

## **Business and Management: Second-round Sample Tasks for the Open Doors Master's and Doctoral Track**

This sample test comprises 35 tasks, including 21 entry-level tasks with a single correct answer (each correct answer is assigned 1 point), 10 intermediate-level tasks with multiple correct answers (the correct answer is assigned 4 points), and 4 advanced-level tasks requiring a detailed answer (the answer is assigned 9–10 points depending on its correctness and completeness).

For advanced-level tasks requiring a detailed answer, assessment criteria and a standard answer are provided.

### **Field of Science 1. Strategic Management**

#### **Task 1**

##### **Entry level (1 point)**

Which strategy should a company use for a business unit placed in the Star category of the BCG matrix?

- a) analyzing whether the business unit can move to a better category
- b) disposing of it
- c) retaining it
- d) investing for growth
- e) using high cash flows to invest in other business units

**Answer:** d.

#### **Task 2**

##### **Entry level (1 point)**

As part of its development strategy, a wholesale company has acquired a chain of retail stores. What is this strategy called?

- a) horizontal integration
- b) vertical backward integration
- c) vertical integration forward
- d) related diversification
- e) unrelated diversification

**Answer:** c.

#### **Task 3**

##### **Entry level (1 point)**

Which of the following is a basic human need motivating people to act, according to McClelland's Human Motivation Model?

- a) need for self-realization
- b) need for success
- c) need to know the world
- d) need for respect
- e) need for self-discipline

**Answer:** b.

**Task 4**  
**Intermediate level (4 points)**

Which characteristics indicate that a company has chosen differentiation as its competitive strategy? Select all that apply.

- a) It can spend more on advertising than its competitors.
- b) It gets a premium price for its product.
- c) It highlights special product features that are important to a specific group of customers.
- d) It does not have sufficient resources to serve a broader market segment.
- e) It ensures that the customer recognizes the uniqueness of the product.

**Answer:** b, e.

**Task 5**  
**Intermediate level (4 points)**

Which of the following represent general management functions as formulated by Henri Fayol? Select all that apply.

- a) planning
- b) personnel management
- c) marketing management
- d) decision-making
- e) organization

**Answer:** a, e.

**Field of Science 2. Decision-Making in Management**

**Task 6**  
**Entry level (1 point)**

Which PESTEL analysis factor includes an examination of bankruptcy law practices?

- a) political
- b) economic
- c) socio-cultural
- d) technological
- e) legal

**Answer:** e.

**Task 7**  
**Entry level (1 point)**

Which of the SMART criteria does not align with a company's strategic goal of improving performance by 25-30% by January 1, 2025?

- a) specific
- b) measurable
- c) achievable
- d) realistic
- e) time-bound

**Answer:** a.

**Task 8**  
**Entry level (1 point)**

What is a managerial decision?

- a) The key factor in the interaction between the managing and managed systems
- b) An impact on the managed system
- c) Actions causing reasonable changes in the behavior of the managed system
- d) Implementation of an action plan
- e) A manager's intention to change the situation and achieve results

**Answer:** b.

**Task 9**  
**Intermediate level (4 points)**

After conducting a SWOT analysis, a company producing art supplies has chosen an ST strategy. Which activities are associated with this strategy? Select all that apply.

- a) promoting the company's unique offering of custom-sized canvases based on the capabilities of its equipment
- b) expanding the advertising campaign's target audience based on the widespread growth of interest in art
- c) increasing the share of low-cost assortment items in response to declining household incomes
- d) implementing a mentoring system among employees to combat the decline in manual labor skills
- e) expanding partnerships with the increasing number of creative studios and hobby centers

**Answer:** a, c.

**Task 10**  
**Intermediate level (4 points)**

Which of the following are stages of managerial decision-making? Select all that apply.

- a) problem detection
- b) identification of relevant factors and conditions
- c) developing a decision
- d) evaluation and decision-making
- e) all of the above

**Answer:** c, d.

**Field of Science 3. Organizational Behavior and Human Resource Management**

**Task 11**  
**Entry level (1 point)**

Which of the following describes more precisely the means managers use to achieve organizational goals?

- a) power and discipline
- b) people and equipment
- c) resources and power
- d) people, power, and resources
- e) people and resources

**Answer:** d.

**Task 12**  
**Entry level (1 point)**

Which stage of an organization's life cycle, according to Ichak Adizes' model, characterizes the transition to premature ageing?

- a) infancy
- b) prime
- c) adolescence
- d) early bureaucracy
- e) aristocracy

**Answer:** c.

**Task 13**  
**Entry level (1 point)**

How would a classical manager assign employees to specific jobs?

- a) give the best jobs to the most senior employees
- b) allocate employees to positions based on their ability to best perform the required tasks
- c) assign roles according to employees' educational qualifications
- d) assign the job to the employee ready to accept the lowest pay
- e) delegate decision-making to the human resources department

**Answer:** b.

**Task 14**  
**Intermediate level (4 points)**

Having the power of mandatory approval means the right to...  
Select all that apply.

- a) give advice to a subordinate.
- b) reject decisions taken.
- c) veto decisions.
- d) adjust the decisions made.
- e) urge amendments to proposed decisions.

**Answer:** d, e.

**Task 15**  
**Advanced level (10 points)**

The planned number of production personnel for the company as of March 1, 2025, is 500 FTE (Full-Time Equivalent), including 20 new positions. The average employee turnover rate for the year is 12% of the average number of employees (assumed to be 480 for simplicity). The average conversion rate of the recruitment funnel for production personnel is 25% (the percentage of candidates who accept a job offer out of all initial applicants; option 1). Of those who accept a job offer, 10% either decline before starting, do not start, or quit within the first week of employment.

Calculate the number of initial applicants needed to fill all the vacancies, given the current personnel turnover and selection funnel parameters. Additionally, determine the change if the funnel conversion rate improves to 30% (option 2) as a result of optimizing the attraction and selection process.

**Note** that the assessment will take into account both the solution process and the reasoning behind it; simply providing the final answer will not be sufficient.

### Solution

1. Let us calculate the number of vacancies to be filled:

- 20 new vacancies;
- vacancies resulting from the turnover: 12% of 480 = 57.6, which rounds to 58 vacancies

Total:  $58 + 20 = 78$  vacancies. This calculation assumes all production workers are full-time. (3 points).

2. Let us find the number of job offers (X) needed for 78 vacancies to be filled:

$X \times 0.9 = 78$ ; therefore,  $X = 78/0.9 = 86.7$ , which rounds to 87 job offers (3 points).

3. Let us determine the number of initial applicants (Y) needed, given the required number of job offers and an average recruitment funnel conversion rate of 25%.

(option 1):  $Y \times 0.25 = 87$ ; therefore,  $Y = 87/0.25 = 348$  initial applicants (2 points).

4. Find the number of initial applicants at an improved funnel conversion rate of 30% (option 2):  $87/0.30 = 290$  initial candidates (2 points).

**Answer:** If the selection parameters remain the same, recruiters need to attract at least 348 candidates to fill all production worker vacancies by March 1. However, if the funnel conversion rate increases to 30%, it will only be necessary to attract 290 initial applicants.

### Assessment criteria

Calculating the number of vacancies - 3 points.

Calculating the number of job offers - 3 points.

Calculating the number of primary candidates for Option 1 - 2 points.

Calculating the number of primary candidates for Option 2 - 2 points.

## Field of Science 4. Entrepreneurship

### Task 16

Entry level (1 point)

According to Philip Kotler, what is the goal of marketing?

- a) product development
- b) best price calculation
- c) productive advertisement campaigns
- d) satisfaction of customers' needs and wants
- e) high profitability of the business for its owners

**Answer:** d.

### Task 17

Entry level (1 point)

Which of the following refers to goods and services expressed in monetary terms that can be purchased within a specific period under certain conditions?

- a) market capacity
- b) market saturation
- c) market share
- d) target market
- e) positioning

**Answer:** a.

### Task 18

#### Entry level (1 point)

According to the theory of tax differentiation, investors prefer...

- a) a tax policy that minimizes the taxation of dividends.
- b) capital gains to dividend payments.
- c) dividend payments to capital gains.
- d) stable dividend policy.
- e) buyback of shares.

**Answer:** b.

### Task 19

#### Intermediate level (4 points)

Investment decisions are those related to...

Select all that apply.

- a) finding financial resources for investment.
- b) upgrading the physical infrastructure.
- c) Identifying potential investors.
- d) developing new types of activities.
- e) formation of working capital.

**Answer:** b, d.

### Task 20

#### Advanced level (10 points)

A cannery is considering purchasing a vegetable preserve production line for \$3,500. The line has a service life of 4 years, during which it will generate annual revenue of \$1,000. After its service life ends, the machine is expected to be sold for \$500. Determine the feasibility of purchasing this machine with an annual interest rate of 2%.

**Note** that the assessment will take into account both the solution process and the reasoning behind it; simply providing the final answer will not be sufficient.

#### Solution

$$NPV = -I_0 + \sum_{i=1}^3 \frac{\text{annual flows}}{(1+r)^i} + \frac{\text{annual flows} + \text{revenue from sales}}{(1+r)^4} \quad (4 \text{ points})$$

$$\text{NPV} = -3500 + \frac{1000}{(1+0,02)} + \frac{1000}{(1+0,02)^2} + \frac{1000}{(1+0,02)^3} + \frac{1000+500}{(1+0,02)^4} = -3500 + 4269,65141 = 769,651412 \text{ (to the nearest \$) (5 points)}$$

NPV > 0, therefore, it is advisable to purchase the production line (1 point)

**Answer**

NPV > 0, therefore, it is advisable to purchase the production line.

**Assessment criteria**

Provision of the correct formula – 4 points.

Accuracy of calculations – 5 points.

Formulation of a correct conclusion – 1 point.

## Field of Science 5. Business Analytics and Digital Transformation of Business

### Task 21

Entry level (1 point)

What is a business process?

- a) set of business functions
- b) commercial activities conducted for profit
- c) distribution of responsibilities, powers, and functions within an organization
- d) sequence of actions to transform inputs into outputs satisfying the consumer
- e) any activity on a corporate scale

**Answer:** d.

### Task 22

Entry level (1 point)

Which notation is used to describe the structure of a business process system, represent the composition of processes at the same level of abstraction, and illustrate the relationships between them using a diagram?

- a) BPMN
- b) DFD
- c) EPC
- d) IDEF0
- e) all of the above

**Answer:** d.

### Task 23

Entry level (1 point)

What is enterprise architecture?

- a) management style
- b) conceptual structure of system organization
- c) software used to systematize business processes and store data in an organization
- d) the art of designing and building business centers and industrial buildings

- e) a unified system that describes existing organizational structures, goals, and achievement indicators, the line of products/services that generate income, as well as the infrastructure (software, hardware, equipment) used in operations.

**Answer:** e.

**Task 24**  
**Intermediate level (4 points)**

What types of problems can be addressed using the Ishikawa (fishbone) diagram?  
Select all that apply.

- a) increasing the level of manageability of business processes
- b) showing the cause-and-effect relationship between processes and results
- c) identifying potential sources of the problem
- d) assessing the degree of influence of problems on the result
- e) generating a complete set of QMS documentation

**Answer:** c, d.

**Task 25**  
**Advanced level (10 points)**

A corporate website receives 30,000 visitors per month. The win rate is 15%, and the average purchase amount is 3,000 RUR. The company spends 1,000,000 RUR monthly on marketing to maintain this level of visitor traffic and sales.

Write the relevant formulas and calculate:

- the number of sales (the number of visitors converted to buyers)
- sales volume (in RUR)
- ROMI

Explain what the ROMI values mean.

**Note** that the assessment will take into account both the solution process and the reasoning behind it; simply providing the final answer will not be sufficient.

**Solution**

Let us calculate the number of sales (2 points).

Formula: number of sales = number of visitors × win rate

$$\text{number of sales} = 30,000 \times 0.15 = 4,500$$

Let us calculate the volume of sales (2 points).

Formula: volume of sales = sales number × average purchase value

$$\text{volume of sales} = 4,500 \times 3,000 = 13,500,000 \text{ RUR}$$

ROMI (4 points)

Formula: ROMI = (volume of sales – marketing costs) / marketing costs

$$\text{ROMI} = (13,500,000 - 1,000,000) / 1,000,000 = 12.5$$

ROMI Explanation: this ROMI value indicates that each ruble spent on marketing generates 12.5 RUR in revenue for the company, which signifies a highly favorable impact of the marketing actions (2 points).



**Assessment criteria:**

Calculation of the number of sales - 2 points.

Calculation of the sales volume - 2 points.

Calculation of the ROMI - 4 points.

Explanation of the ROMI value - 2 points.

**Field of Science 6. International Business and Management**

**Task 26**

**Entry level (1 point)**

Who is the author of the world's most authoritative study on the competitiveness of countries and nations?

- a) Joseph Schumpeter
- b) Michael Porter
- c) John Dunning
- d) Adam Smith
- e) Paul Krugman

**Answer:** b.

**Task 27**

**Entry level (1 point)**

What process is driven by intensification and changes in international competition, saturation of local markets, and the need for a firm to expand into foreign markets?

- a) vertical integration
- b) strategic planning
- c) diversification
- d) internationalization
- e) horizontal integration

**Answer:** d.

**Task 28**

**Entry level (1 point)**

International franchising is ...

- a) a special agreement under which a company sells its management experience and develops management system of a foreign company
- b) a special form of license in which a company allows another company to use its entire business system under its brand name for a fee
- c) an agreement under which a company allows a foreign company to use its technology, patents, trademarks, copyrights for a fee (royalty)
- d) a system of doing business when a company hires most of its staff in foreign branches from among local residents
- e) an agreement under which a company transfers part of its production and transport equipment to a foreign partner for temporary use for a certain fee

**Answer:** b.

**Task 29**

**Intermediate level (4 points)**

Which two blocks of Osterwalder's business model characterize the financial component of the business?

- a) key resources
- b) value proposition
- c) cost structure
- d) revenue streams
- e) sales channels

**Answer:** c, d.

**Task 30**

**Intermediate level (4 points)**

Which two basic terms of delivery of goods include payment for the primary transportation?

- a) CIF
- b) DDU
- c) EXW
- d) FOD
- e) FCA

**Answer:** a, b.

**Field of Science 7. Innovation Management**

**Task 31**

**Entry level (1 point)**

Which factor underlies the long waves of industrial market conditions lasting from 40 to 60 years?

- a) replacement of infrastructure assets, such as buildings, structures, utility lines, and transmission devices
- b) replacement of the equipment assets, such as machinery and vehicles
- c) market changes in relation to certain types of industrial products
- d) change of workforce generations
- e) change of educational systems

**Answer:** a.

**Task 32**

**Entry level (1 point)**

Who authored the concept of dynamic business cycles, where cyclicity is viewed as a pattern of economic growth, with investment in fixed capital driven by innovation as the primary force behind growth?

- a) Ichak Adizes
- b) Karl Marx
- c) Joseph Schumpeter
- d) Adam Smith
- e) Nikolai Kondratiev

**Answer:** c.

**Task 33**

**Entry level (1 point)**

To which block does the process technology for all organizational functions and projects belong?

- a) resource block
- b) product block
- c) function block
- d) organizational block of the production and economic system
- e) control block

**Answer:** d.

**Task 34**  
**Intermediate level (4 points)**

Which of the following innovations are product innovations?

Select all that apply.

- a) first digital camera
- b) first system for transporting goods using a barcode
- c) first use of discount cards in stores
- d) a new system for advanced training at the enterprise
- e) launch of nanocellulose (biodegradable packaging) production for use in the organization's operations

**Answer:** a, e.

**Task 35**  
**Advanced level (9 points)**

A company is preparing to introduce a new product to the market. Its analysis of the risk of buyers' reluctance to switch to the new product showed the following:

- probability of risk occurrence (on a scale from 1 to 5) is 3 points;
- the severity of consequences if the undesirable event takes place (on a scale from 1 to 5) is 5 points.

Calculate the risk index. Based on this index, determine and describe the impact and level of the risk. Identify and explain the appropriate risk treatment strategy.

**Note** that the assessment will take into account both the solution process and the reasoning behind it; simply providing the final answer will not be sufficient.

**Solution**

Risk index = probability of occurrence × severity of consequences = 15 (2 points)

This risk value points to a significant impact, meaning that these risks will lead to increased work duration (2 points).

Additionally, the value indicates an intolerable level of risk, making it a primary concern: risk treatment should continue until the risk is reduced to an acceptable level. Continuous monitoring and review are necessary (2 points).

The appropriate way to handle this risk is through risk mitigation, which involves implementing preventative measures to reduce either the likelihood of the risk occurring or its potential consequences (3 points).

**Assessment criteria**

Calculation of the risk index – 2 points.

Identification and description of the degree of risk impact – 2 points.

Determination and explanation of the risk level – 2 points.

Selection and justification of the risk treatment method – 3 points.