

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

NATIONAL TECHNICAL UNIVERSITY
«KHARKIV POLYTECHNIC INSTITUTE»



METHODICAL INSTRUCTIONS
FOR THE CURRENT AND SEMESTER CONTROL
of the academic discipline «Enterprise Economy»
for full-time and part-time students
in the specialties 073 «Management»

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INTRODUCTION

Current control tasks are essential in evaluating students' knowledge and skills in Enterprise Economy, ensuring they grasp key concepts and can apply them effectively. These tasks help educators monitor progress, identify gaps in understanding, and adjust teaching methods accordingly. They help ensure a structured learning process, reinforce theoretical concepts, and develop practical competencies.

In the academic discipline "Enterprise Economy", control tasks serve to assess students' knowledge, analytical skills, and ability to apply theoretical concepts in practical situations. These tasks can be classified into several types:

1. Theoretical Tasks
2. Analytical and Calculation Tasks
3. Practical and Simulation-Based Tasks

Semester control, such as exams or final projects, evaluates students' overall understanding of the course. A well-structured current control system prepares students by familiarizing them with key topics, problem-solving techniques, and assessment formats.

Since enterprise economics is closely linked to real-world business operations, continuous assessment helps students connect theoretical concepts to practical scenarios. Case studies, simulations, and project-based evaluations allow them to experience economic decision-making firsthand.

A combination of current and semester control ensures a fair and objective assessment of students' knowledge. Instead of relying solely on final exams, ongoing evaluations provide a more balanced and accurate measure of a student's capabilities.

Current and semester control in "Enterprise Economy" is essential for maintaining academic rigor, fostering practical competencies, and ensuring students are well-prepared for real-world entrepreneurial and managerial challenges. A well-structured assessment system enhances learning outcomes and prepares future business leaders for the complexities of enterprise economics.

These methodological instructions consist of three parts:

1. Questions on course topics.
2. Tests.
3. Practical tasks on course topics (30 variants).

1. QUESTIONS ON COURSE TOPICS

Topic 1. Introduction. Theories of enterprise economics and the foundations of entrepreneurship. Types of enterprises, their organizational and legal forms

1. What are the goals and objectives of the discipline "Enterprise Economics"?
2. Describe the enterprise as the primary link of the national economy.
3. What legislative acts regulate the economic activity of enterprises?
4. Define the most important areas of the company's activity in modern conditions.
5. What is the external environment of the enterprise?
6. By what signs are enterprises classified?
7. What are the main functions and goals of the enterprise?
8. Name the main stages of formation and registration of the enterprise.

9. How do classical and modern theories of enterprise economics explain the role of entrepreneurship in market development?

10. Key factors influencing the success of entrepreneurship according to classical and modern economic theories.

Topic 2. External business environment of enterprises

1. What is the external business environment, and why is it important for enterprises?

2. How does the external environment affect business strategy and decision-making?

3. What are the key components of the external business environment?

4. What is PESTEL analysis, and how does it help businesses assess their external environment?

5. How do economic factors (e.g., inflation, exchange rates, GDP growth) affect business performance?

6. What is SWOT analysis, and why is it useful for assessing entrepreneurship in Ukraine?

7. How does SWOT analysis help entrepreneurs and policymakers in Ukraine?

8. What are the key internal (strengths and weaknesses) and external (opportunities and threats) factors affecting business development in Ukraine?

Topic 3. Structure and management of the enterprise

1. What is an enterprise's structure, and why is it important?

2. How does the structure of an enterprise affect its management and operations?

3. What are the key functions of management in an enterprise?
4. How do organizational structure and management style impact business efficiency?
5. What are the main differences between small, medium, and large enterprise management?
6. What are the main types of enterprise structures?
7. How do startups and tech companies typically structure their management?
8. What are the key managerial?
9. How does strategic management differ from operational management?
10. What is the role of leadership in enterprise management?
11. What is the significance of delegation in management?
12. How has digital transformation affected enterprise management structures?

Topic 4. Market and products

1. What is a market, and how is it defined in business?
2. What are the main types of markets?
3. What is market segmentation, and why is it important for businesses?
4. What are the main stages of the product life cycle?
5. How do businesses develop and launch new products?
6. What is the difference between a product and a service?
7. How do companies determine the pricing of their products?

8. How do businesses promote their products to attract customers?
9. What are the key elements of a successful marketing strategy?
10. How do digital marketing and e-commerce impact product sales?
11. What role does innovation play in staying competitive in the market?

Topic 5. Planning of enterprise activities. Justification of the enterprise production program

1. Essential characteristics of planning.
2. Types and methodological foundations of planning at an enterprise.
3. Strategic, tactical and operational planning.
4. What is an enterprise production program? The purpose of its preparation.
5. Rules for developing a production program.
6. Main indicators of the production program. Units of measurement of these indicators and their economic content.
7. Rhythm of production and sales of products.
8. Justification of the production program by resources and production capacities.
9. Optimization of the production program.

Topic 6. Enterprise personnel, productivity, motivation and remuneration

1. Composition and structure of the enterprise personnel.
2. What factors determine the number of workers?
3. Workforce productivity and its components.

4. Labor intensity of products and its relationship with production volume.
5. Factors of workforce productivity growth, their classification.
6. General organization of remuneration
7. Principles of wage organization in Ukraine.
8. What do the terms "Tariff grid", "Tariff rates" mean and what are they used for?
9. Peculiarities of calculating wages for hourly and piecework forms.
10. What is the essence of the remuneration package?

Topic 7. Fixed capital of the enterprise

1. Productive forces and production assets - features of the concepts.
2. Definition and composition of fixed assets of the enterprise.
3. The structure of the company's fixed assets and factors influencing it.
4. By what features are the fixed assets of the enterprise classified?
5. The essence of the concept of depreciation of fixed assets, methods of calculating depreciation.
6. What are the types of depreciation of fixed assets?
7. Types of fixed capital value
8. System of indicators of efficiency of reproduction and use of fixed capital of the enterprise

Topic 8. Working capital of the enterprise

1. Working capital: essence, structure.
2. What are the key components of working capital?

3. How does working capital impact a company's liquidity and financial health?
 4. Rationing of working capital.
 5. Sources of formation of working capital of the enterprise.
 6. Circulation of working capital.
 7. The essence of rationing of working capital.
- Concepts of norm and norm.
8. Indicators of the efficiency of the use of working capital, their economic meaning and relationship.
 9. What are the directions for increasing the efficiency of the use of working capital?
 10. What are the key strategies for effective working capital management?
 11. What are the risks of having too much or too little working capital?

Topic 9. Intellectual capital

1. What is intellectual capital, and why is it important for businesses?
2. Legal protection of means of individualization.
3. Intangible assets.
4. Valuation of intangible assets.
5. What are the main components of intellectual capital?
6. How does intellectual capital contribute to a company's competitive advantage?
7. How is intellectual capital different from physical and financial capital?
8. What are the key challenges in managing intellectual capital?

Topic 10. Investment and innovation activity

1. Essence, classification and sources of formation investments.
2. Assessment of the effectiveness of real investments.
3. Assessment of the effectiveness of financial investments.
4. The essence of innovations and general characteristics of innovation processes.
5. Scientific and technological progress, its general directions.
6. Features of investment classification.
7. What sources of investment financing do you know?
8. What is simple and advanced asset reproduction?
9. Name the indicators of investment performance evaluation.
10. What is the relationship between investment and innovation?
11. Why is investment in innovation important for economic growth?
12. What are the key sources of funding for innovation?
13. How do governments support innovation through investment programs?
14. What are the differences between direct and indirect innovation investments?
15. How do companies develop and implement innovation strategies?

16. What are the main challenges in managing innovation investment?

Topic 11. Technical and technological base and production capacity of the enterprise

1. Characteristics of the technical and technological base of production.

2. Organizational and economic management of the technical development of the enterprise.

3. The essence of the concept of production capacity.

4. Formation and use of the production capacity of the enterprise.

5. Types of production capacity of an enterprise.

6. What factors affect the size of production capacity?

7. What is called "leading equipment" and "bottleneck"?

8. What types of equipment working time fund are used to calculate production capacity?

9. Reserves for production capacity growth.

10. Explain the main differences between production capacity and equipment throughput.

11. What factors affect the degree of utilization of the enterprise's production capacity?

Topic 12. Organization of production and ensuring product quality

1. The essence, structure and principles of organizing operational activities.

2. Types and methods of organizing production.

3. Quality and competitiveness of enterprise products.

4. Standardization and certification of enterprise products.
5. Managing the competitiveness of the enterprise.

Topic 13. Costs of production and sales of products

1. General characteristics and cost management system.
2. Classification of production costs.
3. The concept and meaning of costs and cost price.
4. Grouping costs by economic elements.
5. The essence of the calculations of full cost price by costing items.
6. Types of cost.
7. What is the meaning of dividing costs into fixed and variable?
8. The essence of break-even analysis.
9. Estimates of responsibility centers and the enterprise as a whole.

Topic 14. Financial and economic results of the enterprise

1. General characteristics of the financial activities of the enterprise.
2. Income, profit and profitability of the enterprise. Composition and structure of prices.
3. Methodological foundations of the analysis of the financial and economic condition of the enterprise.
4. Interpretation of the essence of the concept of income and revenue.
5. Sources of enterprise income formation.
6. Name the factors affecting the formation of profit at the enterprise.

7. What are the main ways to increase the company's profit?
8. What is the economic meaning of the concept of profitability?

Topic 15. Enterprise development: modern models, transformation and restructuring

1. Essential characteristics, role and significance of enterprise development
2. Theories of enterprise development
3. Modern models of enterprise development
4. Characteristics, principles and methodological principles of the transformation of enterprises and associations
5. Business restructuring: features, main forms and types
6. Features of the development and implementation of the restructuring project
7. Name the possible reasons for the termination of the enterprise.
8. Factors and types of restructuring.
9. What is rehabilitation of the enterprise?
10. What are the measures to restore the company's solvency?
11. Reasons for the bankruptcy of the enterprise.
12. Who liquidates the enterprise?
13. Sequence and order of satisfaction of creditors' demands.
14. What documents regulate the bankruptcy process?

Topic 16. Economic security and anti-crisis activities

1. Economic security of the enterprise: essence and prerequisites for formation
2. Bankruptcy of the enterprise as an economic phenomenon
3. Organization and consequences of the liquidation of bankrupt enterprises.

2. TESTS ON COURSE TOPICS

Enterprise Economy tests are necessary for several reasons:

- assessment of knowledge and competencies;
- control and motivation of students;
- analysis of learning effectiveness, etc.

In general, testing plays an important role in learning and managing a business, helping to ensure high quality knowledge and make informed decisions.

TESTS:

Please note that the number of correct answers in each question you choose at your discretion. Perform the tests directly in the document, highlighting the correct answer(s) in color.

1. The primary link in the structure of the national economy is:

- a) set of legal entities;
- b) enterprise;
- c) branch of economy;
- d) an individual employee;
- e) industry;
- e) all answers are correct.

2. The initial value of fixed assets consists of the cost of:

- a) acquisition (purchase);
- b) future overhauls;
- c) current repairs;

d) transportation and installation.

3. Capital intensity shows:

- a) how many products (in value terms) are produced by 1 unit value of the basic production funds;
- b) technical level of equipment;
- c) the value of the basic assets for one hryvna of output;
- d) cost price of commodity output.

4. The time required to produce a unit of production is called:

- a) productivity of the equipment;
- b) funds of operating time;
- c) factor of shift-working;
- d) labor intensity;
- e) duration of one turn-over.

5. What are the resources of the enterprise that are subject to depreciation?

- a) workforce;
- b) fixed assets of the enterprise;
- c) working capital of the enterprise;
- d) intangible assets of the enterprise.

6. The following material components are included in the fixed assets of the enterprise:

- a) buildings, structures, transmission devices, transport means; raw and basic materials; perennial plantings.
- b) buildings, structures, transmissions; machines and equipment (including power machinery and equipment, laboratory equipment, measuring and regulating equipment, computing); vehicles;
- c) buildings, structures, transmissions; vehicles (transport means); work-in-progress;
- d) all answers are correct.
- e) no correct answer.

7. What elements are included in the material part of working capital of the enterprise:

- a) deferred expenses; b) finished products;
- c) transport means
- d) cash; e) all answers are correct;
- f) no correct answer.

8. Which indicators characterize the efficiency of use of fixed assets:

- a) inventory turnover factor; б) workforce productivity;
- В) capital intensity ; г) capital endowment;
- д) all answers are correct; e) no correct answer.

9. Which statement is true?

- a) work-in-progress is a part of basic (fixed) assets;
- b) work-in-progress is a part of material part of working capital;
- c) work-in-progress is a part of working capital;
- d) all answers are correct.

10. What indicator determines the number of turnovers of working capital for the period:

- a) the duration of the turnover; b) inventory turnover factor;
- c) factor of shift-working arrangement; г) labour intensity ;
- e) all answers are correct; e) no correct answer.

11. Calculate the annual depreciation deductions for machine equipment with an initial value of UAH 7100 thousand and a useful life of 6 years if the straight-line method of depreciation is applied:

12. If the capital productivity is reduced then:

- a) capital intensity is also reduced;
- b) capital intensity is increased;
- c) these indicators are not related.

13. The fixed assets of the enterprise include:

- a) work in progress;
- b) labor resources;
- c) fuel;
- d) finished products;
- e) computers;
- f) perennial plants

14. Costs are divided into variables and fixed:

- a) depending on the place of their formation;
- b) depending on the method of transferring value to products;
- c) by the degree of influence of output on the level of costs;
- d) depending on the calendar period.

15. The full cost price of production does not include:

- a) material costs; b) wage costs;
- c) single social contribution; d) excise duties;
- e) all listed items are included in the full cost price.

16. The amount of wages depends on:

- a) the complexity and working conditions of the work performed;
- b) professional and business qualities of the employee;
- c) the results of the work of the employee;
- d) success of the economic activity of the enterprise;
- e) the answers a) and b) are correct.
- e) all answers are correct.

17. The tariff grid defines:

- a) tariff category of workers; b) tariff rates;
- c) tariff factors; d) bonus scale.

18. What costs depend on the volume of production:

- a) gross (total) costs; b) variable costs ; c) fixed costs.

19. How do unit fixed costs (fixed costs per unit of production) change with increasing production volumes:

- a) will increase;
- b) will decrease;
- c) will not change;
- d) under certain conditions, all answers will be correct.

20. What costs are called fixed?

- a) electricity for technical purposes;
- b) raw and basic materials;
- c) purchased accessories and half-finished products;
- d) part of administrative expenses;
- e) heating costs.

21. What is the differences between nominal and real wages?

22. The amount of wages paid per unit of production:

- a) piecework rate; b) hour tariff of average category;
- c) tariff factor; d) all answers are correct.

23. The price at which the final consumer can purchase the goods is called:

- a) sale price of wholesale intermediary; b) selling price of manufacturer;
- c) retail price; d) all answers are correct.

24. By reducing the level of labour intensity, workforce productivity (production output):

- a) will decrease; b) will increase;
- c) these indicators are not related.

25. Depending on the influence of the volume of output, costs are divided into:

- a) direct and indirect; b) variables and fixed;
- c) regulated and unregulated.

26. If the total revenue increases by 7%, and the average annual value of working capital increases by 5%, then the duration of one turnover of working capital:

- a) will increase; b) will decrease; c) will not change.

27. The depreciation of fixed assets can be described as:

- a) failure (deterioration) of individual objects of fixed assets of the enterprise;
- b) loss by fixed assets of their original forms, sizes, properties;
- c) transferring the value of fixed assets to the cost price of products being created;
- d) reimbursement of expenses for the repair of fixed assets from the profits of the enterprise.

28. The part of the revenue remaining after the reimbursement of all costs for production and commercial activities of the enterprise is called:

- a) the income of the enterprise;
- b) profit of the enterprise;
- c) profitability;
- d) all answers are correct.

29. The monetary value of the goods is (are):

- a) income;
- b) profit;
- c) price;
- d) full cost price.

30. The rationed part of working capital includes:

- a) fuel;
- b) auxiliary materials and spare parts for repairs;
- c) cash;
- d) finished products in stock.

31. The ratio of the volume of commodity output to average annual value of the fixed production assets is called:

- a) capital productivity (fund return);
- b) capital intensity (fund-intensity);
- c) capacity utilization factor;
- d) profitability.

32. Acceleration of working capital turnover contributes to:

- a) improving the structure of current assets;
- b) increase of the amount of attracted working capital for the same volume of sales;
- c) increase of output and sales of products at the same amount of working capital involved;

- d) increase of inventory turnover factor;
- e) increasing the duration of one turnover of working capital.

33. The personnel of the company is:

- a) a set of permanent and temporary workers who have received the necessary professional training;
- b) people who are already employed or will be employed in the future;
- c) the population of people permanently residing within a specific territory.

34. The personnel of the enterprise is divided into industrial and non-industrial (nonproduction) by the following features:

- a) the nature of participation in production activities;
- b) level of education;
- c) the complexity of the work performed;
- d) age and professional composition.

35. The industrial-manufacturing personnel of the enterprise do not include:

- a) chief accountant; b) a lawyer;
- c) a doctor; d) cleaner
- e) worker; e) the coach of the sports team.

36. The main goal of the enterprise is:

- a) meeting the needs of the market and getting profit;
- b) the effective use of fixed assets;
- c) increasing workforce productivity;
- d) improving the quality of products.

37. If the average value of working capital increases by 10%, then the inventory turnover factor (with a constant total revenue):

- a) will increase;
- b) will decrease;
- c) will not change.

38 The passive part of fixed assets include:

- a) working machines; b) buildings;
- c) measuring devices; d) vehicles.

39. If the average annual value of the fixed assets increases by 10% then the capital productivity (with a constant volume of commodity output):

- a) will increase; b) will decrease; c) will not change.

40. Which of the following factors indicates the use of fixed assets over time?

- a) integrated factor;
- b) duration of one turn-over;
- c) indicator of intensive use;
- d) indicator of extensive use;
- e) capital intensity;
- f) no correct answer.

41. The number of industrial production staff is 100 people, the output per worker during the estimated period is 120 thousand UAH per year. Under these conditions, a reasonable volume of production will be (thousand UAH):

- a) 11200; b) 12000; c) 112000.

42. Choose three countries - world leaders in terms of workforce (labor) productivity.

- a) UK;
- b) USA;
- c) Mexico;
- d) Moldova;
- e) Namibia.
- f) Australia;
- j) Cambodia.

43. Arrange the definitions into the correct row.

1) remuneration of an agreed annual amount, paid at agreed intervals (i.e., monthly or fortnightly). More often, such remuneration is received by people engaged in intellectual work: lawyer, economist, engineer;

2) macroeconomic indicator calculated as the average arithmetical value of wages of all groups of employees;

3) amount of money that characterizes the purchasing power of wages under the influence of changes in retail prices for goods and services;

4) the lowest monthly and hourly wage that employers are legally entitled to pay their employees;

5) amount of money person receives over a period of time.

6) remuneration based on the number of hours worked, multiplied by an hourly rate of pay. More often, such remuneration is received by people who are engaged in physical labor: builders, loaders, snack bar workers.

Term	Definition
Real wages (real salary)	
Wages	
Nominal wages (nominal salary)	
Salary	
Minimum wages (salary)	
Average wages (salary)	

44. Arrange the definitions into the correct row.

1) The worker's wage depends on the number of products produced per month.

2) The worker's wage depends on the number of hours he worked in a month

Term	Definition
Time-based form of remuneration	
Piece-rate form of remuneration	

45. Employee benefits that includes cash incentives like salary, bonuses and commissions as well as non-cash incentives like flexible work schedules or access to the company vehicle is called?

- a) nominal wages (salary);
- b) remuneration package;
- c) the results of the work of the employee;
- d) time-based form of remuneration;
- e) all answers are correct.

3. TASKS ON COURSE TOPICS

Calculation tasks play a crucial role in enterprise economics, as they support decision-making, resource allocation, financial planning, and overall business efficiency.

Variant 1.

Task 1. Small enterprise acquired a new lathe with numerical control at a price of 341 thousand UAH.

Transportation and installation costs amounted to 6% of the purchase price. The standard service life of the lathe is 5 years. Possible liquidation value - 10% of the initial value. Calculate:

1) the amount of depreciation for the years, using accumulated (cumulative) method (method of sum of serial numbers of years).

Task 2. The net weight of the detail made of steel is 198 kg/unit, the steel utilization rate – 0,81, the company produces 7250 units of product per year. Steel is delivered twice a month, transport time is two days. Determine manufacturing stocks standard (size).

Variant 2.

Task 1. Determine the change in capital intensity in the planning year compared to the reporting year based on the following data. In the reporting year the cost of fixed assets at the beginning of the year amounted to 3270 thousand UAH. It was commissioned from 01.04 fixed assets for 211 thousand UAH and decommissioned from 01.10 to 125 thousand UAH.

Volume of commodity output in the year - 7.2 million UAH.

In the planning year: increase the average annual value of fixed assets by 5%, increase the volume of commodity output by 8%. Analyze the results.

Task 2. The full cost price of unit of production in the reported year was 264 UAH/pc, while the cost of materials was 41% of the full cost price. In the planned year it is expected to reduce material costs by 6% on the product. Calculate the percentage of reduction of full cost price ($\% \Delta C_f$).

Variant 3.

Task 1. Determine the change in capital productivity (fund return) in the planning year compared to the reporting year based on the following data. In the reporting year the cost of fixed assets at the beginning of the year amounted to 4.05 million UAH. It was commissioned from 01.03 fixed assets for 198 thousand UAH and decommissioned from 01.11 to 127 thousand UAH. Volume of commodity output in the year - 7020 thousand UAH.

In the planning year - to increase the average annual value of fixed assets by 6% and increase the volume of commodity output by 9%. Analyze the results.

Task 2. The manufacturing cost of the machine is 5.18 th.UAH/unit. The annual sales costs - 698 thousand UAH, the annual administrative expenses - 1,01 million UAH. The planned rate of profitability is 8 %. The annual volume of production and sale – 0,61 thousand items. Determine the wholesale price of the machine.

Variant 4.

Task 1. The average annual value of the fixed (basic) assets of the enterprise amounted 3190 thousand UAH, the annual output per worker - 198 000 UAH/person, number of employees - 98 people. Calculate the use indicators of the fixed (basic) assets.

Task 2. During the year, products were sold in the amount of UAH 955000 and next year it is planned to increase the sales volume to UAH 1,310 thousand.

Determine the planned reduction in the duration of one turnover and the amount of working capital released, if their average value increases from 96,5 thousand UAH by 6%.

Variant 5.

Task 1. Calculate the efficiency of using of metal cutting machine if the regime fund of an operating time - 4032 hours per year. Passport productivity of the equipment - 21 unit/hour, actual fund of operating time - 3550 hours per year. Actual annual output - 53 thousands unit.

Task 2. Determine the wholesale price of the product, break-even point, profit (P_{rof}) for the annual sales (gross profit) and net profit of the enterprise for the annual sales ($P_{\text{rof net}}$) if: the annual volume of output (sales) is 3000 pieces; full cost price of the product - 86

UAH/pc; rate of profitability of the product - 19%; the share of fixed costs in the full cost price - 0.32.

Variant 6.

Task 1. Determine the change in capital productivity (fund return) in the planning year compared to the reporting year based on the following data. In the reporting year the cost of fixed assets at the beginning of the year amounted to 3.1 million UAH. It was commissioned from 01.05 fixed assets for 198 thousand UAH and decommissioned from 01.02 to 89 thousand UAH. Volume of commodity output in the year - 7020 thousand UAH. In the planning year - average annual value of fixed assets will increase the by 6% and the volume of commodity output increase by 9%. Analyze the results.

Task 2. During the 1-st year, products worth UAH 1010 thousand were sold, and 2-nd year it is planned to increase sales to UAH 1,1 million. Determine the planned reduction in turnover duration and the amount of working capital released if their average value increases from UAH 0,1 million by 9,9%.

Variant 7.

Task 1. Small enterprise acquired a new lathe with numerical control at a price of 155 thousand UAH. Transportation and installation costs amounted to 4,5 thousand UAH. The standard service life of the lathe is 5 years. Possible liquidation value - 10% of the initial value. The planned volume of production for all years of operation - 105 thousand units, moreover, during the first two years 46% of this quantity will be produced evenly, the remainder will be produced evenly over the next years of using the machine Calculate:

1) the amount of depreciation for the years, using unit of production depreciation method.

Task 2. Determine the standard of work-in-progress and turnover indicators of working capital, if during the year 1100 products will be manufactured, the cost price each of them is 1800 UAH/item (manufacturing cost price is 15% lower than Cf). The production manufacturing cycle - 8 days, the average level of product readiness at the enterprise is 73%. Profitability is 16%. Average value of working capital is 500 th UAH.

Variant 8.

Task 1. Calculate the cost of basic materials, if the net weight of the product is 8.2 kg. Material utilization (usage) rate is 93%. Price of the material 17000 UAH/t. The price of returnable waste is 8% of the cost of the material. Transportation costs are 4%.

Task 2. Determine the additional volume of sales (ΔTR) in the 2-nd year if, compared to the first year, the

average value of working capital increases by 5%, and the number of turnovers increases by 2 turnovers. Initial data: volume of sales in the 1-st year - 1033 thousand UAH, the average value of working capital - 117 thousand UAH.

Variant 9.

Task 1. Determine the change in capital productivity in the planning year compared to the reporting year based on the following data. In the reporting year the cost of fixed assets at the beginning of the year amounted to 3270 thousand UAH. It was commissioned from 01.09 fixed assets for 214 thousand UAH and decommissioned from 01.04 to 105 thousand UAH. Volume of commodity output in the year - 8.02 million UAH.

In the planning year: increase the average annual value of fixed assets by 4%, increase the volume of commodity output by 8%. Analyze the results.

Task 2. The full cost price of unit of production in the reported year was 387 UAH/pc, while the cost of materials was 29% of the full cost price. In the planned year it is expected to increase material costs by 7% on the product. Calculate the percentage of change of full cost price ($\% \Delta C_f$).

Variant 10.

Task 1. Determine the wholesale price of the product, calculate the break-even point, profit (P_{rof}) for the annual sales (gross profit) and net profit of the enterprise for the annual sales ($P_{\text{rof net}}$), if it is known that the annual volume of output (sales) is 5550 pieces; full cost price of the product - 68 UAH/pc. The proportion (specific gravity) of fixed costs in full cost price is 27%, rate of profitability is 16% of full cost price.

Task 2. Calculate the efficiency of using of metal cutting machine if the regime fund of an operating time - 4032 hours per year. Passport productivity of the equipment - 23 unit/hour, actual fund of operating time - 3670 hours per year. Actual annual output - 65 thousands unit.

Variant 11.

Task 1. The manufacturing cost price of 1 ton of production is 24250 UAH/t, the annual administrative expenses are 889 thousand UAH, and the annual sales costs are 1.002 million UAH. Profitability is 15.5% of full cost price. The planned volume of output is 950000 kg per year. Calculate the full cost price and wholesale price (P_w) of 1 ton of production, the amount of profit from 1 ton as well as structure of full cost price.

Task 2. The net weight of the part made of steel is 235 kg/unit, the steel utilization rate – 0,88, the company produces 7300 units of product per year. Steel is delivered twice a month, transport time is two days. Determine manufacturing stocks standard (size).

Variant 12.

Task 1. Small enterprise acquired a new lathe with numerical control at a price of 307 thousand UAH. Transportation and installation costs amounted to 2% of the purchase price. The standard service life of the lathe is 5 years. Possible liquidation value - 14% of the initial value. Calculate:

- 1) the amount of depreciation for the years, using straight-line depreciation method;
- 2) the amount of depreciation for the month

Task 2. The manufacturing cost of the machine is 6.05 th.UAH/unit. The annual sales costs - 915 thousand UAH, the annual administrative expenses - 1,01 million UAH. The planned rate of profitability is 11%. The annual volume of production and sale – 0,62 thousand items. Determine the wholesale price of the machine.

Variant 13.

Task 1. The manufacturing cost price of 1 ton of production is 37400 UAH/t, the annual administrative expenses are 895.8 thousand UAH, and the annual sales costs are 2 million UAH. Profitability is 13.5% of full cost price. The planned volume of output is 1050000 kg per year. Calculate the full cost price and wholesale price (P_w) of 1 ton of production, the amount of profit from 1 ton as well as structure of full cost price.

Task 2. Determine the additional volume of sales (ΔTR) in the 2-nd year if, compared to the first year, the average value of working capital increases by 5%, and the number of turnovers increases by 1 turnover. Initial data: volume of sales in the 1-st year - 1271 thousand UAH, the average value of working capital - 507 thousand UAH.

Variant 14.

Task 1. The full cost price of unit of production in the reported year was 541 UAH/pc, while the cost of materials was 34% of the full cost price. In the planned year it is expected to increase material costs by 5% on the product. Calculate the percentage of change of full cost price ($\% \Delta C_f$).

Task 2. Determine the change in capital intensity in the planning year compared to the reporting year based on the following data. In the reporting year the cost of fixed assets at the beginning of the year amounted to 2870 thousand UAH. It was commissioned from 01.06 fixed assets for 202 thousand UAH and decommissioned from 01.07 to 125 thousand UAH. Volume of commodity output in the year - 6.82 million UAH.

In the planning year - to increase the average annual value of fixed assets by 5% and increase the volume of commodity output by 9%. Analyze the results.

Variant 15.

Task 1. Small enterprise acquired a new lathe with numerical control at a price of 222 thousand UAH. Transportation and installation costs amounted to 7% of the purchase price. The standard service life of the lathe

is 5 years. Possible liquidation value – 8,5 % of the initial value. Calculate:

1) the amount of depreciation for the years, using accumulated (cumulative) method (method of sum of serial numbers of years).

Task 2. The net weight of the detail made of steel is 85 kg/unit, the steel utilization rate – 0,95, the company produces 7500 units of product per year. Steel is delivered twice a month, transport time is two days. Determine manufacturing stocks standard (size).

Variant 16.

Task 1. Determine the change in capital productivity (fund return) in the planning year compared to the reporting year based on the following data. In the reporting year the cost of fixed assets at the beginning of

the year amounted to 3.5 million UAH. It was commissioned from 01.07 fixed assets for 128 thousand UAH and decommissioned from 01.03 to 87 thousand UAH. Volume of commodity output in the year - 8120 thousand UAH. In the planning year - average annual value of fixed assets will increase the by 5% and the volume of commodity output increase by 10%. Analyze the results.

Task 2. The average annual value of the fixed (basic) assets of the enterprise amounted 2500 thousand UAH, the annual output per worker - 195 000 UAH/person, number of employees - 81 people. Calculate the use indicators of the fixed (basic) assets.

Variant 17.

Task 1. Small enterprise acquired a new lathe with numerical control at a price of 228 thousand UAH.

Transportation and installation costs amounted to 5,5 thousand UAH. The standard service life of the lathe is 5 years. Possible liquidation value - 7% of the initial value. The planned volume of production for all years of operation - 100 thousand units, moreover, during the first two years 45% of this quantity will be produced evenly, the remainder will be produced evenly over the next years of using the machine Calculate:

1) the amount of depreciation for the years, using unit of production depreciation method.

Task 2. Determine the standard of work-in-progress and turnover indicators of working capital, if during the year 1200 products will be manufactured, the cost price each of them is 1800 UAH/item (manufacturing cost price is 15% lower than C_f). The production manufacturing cycle - 6 days, the average level of product readiness at the enterprise is 77%. Profitability is 16%. The average value of working capital is 500 th UAH.

Variant 18.

Task 1. Determine the change in capital productivity (fund return) in the planning year compared to the

reporting year based on the following data. In the reporting year the cost of fixed assets at the beginning of the year amounted to 3.1 million UAH. It was commissioned from 01.05 fixed assets for 198 thousand UAH and decommissioned from 01.02 to 89 thousand UAH. Volume of commodity output in the year - 7020 thousand UAH. In the planning year - average annual value of fixed assets will increase the by 6% and the volume of commodity output increase by 9%. Analyze the results.

Task 2. Calculate the cost of basic materials, if the net weight of the product is 5.9 kg. Material utilization (usage) rate is 78%. Price of the material 15000 UAH/t. The price of returnable waste is 10% of the cost of the material. Transportation costs are 4%.

Variant 19.

Task 1. Determine the wholesale price of the product, break-even point, profit (P_{rof}) for the annual sales (gross profit) and net profit of the enterprise for the annual sales ($P_{\text{rof net}}$) if: the annual volume of output (sales) is 3000 pieces; full cost price of the product - 105 UAH/pc; rate of profitability of the product - 17%; the share of fixed costs in the full cost price - 0.28.

Task 2. During the 1-st year, products worth UAH 855 thousand were sold, and 2-nd year it is planned to increase sales to UAH 1,1 million. Determine the planned reduction in turnover duration and the amount of working capital released if their average value increases from UAH 0.1 million by 7,4%.

Variant 20.

Task 1. Small enterprise acquired a new lathe with numerical control at a price of 270 thousand UAH. Transportation and installation costs amounted to 3% of the purchase price. The standard service life of the lathe is 5 years. Possible liquidation value - 16% of the initial value. Calculate:

- 1) the amount of depreciation for the years, using straight-line depreciation method;
- 2) the amount of depreciation for the month.

Task 2. During the year, products were sold in the amount of UAH 890000, and next year it is planned to increase the sales volume to UAH 1,310 thousand. Determine the planned reduction in the duration of one turnover and the amount of working capital released, if their average value increases from 125 thousand UAH by 5%.

Variant 21.

Task 1. In the reporting period, the enterprise produced 1500 products, of which 39% were of the highest quality category. The plan provides for changing the output of products of the highest quality category to 75% in the total production (while the total output will not change). Wholesale price of products of the ordinary category - 1050 UAH/pc., the highest category - 1375 UAH/pc., full cost price of products of the ordinary category - 840 UAH/pc., highest category - 1025 UAH/pc.

Determine:

- 1) the amount of profit due to the additional sale of products of the highest quality category;
- 2) the profitability of products of ordinary and highest quality categories;
- 3) the overall level of profitability of the enterprise in the reporting and planning periods.

Task 2. Calculate the number of employees in the planning period, if it is known that in the base period the volume of output amounted to UAH 11.2 million, the number of employees is 128 people. In the planning period, the volume of output will increase by 3%, and workforce productivity (production output) due to the introduction of new technology will increase by 7,5%.

Variant 22.

Task 1. Calculate the monthly wages of an employee using hourly, hourly-bonus, piece-rate and piece-rate bonus systems of remuneration, if the planned time fund for the month is 200 hours. During the month, 169 products were actually processed, with a labor intensity of 77 minutes/pc. The number of defective products - 5 pieces. Category of works - 4,5.

Bonus Scale for overfulfillment (time-based (hourly)): if plan for working time is exceeded from 6 % to 11 % - bonus is 10% of the payment for the tariff; if plan for working time is exceeded from 11 % to 21 % - bonus is 20% of the payment for the tariff.

Bonus Scale for quality (piece-rate): if the quality plan is 100% fulfilled - bonus is 30% of the payment for the tariff; if the quality plan is fulfilled from 96 % to 99 % - bonus is 20% of the payment for the tariff; if the quality plan is fulfilled from 92 % to 95 % - bonus is 10% of the payment for the tariff.

Task 2. Determine the standard of work-in-progress and turnover indicators of working capital, if during the year 1000 products will be manufactured, the cost price each of them is 1800 UAH/item. The production manufacturing cycle - 9 days, the average level of product readiness at the enterprise is 77%. Profitability is 16%.

Variant 23.

Task 1. The company manufactures plastic products, annual output - 194 thousand pcs, labor intensity is 45 min/pcs. The mode of operation of the enterprise: working days per year - 277, 2 shift, shift duration - 8 hours; planned idle time 5%. Percentage of compliance with time rates - 107%. Calculate:

- a) the number of main workers of the enterprise;
- b) number of units of equipment;
- c) workforce productivity (labour efficiency) of one employee.

Task 2. The manufacturing cost price of 1 ton of production is 22250 UAH/t, the annual administrative expenses are 895.8 thousand UAH, and the annual sales costs are 1.002 million UAH. Profitability is 13.5% of full cost price. The planned volume of output is 950000 kg per year. Calculate the full cost price and wholesale price (Pw) of 1 ton of production, the amount of profit from 1 ton as well as structure of full cost price.

Variant 24.

Task 1. Determine the wholesale price of the product, break-even point, profit (Prof) for the annual sales (gross profit) and net profit of the enterprise for the annual sales (Prof net) if: the annual volume of output (sales) is 3000 pieces; full cost price of the product - 81 UAH/pc; rate of profitability of the product - 21%; the share of fixed costs in the full cost price - 0.3.

Task 2. Determine the implementation of the plan by the hour workforce productivity, if it is known that during the year the company actually worked 75 thousand hours and produced products for 9780 thousand UAH (plan 2019). The planned length of the working day on the balance of working time was 6.75 hours, and daily output was 1670 UAH/person (actual 2019).

Task 1. Determine the additional volume of sales (ΔTR) in the 2-nd year if, compared to the first year, the average value of working capital increases by 5%, and the number of turnovers increases by 2 turnovers. Initial data: volume of sales in the 1-st year - 1033 thousand UAH, the average value of working capital - 117 thousand UAH.

Task 2. During the year, products were sold in the amount of UAH 890000, and next year it is planned to increase the sales volume to UAH 1,310 thousand. Determine the planned reduction in the duration of one turnover and the amount of working capital released, if their average value increases from 125 thousand UAH by 5%.

Variant 26.

Task 1. Small enterprise acquired a new lathe with numerical control at a price of 270 thousand UAH. Transportation and installation costs amounted to 3% of the purchase price. The standard service life of the lathe is 5 years. Possible liquidation value - 16% of the initial value. Calculate:

- 1) the amount of depreciation for the years, using straight-line depreciation method;
- 2) the amount of depreciation for the month.

Task 2. The manufacturing cost price of 1 ton of production is 22250 UAH/t, the annual administrative expenses are 895.8 thousand UAH, and the annual sales costs are 1.002 million UAH. Profitability is 13.5% of full cost price. The planned volume of output is 950000 kg per year. Calculate the full cost price and wholesale price (Pw) of 1 ton of production, the amount of profit from 1 ton as well as structure of full cost price.

Variant 27.

Task 1. Determining the effectiveness of the innovative project. Justify the effectiveness of the innovative project, build a project schedule and calculate the Payback Period based on the following initial data:

1. Investments in the project are carried out within one year (**year zero**) and amount to *N1* mln UAH;
2. The share of fixed assets subject to depreciation, (α) – 85%; percentage of annual depreciation charges – 16.5%;
3. Project implementation period – 5 years;
4. Profit tax rate – 18%;
5. The discount rate is the amount of return that could have been received if the investor had used an alternative investment method. An example would be the interest rate on a bank deposit.
The discount rate adopted here is 17%;
6. Profitability level – 20.5%;

Table - Sales volume and cost of production by year

Indicator name	Years of project activity				
	1	2	3	4	5
Volume of product annual sales, Aa, units.	<i>N2</i>	3950	4300	<i>N4</i>	3200

Full cost price, C_f , UAH/unit.	650	N3	575	560	565
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Variant 28.

Task 1. During the year, products were sold in the amount of UAH 890,000, and next year it is planned to increase the sales volume to UAH 1,310 thousand. Determine the planned reduction in the duration of one turnover and the amount of working capital released, if their average value increases from 95 thousand UAH by 7%.

Task 2. Determine the change in capital productivity (fund return) in the planning year compared to the reporting year based on the following data. In the reporting year the cost of fixed assets at the beginning of the year amounted to 4.1 million UAH. It was commissioned from 01.03 fixed assets for 247 thousand UAH and decommissioned from 01.09 to 125 thousand UAH. Volume of commodity output in the year - 7020 thousand UAH.

In the planning year - to increase the average annual value of fixed assets by 7,5% and increase the

volume of commodity output by 5%. Analyze the results.

Variant 29.

Task 1. Small enterprise acquired a new lathe with numerical control at a price of 270 thousand UAH. Transportation and installation costs amounted to 3% of the purchase price. The standard service life of the lathe is 5 years. Possible liquidation value - 16% of the initial value. Calculate:

- 1) the amount of depreciation for the years, using straight-line depreciation method;
- 2) the amount of depreciation for the month.

Task 2. The manufacturing cost price of 1 ton of production is 18.5 th. UAH/t, the annual administrative expenses are 1088 thousand UAH, and the annual sales costs are 1.002 million UAH. Profitability is 11.5% of full cost price. The planned volume of output is 890000 kg per year. Calculate the full cost price and wholesale

price (P_w) of 1 ton of production, the amount of profit from 1 ton as well as structure of full cost price.

Variant 30.

Task 1. Determine the wholesale price of the product, calculate the break-even point, profit (Prof) for the annual sales (gross profit) and net profit of the enterprise for the annual sales (Prof net), if it is known that the annual volume of output (sales) is 6100 pieces; full cost price of the product - 75 UAH/pc. The proportion (specific gravity) of fixed costs in full cost price is 27%, rate of profitability is 17% of full cost price.

Task 2. Calculate the efficiency of using of metal cutting machine if the regime fund of an operating time - 3980 hours per year. Passport productivity of the equipment - 22 unit/hour, actual fund of operating time - 3670 hours per year. Actual annual output - 59500 unit.

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