [15].

Schematically, the essence of the hierarchical method of classification is shown in Fig. 1.

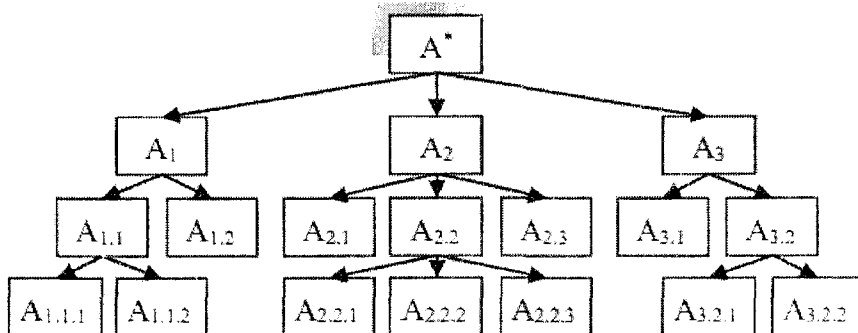


Fig. 1. Hierarchical method of classification of goods

* - A – the initial set of classification objects

The faceted classification method is the parallel division of a large number of objects into independent classification groups [15].

Schematically, the essence of the faceted method of classification is shown in Fig. 2.

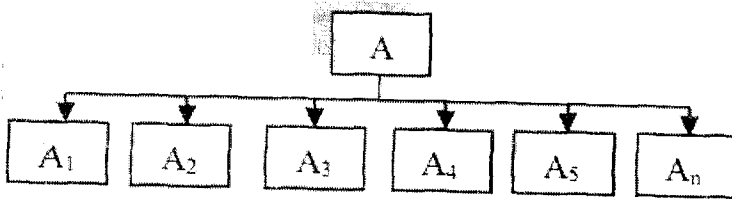


Fig. 2. Faceted classification method

Classification of goods and services in marketing is disclosed as follows [13]:

1. Classification of goods on the basis of their durability:
 - durable goods;
 - short-term goods.
2. Classification of consumer goods based on consumer buying habits:
 - goods of daily demand, which are divided into the following groups:
 - a) basic goods of constant demand;
 - b) goods of impulse purchase;
 - c) goods for emergencies.
 - goods of preliminary choice;
 - goods of special demand;
 - goods of passive demand.
3. Classification of industrial goods based on their role in production:
 - buildings and capital equipment;
 - additional equipment;
 - details and components;
 - raw materials and supplies;
 - industrial services.
4. Classification of services:
 - by type of ownership;
 - by type of market;
 - by source of service;
 - according to the required level of qualification of the specialist;
 - the presence of the client during the service if necessary.

Literature: [3]; [6]; [10]; [12]; [13]; [15].

Practical tasks

Prepare reports on the following topics:

1. Classification as a method of commodity science: general characteristics, object, purpose, feature of classification.
2. Hierarchical method of classification of goods: essence, features, advantages and disadvantages.
3. Faceted method of classification of goods: the essence, features, advantages and disadvantages.
4. Classification of goods by purpose.
5. Falsification of consumer goods.
6. Classes, subclasses and groups of homogeneous goods.
7. Types and varieties of goods.
8. Name of goods. Commodity article.

Task 1

Choose a product that you know well and classify it using the hierarchical method of product classification.

Task 2

Choose a product that you know well and classify it using the faceted method of product classification.

Tests

1. What is the essence of the hierarchical method of classification of goods?

A. It is the sequential division of a large number of objects into independent classification groups.

B. It is the sequential division of a large number of objects into subordinate classification groups.

C. This is the parallel division of a large number of objects into independent classification groups.

D. This is the parallel division of a large number of objects into subordinate classification groups.

E. There is no correct answer.

2. Choose the feature of the faceted method of classification of goods:

A. Parallel division of many objects into independent classification groups.

B. Consistent division of a large number of objects into subordinate classification groups.

C. Commonality and interdependence between separate classification groups of goods.

D. Each subsequent feature specifies the feature of the previous chain.

E. All answers are correct.

3. *The methods of classification of goods include:*

A. Hierarchical, faceted, combined.

B. Hierarchical, faceted.

C. Hierarchical, combined, complex.

D. Faceted, complex.

E. There is no correct answer.

4. *Quantitative and qualitative changes in the set of goods aimed at improving its rationality are:*

A. Update the range.

B. Stabilization of the range.

C. Improving the range.

D. Expansion of the range.

E. Reduction of the range.

5. *Classification of goods on the basis of their durability is as follows:*

A. Durable goods.

B. Goods of daily demand.

C. Pre-selected goods;

D. Goods of special demand;

E. Passive demand goods.

Questions and tasks for self-test

1. What is the essence, purpose and significance of the classification of goods?
2. Describe the main classification features of products.
3. Describe the types of classification of goods.
4. What is the essence of the hierarchical method of classification of goods, what are its advantages and disadvantages?
5. Describe the faceted method of classification of goods, name its advantages and disadvantages.

Practical lesson 5

ASSORTMENT AND CODING OF GOODS

Plan

1. Assortment: basic concepts, types and indicators.
2. Formation of a modern assortment.
3. Basic classifiers of goods.
4. Methods and systems of coding of goods.

Basic theoretical information

The purpose of the lesson is to study theoretical issues related to the range and coding of goods.

After studying the theoretical issues of practical lesson 5, the applicant must:

– *Know* the basic concepts, types and indicators of the range of goods, methods and stages of formation of the modern range and methods and systems of modern coding of goods;

– *be able to* distinguish between types of assortment, apply the acquired skills to assess the indicators of goods range and form a relevant range, as well as apply the acquired skills in using different methods of modern coding.

Assortment of goods is a group of goods that are closely related to each other or because of the similarity of their operation, or due to the fact that they are offered to the same groups of customers, or through the same types of establishments, or within the same range of prices [1].

Commodity availability is a list of homogeneous and heterogeneous goods of general or similar purpose [3].

Assortment property is a feature of the range, which is manifested in its formation and implementation.

Assortment indicator is quantitative and / or qualitative expression of assortment properties; the number of groups, subgroups, types and names of goods is subject to this measurement.

There are the following types of assortment: industrial assortment; trade assortment; simple assortment; complex assortment; group assortment; expanded assortment; rational assortment; optimal assortment; species assortment [7].

The assortment is quantitatively characterized by the following indicators: structure, breadth, completeness, stability and degree of renewal, etc.

Assortment management is activities aimed at achieving the requirements of rationality of the range [10].

The purpose of the organization in the field of assortment is the formation of real and / or projected assortment, as close as possible to the rational range, to meet different needs and get the planned profit.

The formation of the assortment can not be abstracted from a particular organization and should be based on pre-selected goals and objectives that determine the direction of development of the range [7].

Classification of goods is carried out using coding [9].

Coding of goods is the creation and assignment of code to a classification group or object of classification.

Code is a sign or set of signs used to denote a classification group or object of classification.

The purpose of coding is to systematize objects by identifying them and assigning a symbol (code) by which you can find and recognize any object among many others [11].

The structure of the code is the symbol of the composition and sequence of characters in it.

Coding of goods is carried out in several ways, that are varieties of the coding method, they include: ordinal; serial-ordinal; consistent; parallel.

Coding system is a set of rules and methods of coding classification groups and objects of classification. A certain coding system is the basis for the construction of classifiers.

A bar code is a combination of vertical stripes and numbers (the location of which is regulated by certain rules), which is a product in coded form. The code allows you to quickly and accurately read information about the product using an electronic device - a barcode scanner [14].

Literature: [1]; [3]; [6]; [7]; [9]; [10]; [11]; [14].

Practical tasks

Task 1

Choose a well-known trading company and analyze the existing range of different indicators.

Task 2

Based on your own experience and preferences, predict the list of goods in the outlet by key indicators.

Task 3

Determine the degree of product renewal in the reporting year based on the data in the table.

Indexes	Plan	Report
1. The number of products	102	105
including new products	34	37
2. Volume of production at wholesale prices of the enterprise, thousand UAH	690	720
3. Including the volume of production of new products, thousand UAH	205	224

Tests

1. *The set of goods produced by the enterprise, based on its production capacity is:*

- A. Trade range.
- B. The optimal range.
- C. Production range.
- D. Expanded range.
- E. Mixed range.

2. *Quantitative and qualitative changes in the set of goods aimed at improving its rationality are:*

- A. Update the range.
- B. Stabilization of the range.
- C. Improving the range.
- D. Expansion of the range.
- E. Reduction of the range.

3. *According to the degree of satisfaction of needs, the range can be:*

- A. Group, expanded, mixed.
- B. Rational and optimal.
- C. Production and trade.
- D. Simple and complex.
- E. Single and complex.

4. *The assortment list of the store includes goods of 120 product groups, but at the time of observation 24 main product groups were presented. What will be the significance of the coefficient of the breadth of the store range?*

- A. $K_b = 96.0$.
- B. $K_b = -96.0$.
- C. $K_b = 5.0$.
- D. $K_b = 0.2$.
- E. $K_b = 144$.

5. *What elements does the code structure include?*

- A. The basis of the code.
- B. Code bit.
- C. Alphabet of code.
- D. Code length.
- E. All answers are correct.

6. *The system of signs adopted for the formation of the code is:*

- A. Alphabet code.
- B. Code structure.
- C. The basis of the code.
- D. Code bit.
- E. There is no correct answer.

7. *The bar code alphabet is:*

- A. Alphabet, the signs of which are letters and numbers.
- B. The alphabet, the signs of which are dashes and spaces, the width of which can be read using scanners in the form of numbers.
- C. Alphabet, the signs of which are the letters of the alphabet.
- D. The alphabet, the signs of which are numbers.
- E. The alphabet, the signs of which are figures.

8. *Which of the following rules for placing barcodes on product packaging is incorrect?*

- A. The code should be placed only vertically.
- B. The code must be multicolored.
- C. The code should be placed only on a light background.
- D. The barcode should not be placed where there are already other labeling elements.
- E. The barcode has certain dimensions.

9. *The sequential encoding method is...:*

- A. The method by which the code designation of the object of classification indicates the independent features of the classification.
- B. The method by which the code indicates the dependent features of the classification.
- C. The method when the code symbols are numbers of a natural series.

D. It is characterized by the use of code notations of natural numbers with the assignment of individual ranges (series) of these numbers to the objects of classification with the same characteristics.

E. A coding method that is self-contained and used without prior classification of objects.

10. *What is the name of the barcode element that is part of the surface placed between two adjacent strokes?*

- A. Barcode bar.
- B. Bar code sign.
- C. Bar code space.
- D. Symbols of the bar code.
- E. Barcode.

Questions and tasks for self-test

1. Classification of the goods range by location of goods.
2. Classification of the goods range by breadth and depth of coverage of goods.
3. Classification of the goods range according to the needs.
4. Classification of the goods range by the nature of needs.
5. Give examples of simple, complex and extensive range.
6. Give examples of enlarged, related and mixed, complex and expanded range.
7. Classification of indicators of the goods range.
8. Determining the breadth of the goods range and its indicators.
9. Determining the completeness of the goods range and its indicators.
10. Determining the depth of the goods range and its indicators.
11. Stability, novelty, structure of the goods range.
12. Rationality and harmony of the goods range.
13. Definition of "assortment management".
14. The essence of the assortment policy of the organization.
15. The main directions of assortment formation.
16. Content of directions of assortment formation: reduction, expansion and deepening.
17. Content of directions of assortment formation: stabilization, updating, improvement and harmonization.
18. General factors of assortment formation.
19. Specific factors of assortment formation.
20. Coding of goods: the essence, rules and principles of application of commodity codes.
21. Ordinal method of coding goods.
22. Serial-sequential method of coding goods.
23. Consistent method of coding goods.
24. Parallel method of coding goods.

Practical lesson 6

QUALITY OF GOODS, MEANING AND REQUIREMENTS

Plan

1. The main indicators of product quality, their classification.
2. Methods for determining quality indicators.
3. Discrepancies and defects of goods.

Basic theoretical information

The purpose of the lesson is to study theoretical issues regarding the quality of goods, its meaning and requirements.

After studying the theoretical issues of practical lesson 6, the applicant must:

- *Know* the main indicators of quality, its classification, categories and methods of determination;
- *Be able to* apply methods of assessing the quality of goods and identify inconsistencies and defects of goods.

The term "quality" (from the Latin – *qualis*) means "property". Quality is the degree to which a set of the object's own characteristics satisfies the requirements. Requirement means stated needs or expectations, common or mandatory [4].

Product quality is the material basis through which people meet their needs.

Product quality is a set of product characteristics that determine the degree of its ability to meet established and anticipated needs [2].

To assess the quality of products, the degree of its suitability to meet certain needs, use quality indicators that express the quantitative characteristics of the properties of this product.

The property of a product is an objective feature of the product, which is manifested in the sphere of trade, consumption or operation.

Product quality indicator is a quantitative characteristic of one or more properties of the product, components of its quality, which is considered in accordance with certain conditions of its operation or consumption.

Quality control is an activity that involves measuring the examination, testing or evaluation of one or more characteristics of the product and comparing the results with the established requirements to determine whether compliance with each of these characteristics [9].

Quality study is a study of the patterns of consumer goods properties identification in accordance with its purpose in certain conditions of circulation, consumption or operation [6].

Methods of determining the quality of goods are methods used to quantify the quality of goods.

The main methods of determining the quality of goods include organoleptic, instrumental, registration, expert and sociological.

Gradation, class and variety are a category or category assigned to different requirements for the quality of products, processes or systems that have the same functional application [12].

Variety is a category of product quality of one name, but different from another category in terms of values.

The set of favorable or desirable properties for a person characterizes the good quality of the product, and the set of unfavorable properties for a person is the poor quality of the product.

The set of varieties belonging to the product of the same name is called assortment. There is natural and commodity assortment.

Re-sorting is one of the most common methods of qualitative falsification. Depending on the causes, it can be objective and subjective.

Non-compliance is any non-compliance of goods with the requirements of regulations and regulations, contract terms or requirements for goods (products), as well as information about the products provided by the manufacturer (seller) [9].

One of the tasks of control is to identify product defects, which include each individual non-compliance of the product with the requirements specified in the documents [5].

Defect is failure to comply with the requirements related to the intended or intended use.

Defects of production can be found both at organoleptic, and at measuring control; and some defects can be detected only during operation. Depending on the possibility of detection, defects can be obvious and hidden.

Literature: [2]; [4]; [5]; [6]; [9]; [11]; [12].

Practical tasks

Prepare reports on the following topics:

1. Discover the essence of the concept of "product quality".
2. Quality indicators and signs of their classification.
3. Groups of product quality indicators.
4. Organoleptic method of determining the quality of goods.
5. Instrumental method for determining the quality of goods.
6. "Good quality" and "poor quality" of the goods.
7. Product properties and quality indicators.
8. Integrated quality indicator.
9. Regulatory and technical documentation on quality indicators.
10. Differential method of calculating the level of product quality.
11. Differences between the expert method and organoleptic analysis.
12. Sociological method of researching the quality of goods.

Task 1

Calculate the annual economic effect of the production of high quality mineral fertilizers. It is known that Eco will produce 15,000 tons of high-quality potash fertilizers annually. The profit from the sale of 1 ton of these fertilizers will be 84 UAH. instead of UAH 68. to improve quality. Additional investments in the implementation of measures to improve the quality of potash fertilizers amount are to UAH 2.8 million.

Task 2

The new device for measuring the electrophysical parameters of semiconductor devices compared to the previous model requires higher manufacturing costs, but it is characterized by higher quality. According to the table data calculate the annual economic effect of the production of a new device.

Indicator	Device	
	base	new
Annual production of devices, pcs.	100	50
The total cost of the device, UAH	8 000	10 000
Investments, thousand UAH	60	90
Annual productivity of the device, thousand measurements	100	200
Service life of the device, years	5	10
Annual operating costs of the consumer, UAH	3 000	1 500
Accompanying consumer investments, UAH	200	500
Normative rate of return on investment Eq	0,15	0,15

Task 3

As a result of the improvements, the reliability and technical level of products has increased, but the cost of the car has increased from 27 to 29 thousand UAH, and service life from 9 to 11 years. Determine the overall savings by improving the quality of the machine.

Task 4

The company provides such an annual volume of production by varieties table.

Variety	Number of products, pcs.	Wholesale price per unit, UAH
I	50 000	22
II	12 000	18

It is necessary to calculate the coefficient of product grade.

Task 5

It is planned to produce 60 tons of pasta a year at the bakery, including premium – 45 tons, the first – 5 tons. The price of premium pasta – 45 UAH., first grade – 27 UAH. per kg. The grade ratio in the reporting year was 94.5 %.

Determine the coefficient of grade in the planning period.

Tests

1. *Quality indicators adopted as a reference are:*

- A. Relative quality indicators.
- B. Basic quality indicators.
- C. Direct quality indicators.
- D. Complex quality indicators.
- E. Indirect quality indicators.

2. *According to the methods of expression, quality indicators are divided into:*

- A. Those that are expressed in physical units, conventional units and units of value.
- B. Single and complex.
- C. Organoleptic, physical, chemical, microbiological.
- D. Basic and relative.
- E. Direct and indirect.

3. *By the nature of application to assess the quality of indicators they are divided into:*

- A. Organoleptic, physical, chemical, microbiological.
- B. Basic and relative, direct and indirect.
- C. Indicators of purpose, reliability, manufacturability, safety.
- D. Single and complex.
- E. Natural and valuable.

4. *Relative quality indicators are indicators that:*

A. Directly related to the nutritional value and consumer properties of goods.

B. Accepted as a reference.

C. They are not directly related to the consumer properties of goods, but their values depend on the factors that determine the nutritional value of products.

D. Characterize the ratio of the quality of the studied products to the basic quality indicator.

E. Determined by the human senses in the process of organoleptic analysis.

5. *What is the name of the value of the quality indicator, which is established by current regulations?*

A. Optimal.

B. Critical.

C. Valid.

D. Relative.

E. Regulated.

6. *The critical value of the quality indicator is:*

A. The value established by current regulations.

B. A value that is determined by a single or multiple measurement.

C. Exceeding or decreasing the quality indicator, which is regulated as non-compliance with current regulations.

D. The value that allows to achieve the fullest satisfaction of some of the needs that determines this indicator.

E. There is no correct answer.

7. *What methods of quality study allow to establish the activity and nature of biochemical processes that may occur during the production, storage or use of food products?*

A. Physical methods.

B. Chemical methods.

- C. Physico-chemical.
- D. Physiological methods.
- E. Biochemical methods.

8. *What is the name of the product with identified breakable or insurmountable discrepancies in one or a set of indicators?*

- A. Waste.
- B. Resort.
- C. Marriage.
- D. Standard product.
- E. Non-standard goods.

Questions and tasks for self-test

1. General definition of "quality".
2. Requirements as the main component of determining the quality of goods.
3. The ratio of requirements and needs of consumers in defining the concept of "product quality".
4. The essence of the concept of property. Simple and complex properties of the product.
5. Determining the quality of the product. Physical and non-physical indicators of product quality.
6. The main indicators of product quality and their value.
7. Ergonomic properties of goods and their subgroups.
8. Subgroups of consumer properties of product safety.
9. Concepts and stages of quality assessment.
10. What is a standard product?
11. Lack: removable and irremovable.
12. Waste: liquid and illiquid.
13. Three grades of product quality.
14. Natural and product range of goods.
15. Groups of defects by degree of significance.
16. Groups of defects in the presence of methods and means for their detection or elimination.
17. Groups of defects at the place of detection.
18. Groups of defects by degree of damage.

Practical lesson 7

PRODUCT INFORMATION

Plan

1. Information about the product: the essence, forms and requirements for it.
2. Means of commodity information.
3. Information signs.

Basic theoretical information

The purpose of the lesson is to study theoretical issues regarding product information.

After studying the theoretical issues of practical lesson 7, the applicant must:

- *Know* the content of information about the product, its forms and types, as well as distinguish the means of product information;
- *be able to characterize* information about the product, means of trade information and information signs.

Information about the product is provided in documentary or figurative form information about the product, place and time of its manufacture, price, rules of handling and care, nutritional value, expiration date and name of the manufacturer [4].

Channels of conveying information about the product to consumers are divided into informal and formal.

According to the form of presentation of the product notice can be divided into non-documentary and documentary.

Depending on the purpose, there are three types of information about the product: basic, commercial and consumer.

Various forms of commodity information are used to bring information to the subjects of market relations: verbal, digital, pictorial, symbolic, dashed [6].

The main requirements for product information are: reliability, availability, sufficiency.

Means of commodity information are: labeling, technical documents, regulations, reference, educational and scientific literature, advertising and advocacy [14].

Labeling is text, symbols or images applied to packaging and / or goods, as well as other aids designed to identify the product or its

individual properties, bring to the consumer information about manufacturers, quantitative and qualitative characteristics of the product [12].

Depending on the place of application, there is production and trade markings.

Production markings are texts, symbols or drawings applied by manufacturers to products or packaging. Carriers of production markings can be labels, necklaces, inserts, labels, tags, control tapes, stamps, stamps, etc. [9].

Trade mark is text, symbols or drawing applied by the seller on goods or cash receipts, packaging and / or goods.

The main types of information symbols and signs about the product include trademark, conformity mark, eco-signs, safety signs, etc. (Fig. 3) [14].

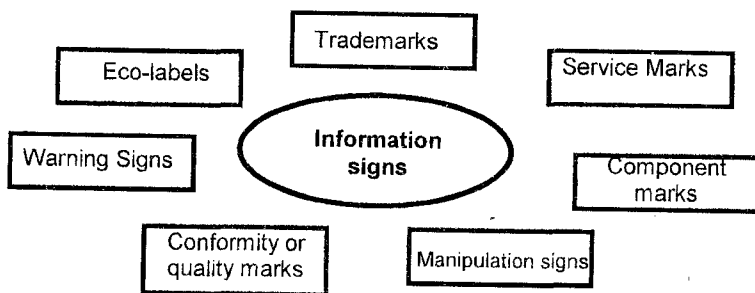


Fig. 3/ Groups of information signs

Literature: [1]; [2]; [4]; [6]; [9]; [11]; [12]; [14].

Practical tasks

Prepare reports on the following topics:

1. Product information.
2. Describe the main types and forms of information about the product.
3. Requirements for information about the product.
4. The essence of product labeling, what are its main functions.
5. The essence of production and trade types of labeling.
6. The main carriers of production marking.
7. "Information sign" and its groups.
8. The essence and types of trademarks.
9. Ecological signs and their subgroups.
10. The essence of the concepts of "minimum shelf life of food" and "date of use before..."

Tests

1. Channels of delivery of information about the product to the consumer are divided into:
 - A. Informal and formal.
 - B. Oral and written.
 - C. Numeric and alphanumeric.
 - D. Real and imaginary.
 - E. Informal and informal.
2. What types of messages are divided into goods according to the form of presentation?
 - A. Informal and formal.
 - B. Documentary and non-documentary.
 - C. Real and imaginary.
 - D. Verbal and digital.
 - E. Pictorial and symbolic.
3. What are the types of information about the product depending on the purpose?
 - A. Fundamental, commercial, consumer.
 - B. Verbal and digital.
 - C. Documentary and non-documentary.
 - D. Informal and formal.
 - E. Pictorial and symbolic.
4. What can be attributed to the non-documentary form of notification of goods?
 - A. Texts.
 - B. Digital data.
 - C. Tables.
 - D. Gestures and smells.
 - E. Photos.
5. What is basic product information?
 - A. This is information about the product that complements the basic information.
 - B. This is the basic information about the product, which is crucial for its identification.
 - C. This is information about the product, which shows the benefits of a particular product in the process of its consumption or operation.
 - D. It is a message about something; information that is the object of storage, processing and transmission.

E. This is information about the product, which is conveyed through words.

6. What is the name of the requirement for information, which provides for the truthfulness and objectivity of information about the product, the lack of misinformation and subjectivity?

- A. Availability.
- B. Reliability.
- C. Sufficiency.
- D. Clarity.
- E. Efficiency.

7. Types of marking:

- A. Formal and informal.
- B. High quality and low quality.
- C. Product and commodity.
- D. Production and trade.
- E. Production and products.

8. Production markings attached to goods or packaging are...

- A. Stigma.
- B. Stamps.
- C. Necklaces.
- D. Tabs.
- E. Labels.

9. Signs of manipulation are...

- A. Signs informing about the rules of handling the goods.
- B. Marks used for information on food additives or other ingredients specific (or inherent) to the product.
- C. Legislatively protected marks used in accordance with the rules of the certification system.

D. Signs that acquaint consumers with the rules of operation, methods of care and adjustment of consumer goods.

E. Signs that inform consumers about the environmental friendliness of consumer goods.

10. What are the names of information signs used to ensure the safety of consumers and the environment during the operation of potentially dangerous goods?

- A. Operational.
- B. Component.
- C. Environmental.
- D. Warning.
- E. Manipulations.

Questions and tasks for self-test

1. What is product information. Name its types?
2. What do you mean by the availability of product information?
3. What do you mean by the reliability of product information?
4. Name the main forms of presentation of product information.
5. Basic requirements for product information.
6. What do you mean by the probability of product information?
7. Name the main means of product information.
8. Marking and its main types.
9. What is a trademark?
10. The main functions of trademarks.
11. Classification of trademarks.
12. Types of trademark designations.
13. Features of the use of trademarks.
14. The role of excise marking.
15. Types of technical documentation.
16. Accompanying documentation.
17. Operational documentation.
18. Name the main documents of information supply.

Practical lesson 8

INNOVATIVE APPROACHES TO PACKAGING AND STORAGE OF GOODS

Plan

1. Packaging of goods.
2. Regimes, principles and rules of goods storage.
3. Transportation of goods.
4. Sales and post-sales service of goods.

Basic theoretical information

The purpose of the lesson is to study the theoretical aspects of innovative approaches to packaging and storage of goods.

After studying the theoretical issues of practical lesson 8, the applicant must:

- Know the purpose and types of packaging of goods; regimes, principles, rules of storage and transportation of goods, as well as conditions of sale and after-sales service of goods;
- be able to apply the acquired skills in the development of

packaging of goods, analyze the factors influencing the choice of packaging and form a system of efficient transportation, storage and sale and after-sales service of goods.

Packaging is a technical means or a set of means with the goods placed in it, which protects the goods from damage and loss during transportation, storage and sale, and the environment – from pollution [7].

Packaging items include packaging, wrapping and dressings.

Containers are the main element of packaging, which is a product for storing goods.

In general, all the functions performed by packaging can be divided into three groups: intended for the consumer, for the manufacturer and for the intermediary. Buyers evaluate the packaging of the product for compliance with its aesthetic requirements, convenience and safety, the possibility of transportation, opening, closing, destruction, compliance with the size of the packaging needs, the availability of important information for the buyer [5].

The main features that classify package and packaging are: place of packaging, purpose, material, frequency of use, ability to retain its shape, production technology, design, shape, size [4].

One of the important functions of supply is the storage of goods, which is to create such organizational and economic conditions and technological operations that ensure the preservation of the quality and quantity of goods that have been sent for storage [14].

When storing goods, it is necessary to create conditions for favorable preservation of the quality and quantity of goods, reduce commodity costs, maximum use of storage space and quality implementation of trade and technological process in the warehouse.

Storage regime is a set of climatic and sanitary and hygienic requirements that ensure the storage of goods.

Commodity movement is a system that covers the movement of goods from producer to consumer; subsystems of this system are storage, transportation, unloading, sale of goods (Fig. 4).

Transportation is a type of storage of goods, which affects the preservation of their quality during subsequent storage.

Delivery of goods is a commercial service for the transportation of purchased goods to the address specified by the consumer. Its purpose is to ensure the safety of goods during transportation. To do this, the goods are either additionally packed in transport containers, or use special devices, transport and trained workers for this purpose [8].

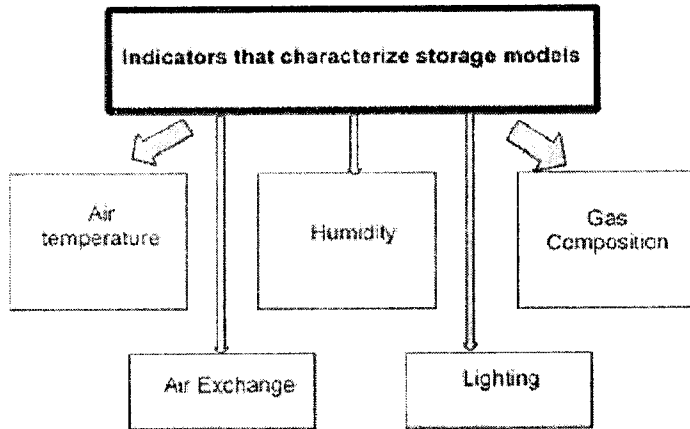


Fig. 4. Indicators that characterize the modes of storage of goods.

The process of moving goods from producer to consumer requires quality training and transport plays an important role in this process. In carrying out trade activities, transport is one of the factors in preserving goods due to the speed of delivery of goods, their safety, reliability and safety, and so on. The use of different types of transport in the transportation of goods depends on their technical and operational characteristics [7, 8].

Minimization of costs with high efficiency, reliability and stability of transportation from producer to consumer is one of the main conditions for effective business. Therefore, the supply of goods to consumers must be clear, on time in accordance with the order. The quantity of goods must correspond to the quantity specified in the order. Transportation should be such that the quality of the goods does not change. The goods must be qualitatively and securely packed, have appropriate markings and installed on special pallets [14].

Sales of goods are activities related to the sale of goods to consumers. The purpose of the sales process is to create consumer benefits that ensure the sale of goods.

Quite often the process of sale is confused with the process of short-term storage of goods in the retail trade network: in the warehouse and in the retail space. In retail stores, the sales process is often combined with a number of goods processing operations: sorting, package, packaging, providing an attractive appearance, which is done directly at the workplace by the seller. In this case, the impact of sales on preservation increases.

After-sales service is a set of trade services that ensure the safety of goods from the consumer in the process of delivery, storage, operation and use.

The purpose of these services is to create a positive after-sales attitude of consumers to the product, manufacturer and/or seller by better meeting the needs during use or operation of goods, due to long-term preservation of functionality, safety and other consumer properties relevant to consumers.

Literature: [4]; [5]; [6]; [7]; [8]; [14].

Practical tasks

Prepare reports on the following topics:

1. Factors influencing the preservation of goods.
2. Packaging and its classification.
3. Features of road transport.
4. Features of transportation by rail.
5. Selection of the optimal vehicle for the transportation of goods.
6. Storage and storage process requirements.
7. The influence of air temperature on the conditions of storage of goods.
8. Classification of repositories.
9. The order of warranty service: the nature and types of work.

Tests

1. Storage of goods is ...

A. The stage of the technological cycle of trade from the release of finished products to delivery to the seller, the purpose of which is to ensure the stability of the original properties.

B. The set of external environmental influences due to the mode of storage and placement of goods in storage: they are chosen depending on the properties of goods.

C. The stage of the technological cycle of trade from the release of finished products to consumption or disposal, the purpose of which is to ensure the stability of the original properties or their change with minimal losses.

D. The stage of the technological cycle of trade from the release of finished products to shipment to the warehouse.

E. There is no correct answer.

2. What types of packaging are distinguished by the place of its implementation?
- A. Production and trade.
 - B. Consumer and transport.
 - C. Hard, semi-hard, soft.
 - D. In tanks, barrels, jars, bottles, containers, boxes, etc.
 - E. High quality and low quality.
3. According to the purpose of packaging it is divided into:
- A. Hard, semi-hard, soft.
 - B. Production and trade.
 - C. Trade and transport.
 - D. Consumer and transport.
 - E. Sales and production.
4. The set of external environmental influences due to the mode of storage and placement of goods in storage is:
- A. Storage conditions.
 - B. Storage modes.
 - C. Storage properties.
 - D. Storage rules.
 - E. Principles of storage.
5. Which rule of placement of goods for storage sets requirements for joint storage of goods with the same storage regimes?
- A. Rationality of operation of warehouses.
 - B. Ensuring the mechanization of works.
 - C. The rule of commodity neighborhood.
 - D. Security.
 - E. Efficiency.
6. What is the name of the indicator that reflects the actual amount of water vapor contained in the air at a given temperature?
- A. Air temperature.
 - B. Relative humidity.
 - C. Absolute humidity.
 - D. Air exchange.
 - E. Gas composition of air.
7. What is the name of the principle of goods storage, which is to

protect goods from climatic and other adverse conditions during transportation and storage?

- A. The principle of economic efficiency of storage.
- B. The principle of systematic control.
- C. The principle of information support.
- D. The principle of continuity of storage conditions.
- E. The principle of protection against adverse external actions.

8. What is the principle of economic efficiency of storage?

A. The ability of the selected methods to store goods with the least storage losses.

B. In the protection of goods from climatic and other adverse conditions during transportation and storage.

C. Obligatory observance of the set requirements for climatic and sanitary-hygienic regimes at all stages of goods promotion.

D. To provide stakeholders with the necessary information regarding storage conditions and terms.

E. In conducting periodic inspections at all stages of the technological cycle, and during long-term storage at certain intervals.

9. What is the name of the principle of goods storage, which is to provide interested parties with the necessary information about the conditions and terms of goods storage?

- A. The principle of economic efficiency of storage.
- B. The principle of systematic control.
- C. The principle of information support.
- D. The principle of continuity of storage conditions.
- E. The principle of protection against adverse external actions.

10. What characterizes the indicator "relative humidity"?

- A. Intensity and multiplicity of air exchange in the environment.
- B. The degree of saturation of air with water vapor.
- C. The composition of gases in the environment.
- D. The intensity of light in storage.

E. The state of pollution of storage facilities and the environment that exceeds the established norms.

Questions and tasks for self-test

1. What is the main purpose of packaging of goods?
2. Describe the concepts of "package" and "packaging".
3. What are the basic requirements for packaging?
4. Name the main classification features and types of packaging.
5. Describe the essence and give examples of hard, semi-hard and soft packaging.
6. What is the storage mode, what indicators is it characterized by?
7. How does air temperature affect the storage of goods?
8. What conditions must be met in order to create optimal conditions for storage of goods in warehouses?
9. How does the ventilation of warehouses affect the quality of goods?
10. Describe the basic rules of placement of goods.
11. What principles of placement of goods must be followed during storage?
12. How is it necessary to ensure the safety of goods during transportation?

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Навчальне видання

ТОВАРОЗНАВСТВО

ПРАКТИКУМ

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