Документ подписан простой электронной подписью
Информация о владельце:
ФИО: Максимов Алексей Борисович
Должность: директор департамента по образовательной политике
Дата подписания: 13.04.2026 17:16:26
Уникальный программный ключ:
8db180d1a3f02ac9e60521a5672742735c18b1d6

MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION

Federal State Autonomous Educational Institution of Higher Education

"Moscow Polytechnic University"

APPROVE
Vice-President
for International Affairs
_____ /Yu.D. Davydova/
"___" февраля 2024

Dean of the Faculty
of Economics and Management
_____ /A.V. Nazarenko/
"15" февраля 2024

WORKING PROGRAM OF THE DISCIPLINE

"Business Process Management"

Field of study
38.03.02 Management

Educational program (profile)
"Business Process Management"

Qualification (degree)
Bachelor

Form of study
Part-time

Moscow 2024

Developer(s):

Associate Professor, Ph.D.  /S.V. Bolotnikov/

Agreed:
Head of the Department of Management,
Ph.D., Associate Professor  /E.E. Alenina/

Content

1. Goals, objectives and planned learning outcomes in the discipline 3
2. Place of discipline in the structure of the educational program 4
3. Structure and content of the discipline 4
   3.1. Types of educational work and labor intensity 5
   3.2. Thematic plan for studying the discipline 5
   3.3. Contents of the discipline 8
   3.4. Topics of seminars/practical and laboratory classes 10
4. Educational, methodological and information support 11
   4.1. Regulatory documents and GOSTs 11
   4.2. Main literature 12
   4.3. additional literature 12
   4.4. Electronic educational resources 12
   4.5. Licensed and freely distributed software 12
   4.6. Modern professional databases and information reference systems 12
5. Logistics support 12
6. Guidelines 13
   6.1. Methodological recommendations for teachers on organizing training 13
   6.2. Guidelines for students on mastering the discipline 13
7. Appraisal Fund 16
   7.1. Methods for monitoring and assessing learning outcomes 16
   7.2. Scale and criteria for assessing learning outcomes 18
   7.3. Evaluation tools 23

1. Goals, objectives and planned learning outcomes in the discipline.

The discipline “Business Process Management” is intended to present the modern concept of managing a company (enterprise) operating in difficult economic conditions.

The main goals of mastering the discipline “Business Process Management” include:

- presentation to students about the problems and prospects for the effective organization of production and operational processes,
- to develop theoretical knowledge and practical skills on the basic principles of production (operational) management in order to increase the competitiveness of the enterprise

To the main tasksmastering the discipline “Business Process Management” should include:

- identification of types of operating activities and significant relationships between them;
- consideration of modern problems of operations management based on a study of the fundamentals of the formation and functioning of the organization’s operating system;
- study of the stages of the life cycle of operating systems, highlighting the characteristic features of each stage and identifying the main approaches to solving their inherent operational problems;
- study of the motives for creating and the conditions for choosing a new product based on modern strategic approaches;
- acquiring practical skills in developing the process of creating a new product in an organization, including skills in developing service plans for organizations engaged in the service sector;
- consideration of the theoretical foundations of constructing production processes and determining the possibilities of using specific process strategies based on the most influential factors;
- mastering the skills of designing production processes using modern production flow planning tools and based on studying the conditions for choosing a method of providing services;
- identifying areas for improving the operational activities of modern organizations.

A list of planned learning outcomes for the discipline (module), correlated with the planned results of mastering the professional training program.

As a result of mastering the discipline (module), students develop the following competencies and the following learning outcomes must be achieved as a stage in the formation of relevant competencies:

Cipher	Name	Code and name of the competency achievement indicator

OPK-4	Able to identify and evaluate new market opportunities, develop business plans for the creation and development of new activities and organizations	IOPK-4.1. Knows methods for identifying and assessing new market opportunities, developing business plans for creating and developing new areas of activity for organizations. IOPK-4.2. Able to identify and evaluate new market opportunities, develop business plans for the creation and development of new areas of activity of organizations. IOPK-4.3. Possesses the skills and methods of identifying and assessing new market opportunities, developing business plans for the creation and development of new areas of activity of organizations.

2. Place of discipline in the structure of the educational program

The discipline "Business Process Management" is one of the compulsory disciplines of the cycle (B1.1) of the undergraduate educational program.

The discipline "Business Process Management" is interconnected logically, substantively and methodologically with the following disciplines and practices of the EP:

In the basic part (B1.1):

-Introduction to project activities;

-Organizational Lifecycle Management

In the part formed by participants in educational relations (B.1.2):

- Project activities;
- Business process management tools;
- Business process reengineering;
- System management of business processes.

3. Structure and content of the discipline.

The total labor intensity of the discipline is _4_ credit(s) units (144 hours).

3.1. Types of educational work and labor intensity

(according to forms of study)

3.1.2. Part-time education

No.	Type of educational work	Number of hours	Semesters	
			2	-
1	**Auditory lessons**	**54**	**54**	-
	Including:			-
1.1	Lectures	18	18	-
1.2	Seminars/practical sessions	36	36	-
1.3	Laboratory exercises	-	-	-
2	**Independent work**	**90**	**90**	-
3	**Interim certification**	**-**	**-**	-
	Test/differential test/exam	**exam**	**exam**	-
	Total	**144**	**144**	

3.2. Thematic plan for studying the discipline
(according to forms of study)

3.2.1. Part-time education

No.	Sections/topics disciplines	Labor intensity, hour					
		Total	Classroom work				Independent work
			Lecture	Seminars/practical sessions	Laboratory exercises	Practical training	
1	**Topic 1. Basic approaches to optimizing business processes**	16	2	4	-	-	12
2	**Topic 2. Business process modeling**	16	2	4	-	-	12
3	**Topic 3 "IDEF Methodologies"**	16	2	4	-	-	12
4	**Topic 4 "ARIS Methodology"**	16	2	4	-	-	12
5	**Topic 5 "The concept of BPM business process management"**	16	2	4	-	-	12
6	**Topic 6 "Methods of business process analysis"**	16	2	4	-	-	12
7	**Topic 7 "Basic approaches to optimizing business processes"**	16	2	4	-	-	12
8	**Topic 8 "Risk analysis of business processes"**	16	2	4	-	-	12
9	**Topic 9 "System of performance management indicators for business processes"**	16	2	4			12
	Total	144	18	36			108

3.3. Contents of the discipline

Topic 1. Basic approaches to optimizing business processes

Business processes. Basic definitions. Subprocess. Function. Characteristic features of business processes. Elements of a business process. Business process diagram. Classification of business processes. Basic business processes. Supporting business processes. DMAIC cycles. DMADV

Topic 2. Business process modeling

Goals and objectives of business process modeling. Universal goals for describing business processes. Methods of describing business processes: text; tabular; graphic. Basic methodologies for modeling business processes. Data Flow Diagram (DFD). WFD methodology.

Topic 3 IDEF Methodologies

Method of structural analysis and design. SADT methodology. IDEF group methodologies. Diagram presentation standard IDEF0. Context diagram. Top level diagram. Parent diagram. Child diagram. IDEF3 methodology.

Topic 4. ARIS methodology

Basic ARIS models. Basic elements of models in ARIS. Purpose of the ARIS methodology. Advantages of the ARIS methodology. Basic ARIS models. Process-event model (Extended Event-Driven Process Chain - eEPC).

Topic 5. Concept of business process management BPM

The essence and basic concepts of the BPM concept. Scope of BPM. BPMN (Business Process Model and Notation). Application of the BPM concept. Basic elements of a process diagram in BPMN notation.

Topic 6. Methods for analyzing business processes

Analysis of business processes as an integral part of their refinement and optimization. Types of business process analysis. Process continuity analysis. Analysis of process resource support. Analysis of compliance with process implementation requirements. SWOT analysis. Analysis of process monitoring results. Analysis of simulation results.

Topic 7. Basic approaches to optimizing business processes

Basic approaches to optimizing business processes. Optimally structured business process. Procedure for improving business processes. Vertical compression of a business process. Horizontal compression of a business process. Increased process flexibility. Reduce redundant business processes.

Topic 8. Risk analysis of business processes

Methods for analyzing risks of business processes. Risk analysis of top-level business processes. Schematic diagram of the relationship between the concepts of "uncertainty" and "risk". Business process risk matrix. Activities to manage business process risks. Risk management methods.

Topic 9 "System of indicators for managing the efficiency of business processes

The concept of company performance management. Company performance management cycle. Elements of organizational performance management. Balanced Scorecard. Components of a balanced scorecard. Internal business processes and KPI system. Operational processes in the value chain. Formation of KPIs and identification of responsible executors

3.4. Topics of seminars/practical and laboratory classes

Topic 1. Basic approaches to optimizing business processes	Practical lesson 1	Test tasks 1

Topic 2. Business process modeling	Practical lesson 2	Test tasks 2
Topic 3 "IDEF Methodologies"	Practical lesson 3	Test tasks 3
Topic 4 "ARIS Methodology"	Practical lesson 4	Test tasks 4
Topic 5 "The concept of BPM business process management"	Practical lesson 5	Test tasks 5
Topic 6 "Methods of business process analysis"	Practical lesson 6	Test tasks 6
Topic 7 "Basic approaches to optimizing business processes"	Practical lesson 7	Test tasks 7
Topic 8 "Risk analysis of business processes"	Practical lesson 8	Test tasks 8
Topic 9 "System of performance management indicators for business processes"	Practical lesson 9	Test tasks 9

3.4.1. Seminars / Practical classes.

4. Educational, methodological and information support

4.1. Main literature:

1) Dolganova, O. I. Modeling business processes: textbook and workshop for universities / O. I. Dolganova, E. V. Vinogradova, A. M. Lobanova; edited by O. I. Dolganova. - Moscow: Yurayt Publishing House, 2021. - 289 p. - (Higher education). — ISBN 978-5-534-00866-1. — Text: electronic // Educational platform Urayt [website]. — URL:https://urait.ru/bcode/468913

4.2. Additional literature:

1) Gromov, A. I. Business process management: modern methods: monograph / A. I. Gromov, A. Fleishman, V. Schmidt; edited by A. I. Gromov. - Moscow: Yurayt Publishing House, 2023. - 367 p. — (Current monographs). — ISBN 978-5-534-03094-5. — Text: electronic // Educational platform Urayt [website]. — URL:https://urait.ru/bcode/511132

2) Frolov, Yu. V. Strategic management. Formation of strategy and design of business processes: textbook for universities / Yu. V. Frolov, R. V. Seryshev; edited by Yu. V. Frolov. — 2nd ed., rev. and additional - Moscow: Yurayt Publishing House, 2022. - 154 p. - (Higher education). — ISBN 978-5-534-09015-4. — Text: electronic // Educational platform Urayt [website]. — URL:https://urait.ru/bcode/491863

4.3 Electronic educational resources:

An electronic educational resource on the discipline is under development.

4.4. Licensed and freely distributed software.

Office applications, Microsoft Office 2013 (or lower) – Microsoft Open License. License No. 61984042

4.5. Modern professional databases and information reference systems

1. http://www.gov.ruServer of government authorities of the Russian Federation.
2. http://www.mos.ruOfficial server of the Moscow Government.
3. http://www.minfin.ruMinistry of Finance of the Russian Federation.
4. http://www.garant.ruGARANT Legislation with comments.
5. http://www.gks.ruFederal State Statistics Service.
6. http://www.rg.ruRussian newspaper.
7. http://www.prime-tass.ruPRIME-TASS Economic Information Agency.
8. http://www.rbc.ruRBC (RosBusinessConsulting).
9. http://www.businesspress.ruBusiness press.
10. http://www.ereport.ruWorld economy.
11. http://uisrussia.msu.ruUniversity information system of Russia.
12. http://www.forecast.ruTsMAKP (Center for Macroeconomic Analysis and Short-Term Forecasting).
13. http://www.cfin.ruCorporate management.
14. http://www.fin-izdat.ruPublishing house "Finance and Credit"
15. http://economist.com.ruThe Economist magazine.
16. http://www.vopreco.ruJournal "Economic Issues".
17. http://www.mevriz.ruMagazine "Management in Russia and Abroad"
18. http://systems-analysis.ru/Laboratory of Systems Analysis
19. https://gtmarket.ru/concepts/7111System analysis
20. http://minpromtorg.gov.ru/Ministry of Industry and Trade of the Russian Federation.
21. http://www.rg.ruRussian newspaper.

5. Material and technical support of discipline.

Auditoriums for lectures and seminars of the general fund: educational tables with benches, a blackboard, a portable multimedia complex (projector, projection screen, laptop). Teacher's workplace: table, chair.

6. Methodological recommendations

6.1. Methodological recommendations for teachers on organizing training.

Current control (carried out by the lecturer and teacher): correctness of answers to questions on the topics covered; assessment of existing opinions and approaches to solving specific problems; essay preparation; intermediate testing in individual sections of the discipline.

When performing routine monitoring, it is possible to use test material. Samples of control questions and tasks for conducting ongoing monitoring are given in the appendix. When implementing a bachelor's degree program, an organization has the right to use e-learning and distance learning technologies. All materials are posted in the Moscow Polytechnic Library.

When training people with disabilities, e-learning and distance educational technologies must provide for the possibility of receiving and transmitting information in forms accessible to them.

6.2. Guidelines for students on mastering the discipline.

A lecture is a systematic, consistent, monologue presentation by a teacher of educational material, usually of a theoretical nature. When preparing a lecture, the teacher is guided by the work program of the discipline. During lectures, it is recommended to take notes, which will allow you to later recall the studied educational material and supplement the content when working independently with literature.

You should also pay attention to categories, formulations that reveal the content of certain phenomena and processes, scientific conclusions and practical recommendations, positive experience in oratory. It is advisable to leave margins in your working notes in which to make notes from the recommended literature, supplementing the material of the lecture you listened to, as well as emphasizing the special importance of certain theoretical positions.

Conclusions from the lecture summarize the teacher's thoughts on educational issues. The teacher provides a list of used and recommended sources for studying a specific topic. At the end of the lecture, students have the opportunity to ask questions to the teacher about the topic of the lecture. When delivering lectures on the discipline, electronic multimedia presentations can be used.

Methodological instructions for students when working at the seminar.

Seminars are implemented in accordance with the working curriculum with sequential study of the topics of the discipline. In preparation for the seminars, the student is recommended to study the basic literature, familiarize himself with additional literature, new publications in periodicals: magazines, newspapers, etc. In this case, you should take into account the recommendations of the teacher and the requirements of the curriculum. It is also recommended to finalize your lecture notes by making appropriate notes from the literature recommended by the teacher and provided for by the curriculum. Abstracts should be prepared for presentations on all educational issues brought up for the seminar.

Since the student's activity in seminar classes is the subject of monitoring his progress in mastering the course, preparation for seminar classes requires a responsible attitude. During interactive classes, students must be active.

Guidelines for students on organizing independent work.

Independent work of students is aimed at independent study of a separate topic of the academic discipline. Independent work is mandatory for each student, its volume is determined by the curriculum. When working independently, the student interacts with the recommended materials with the participation of the teacher in the form of consultations. The electronic library system (electronic library) of the university provides the possibility of individual access for each student from any point where there is access to the Internet.

If there are students with disabilities, they will be provided with printed and (or) electronic educational resources in forms adapted to their health limitations.

Guidelines for making presentations.

A presentation (from the English word - presentation) is a set of color pictures-slides on a specific topic, which is stored in a special format file with the PP extension. The term “presentation” (sometimes called “slide film”) is associated primarily with the information and advertising functions of pictures, which are designed for a certain category of viewers (users).

Multimedia computer presentation is:

- dynamic synthesis of text, image, sound;
- the most modern software interface technologies;
- interactive contact between the speaker and the demonstration material;
- mobility and compactness of information media and equipment;
- ability to update, supplement and adapt information;
- low cost.

Rules for designing computer presentations

General Design Rules

Many designers claim that there are no laws or rules in design. There are tips, tricks, tricks. Design, like any kind of creativity, art, like any way of some people communicating with others, like a language, like a thought, will bypass any rules and laws.

However, there are certain guidelines that should be followed, at least for novice designers, until they feel the strength and confidence to create their own rules and guidelines.

Font design rules:

- Serif fonts are easier to read than sans serif fonts;
- It is not recommended to use capital letters for body text.
- Font contrast can be created through: font size, font weight, style, shape, direction and color.
- Rules for choosing colors.
- The color scheme should consist of no more than two or three colors.
- There are incompatible color combinations.
- Black color has a negative (gloomy) connotation.
- White text on a black background is hard to read (inversion is hard to read).

Presentation Design Guidelines

In order for the presentation to be well received by the audience and not cause negative emotions (subconscious or fully conscious), it is necessary to follow the rules of its design.

A presentation involves a combination of information of various types: text, graphics, music and sound effects, animation and video clips. Therefore, it is necessary to take into account the specifics of combining pieces of information of different types. In addition, the design and display of each of the listed types of information is also subject to certain rules. So, for example, the choice of font is important for textual information, brightness and color saturation are important for graphic information, and optimal relative position on the slide is necessary for the best possible perception of them together.

Let's consider recommendations for the design and presentation of various types of materials on the screen.

Formatting text information:

- font size: 24–54 points (heading), 18–36 points (plain text);

- the font color and the background color should contrast (the text should be easy to read), but not hurt the eyes;
- font type: for the main text a smooth sans-serif font (Arial, Tahoma, Verdana), for the title you can use a decorative font if it is easy to read;
- Italics, underlining, bold font, and capital letters are recommended to be used only for semantic highlighting of a text fragment.

Design of graphic information:

- drawings, photographs, diagrams are designed to supplement textual information or convey it in a more visual form;
- It is advisable to avoid drawings in the presentation that do not carry a semantic load, if they are not part of the style;
- the color of the graphic images should not sharply contrast with the overall style of the slide;
- illustrations are recommended to be accompanied by explanatory text;
- if a graphic image is used as a background, then the text on this background should be clearly readable.

Contents and arrangement of information blocks on the slide:

- there should not be too many information blocks (3-6);
- the recommended size of one information block is no more than 1/2 the size of the slide;
- It is desirable to have blocks with different types of information on the page (text, graphs, diagrams, tables, pictures) that complement each other;
- Key words in the information block must be highlighted;
- It is better to place information blocks horizontally, blocks related in meaning - from left to right;
- the most important information should be placed in the center of the slide;
- the logic of presenting information on slides and in a presentation must correspond to the logic of its presentation.

In addition to the correct arrangement of text blocks, we must not forget about their content - the text. Under no circumstances should it contain spelling errors. You should also take into account the general rules of text formatting.

After creating a presentation and its design, you need to rehearse its presentation and your speech, check how the presentation as a whole will look (on a computer screen or projection screen), how quickly and adequately it is perceived from different places in the audience, under different lighting, noise, in an environment as close as possible to real performance conditions.

7. Fund of assessment funds

7.1. Methods for monitoring and assessing learning outcomes

In the process of mastering this discipline, the student develops and demonstrates the following competencies:

COMPETENCIES		List of components	Technology for developing competencies	Form of assessment tool**	Degrees of levels of mastering competencies
INDEX	FORMULATION				
OPK-4	Able to identify and evaluate new market opportunities, develop business plans for the creation and development of new areas of the organization's activities.	IOPK-4.1. Knows methods for identifying and assessing new market opportunities, developing business plans for creating and developing new areas of activity for organizations. IOPK-4.2. Able to identify and evaluate new market opportunities, develop business plans for the creation and development of new areas of activity of organizations. IOPK-4.3. Possesses the skills and methods of identifying and assessing new market opportunities, developing business plans for the creation and development of new areas of activity of organizations.	lecture, independent work, seminar classes	DS, T, K-Z, exam	A basic level of - has the skills to work with models for predicting the likelihood of bankruptcy at an enterprise. Increased level - has skills in working with methods of analysis and modeling of business processes. The student is able to apply these skills in new non-standard situations.

7.2. Scale and criteria for assessing learning outcomes

In the process of mastering the educational program, competencies, including their individual components, are formed step by step as students master disciplines (modules) and practices in accordance with the curriculum and calendar schedule of the educational process.

An indicator for assessing competencies at various stages of their formation is the achievement by students of the planned learning outcomes in the discipline (module).

OPK-4Able to identify and evaluate new market opportunities, develop business plans for the creation and development of new activities and organizations				
IOPK-4.1. Knows methods for identifying and assessing new market opportunities, developing business plans for creating and developing new areas of activity for organizations.	The student demonstrates a complete absence or insufficient compliance with the following knowledge: methods for identifying and assessing new market opportunities, developing business plans for creating and	The student demonstrates incomplete compliance with the following knowledge: methods for identifying and assessing new market opportunities, developing business plans for creating and developing new areas	The student demonstrates partial compliance with the following knowledge: methods for identifying and assessing new market opportunities, developing business plans for creating and developing new areas of activity of	The student demonstrates full compliance with the following knowledge: methods for identifying and assessing new market opportunities, developing business plans for creating and developing new areas of activity of

	developing new areas of activity of organizations.	of activity for organizations. Significant mistakes are made, insufficient knowledge is manifested, according to a number of indicators, the student experiences significant difficulties in operating knowledge when transferring it to new situations.	organizations, but minor errors, inaccuracies, and difficulties in analytical operations are allowed.	organizations, and freely operates with acquired knowledge.
IOPK-4.2. Able to identify and evaluate new market opportunities, develop business plans for the creation and development of new areas of activity of organizations.	The student is unable or insufficiently able to identify and evaluate new market opportunities, develop business plans for the creation and development of new areas of activity of organizations	The student demonstrates incomplete compliance with the following skills: identify and evaluate new market opportunities, develop business plans for the creation and development of new areas of activity of organizations. Significant mistakes are made, insufficient skills are manifested, according to a number of indicators, the student experiences significant difficulties in operating skills when transferring them to new situations.	The student demonstrates partial compliance with the following skills: identify and evaluate new market opportunities, develop business plans for the creation and development of new areas of activity of organizations. The skills have been mastered, but minor errors, inaccuracies, and difficulties are allowed during analytical operations and transfer of skills to new, non-standard situations.	The student demonstrates full compliance with the following skills: identify and evaluate new market opportunities, develop business plans for the creation and development of new areas of activity of organizations. Fluently operates with acquired skills and applies them in situations of increased complexity.
IOPK-4.3. Possesses the skills and methods of identifying and assessing new market opportunities, developing business plans for the creation and development of new areas of activity of organizations.	The student does not have or has insufficient knowledge of the skills and methods of identifying and assessing new market opportunities, developing business plans for creating and developing new areas of activity of organizations	The student has the skills and methods of identifying and assessing new market opportunities, developing business plans for the creation and development of new areas of activity of organizations in an incomplete manner, significant mistakes are made, insufficient skills are manifested in a number of indicators, the student experiences significant difficulties in applying skills in new situations.	The student partially possesses the skills and methods of identifying and assessing new market opportunities, developing business plans for the creation and development of new areas of activity of organizations; skills have been mastered, but minor errors, inaccuracies, and difficulties in analytical operations and transfer of skills to new, non-standard situations are allowed.	The student has the skills and methods for identifying and assessing new market opportunities, developing business plans for creating and developing new areas of activity for organizations, and freely applies the acquired skills in situations of increased complexity.

Form of intermediate certification: exam.

Interim certification of students in the form of an exam is carried out based on the results of completing all types of academic work provided for by the curriculum for a given discipline (module), while taking into account the results of ongoing monitoring of progress during the semester.

Only students who have completed all types of academic work provided for in the work program for the discipline (tests, reports) are allowed to take part in the intermediate certification.

Grading scale	***Description***
Great	*All types of educational work provided for by the curriculum have been completed. The student demonstrates compliance of knowledge, skills and abilities with the indicators given in the tables, according to the evaluation criterion of "5".*
Fine	*All types of educational work provided for by the curriculum have been completed. The student demonstrates compliance of knowledge, skills and abilities with the indicators given in the tables according to the evaluation criterion "4"*
Satisfactorily	*All types of educational work provided for by the curriculum have been completed. The student demonstrates compliance of knowledge, skills, and abilities with the evaluation criterion "3"*
Unsatisfactory	*One or more types of educational work provided for by the curriculum have not been completed. The student demonstrates incomplete compliance of knowledge, skills, and abilities with the threshold level - according to the evaluation criterion "2"*

7.3. Evaluation toolsby discipline "Business Process Management"

OS No.	Name of the assessment tool	Brief description of the evaluation tool	Submission of the assessment tool to the Federal Fund
2	Test (T)	A system of standardized tasks that allows automate procedure for measuring the level of knowledge and skills of the student.	Test task fund

3	Report, message (R)	Product independent work student, representing a public performance by presenting the results obtained from solving a certain educational-practical, educational-research orscientific	Topics of reports, messages
4	Case-Problem (C-Z)	A practice-oriented task to solve a particular issue of a business process. Involves analyzing the situation and using a business process management tool.	List of case problems
5	Exam (E)	Final form of knowledge assessment. In higher educational institutions they are held during the session.	Questions for the exam

7.3.1. Current control

CASE PROBLEMS
in the discipline "Business Process Management"
(formation of OPK-4 competence)

Case problem 1.

Topic 8: Organization of business processes in space. Graphic modeling of business processes. Formation of a network calendar schedule and operogram of the selected process.

An organization wants to design a manufacturing business process. The result will be the launch of a new production site and the production of high-tech products.
In preparation for the launch, the main operations (work) that must be done as part of the launch of the entire system were identified:

Process operations:

- Analysis of methodological documents on planned operations, lasting 3.75 days;
- Clarification of production process standards, 6.75 days;
- Rcalculation of the main parameters of the production process at the site, 5.25 days;
- Combining equipment on site based on methodological documentation of the technical process, 4.5 days;
- Organization of the movement of objects of labor on the site based on standard values - 3.75 days;
- ABOUTorganizing the movement of objects of labor on the site based on calculations of the characteristics of the site, 6 days;
- Calculation of the efficiency and effectiveness of the site based on the scheme for combining equipment at the site, 4.5 days;
- Calculation of the efficiency and effectiveness of the site based on the movement of objects of labor on the site, 3.75 days.

Task:

1. Based on the description of the main operations of the process, create a network calendar schedule for the launch of a new production site. Mark on the chart:
   - main events in the process;
   - major work in progress;
   - distribute events and work based on the logic of their interdependence with others;
   - apply a time metric to each job;
   - form several parallel paths within the network diagram (process parallelism principle);
   - calculate the duration of all paths within a given process in time;
   - highlight the critical path in the schedule;
   - Based on the duration of the critical path, calculate the amount of slack for other paths.

2. Based on the structure of the network calendar schedule and the completion dates of the work, create a simple coordinate operogram for this business process.
   As part of constructing the operogram:
   - ensure that for each job there is at least 1 responsible executor and 1 co-executor.
   - provide at least 1 additional employee for work on the critical path to insure the work against non-fulfillment.

3. Answer the questions:
   - what is the final length of the resulting process?
   - How many people did it take to provide performers for this process?

Upload the finished business process in the form of a diagram-structure into the LMS system in the "task" section.

Case problem 2.

Topic 8: Organization of business processes in space. Graphic modeling of business processes. Graphical modeling of processes in BPMN notation.

The organization has determined the scope and characteristics of work in its commercial activities. The essence of the process is the purchase of raw materials from suppliers. After studying the organizational structure, staffing table and regulations, the following data can be highlighted:

1. The name of the process under study: "Purchase of goods and materials and services."
2. The process is carried out by the procurement department.
3. The owner of the process is the head of the procurement department.
4. Subordinate to the head of the supply department are 2 supply managers.

5. Resources required to carry out the process: working hours of supply department employees, computers, software (1C, Microsoft office), funds in the current account for mutual settlements.
6. Process input: 1st – the arrival of the purchase date according to a previously approved plan, 2nd – receipt of an application from the initiator from another department of the organization.
7. Process output: goods and materials or service purchased (the "receipt of goods and services" document is issued).
8. Performance indicators: % of duplicated items, % of reliable suppliers, % of timely purchases.
9. Based on the process parameters, the following actions were identified.

Table 1 – Possible actions in the procurement business process.

Actions	Responsible
Process the application initially	Head of Procurement Department
Assign an executor	Head of Procurement Department
Process document basis	Purchasing Department Manager
Request inventory or services from suppliers	Purchasing Department Manager
Select a supplier by criteria	Purchasing Department Manager
Coordination of supplier selection	Head of Procurement Department
Checkout	Purchasing Department Manager
Register an account	Purchasing Department Manager
Process shipping notification	Purchasing Department Manager
Generate the receipt of goods and services	Purchasing Department Manager

The process parameter being studied is the execution time of the action/event, the quantitative characteristic is minutes, hours, days. After timing for each operation, all received data was tabulated:

Table 2 – Description of the business process for purchasing inventories.

Actions, operations (O) and conditions (C)	Executor	Time, min	Cost, rub.
1.Process the application initially			
O1.1 Determine whether the application meets the requirements	Beginning supply department	1.1	9.74
U1.1 Incorrect application – refusal (p=0.1)		-	-
U1.2 Correct application – O2.1 (p=0.9)		-	-
2. Appoint an executor			
O2.1.Set the employee's workload	Beginning supply department	2	17.70
O2.2. Send the basis document		1	8.85
3.Process the base document			
O3.1. Check available stock in the warehouse	Manager	10.41	71.83
O3.2. Check for repeat purchases		15.24	104.52

U3.1. Repeat purchase – O7.1 (p=0.7)		-	-
U3.2 New purchase – O4.1 (p=0.3)		-	-
4. Request inventory/services from suppliers			
O4.1 Search for suppliers	Manager	196.17	1328.07
O4.2 Checking the reliability of suppliers		35.4	239.66
5.Select a supplier based on criteria			
O5.1 Select suitable offers	Manager	18.23	123.42
O5.2 Fill out the approval form		37.8	255.91
6. Coordination of supplier selection			
O6.1 Determine whether the selection meets the criteria	Beginning supply department	2.14	18.94
O6.2 Check balances and repeat purchases		13.41	118.68
U6.1 There are comments on the choice – O4.1(p=0.2)		-	-
U6.2 No comments on the choice – O8.1 (p=0.8)		-	-
7.Place an order			
O7.1 Agree on the order with the supplier	Manager	9.45	63.98
O7.2 Place an order in 1C		4.32	29.25
8.Register an account			
O8.1 Agree on payment in the accounting department	Manager	6.14	41.57
O8.2. Register an account		2.36	15.9
9.Process shipment notification			
O9.1 Agree on the date and form of receipt	Manager	5.47	37.03
10. Generate the receipt of goods and services			
O10.1 Enter documents into 1C	Manager	10.5	71.08

In the table: parameters marked as "U" (example U1.1., U.1.2) are variable. The "p" value shows the probability of the occurrence of a given event (1 – 100% probability), the type of connection is soft.

Exercise:

1. Based on the comprehensive description of the business process in Table 2, model the process in BPMN 2.0 notation, outlining it in the form of a comprehensive diagram.
2. In operations where there is variability (example U1.1., U.1.2), splitters should be placed and how the process can unfold further, depending on each condition - where and at what stage the process should return or be completely stopped.
3. Distribute business process operations among executors (responsible resources) - each operation must be in its own track (pool) and in its own role.
4. Apply numerical data from Table 2 to each operation and flow according to the parameters: time and cost.

Upload the finished business process in the form of a diagram-structure into the LMS system in the "task" section.

Case problem 3.

Topic 8: Organization of business processes in space. Graphic modeling of business processes. Graphical modeling of processes in IDEF0 notation (SADT methodology).

The organization Wooden Furniture LLC is launching a new key business process. Goal: production and sale of furniture made from natural materials (pine). The process will be carried out by the planning department, the production department of the organization and the sales department.

In order for the process to start functioning, it is necessary to purchase raw materials from suppliers, invest funds received from sales (proceeds from sales for the previous period). A sales funnel must be organized and new customers must be attracted. To calculate the volume of production and sales, information about the capacity of the wooden furniture market is needed.

The result of the working process should be three types of wooden furniture (children's, kitchen, bedroom). For normal functioning, every month the company must pay suppliers and pay taxes to government authorities. The sales department must also prepare advertising information and commercial offers to attract future customers, take into account the number of satisfied customers per month to form KPIs for sales managers.

The organization has three owners, which put forward a set of requirements for the quality of furniture. There is also GOST 3702.18 “Production of wooden furniture”, which defines the standard for this type of activity. The work of the process must take place strictly in accordance with the laws of the Russian Federation.

In general, 4 main functions can be distinguished in the business process:

1. Production planning: handled by the planning department, the result is a sales plan, production plans and schedules for the month.
2. Preparation and support of production: the production department is engaged in the production, the result is a prepared infrastructure and processed materials for production.
3. Furniture production: carried out by the production department, must be regulated by all planning documents, standards and laws, the result is finished furniture of 3 types (see above).
4. Promotion and sale of furniture: is handled by the sales department, works on the basis of a sales plan, attracts customers, generates advertising and calculates KPIs for managers. The result is furniture for sale, as well as information on sales volume.

If we consider the last function “Promotion and sale of furniture”, then 4 main operations can be distinguished in it:

1. Recording a client request in CRM – duration 5 minutes, performed by a manager-hunter.
2. Pitch session – presentation of a commercial proposal to the client, duration 12 minutes, performed by a manager-closer.
3. Execution of the contract and payment of money - duration 25 minutes, is performed by the manager-closer.
4. Formation of a delivery request - duration 10 minutes, is carried out by the manager.

To maintain the required level of quality, information about the volume of defects is collected based on the process results and used to correct the process at the "Preparation and maintenance of production" stage. Information on sales volume is also collected in order to calculate an effective KPI for sales managers.

Task: based on a comprehensive description of the process, create a complete graphical model of the process in IDEF0 notation.
Within the notation it is necessary:

1. Create a "black box" of the process (context diagram). Highlight all possible process flows: material, customer, financial, information, management.
2. Arrange the flows for the "black box": input, output, control, mechanism.
3. Construct a decomposition diagram at level 1 for 4 main functions: planning, preparation, production, promotion.
4. Connect existing flows to each function (follow the rules for connecting flows to diagram blocks). If necessary, add additional input, output, control, and mechanism flows.
5. For the function "Promotion and sale of furniture", build a decomposition diagram at level 2 for 4 main sales operations: CRM, pitch session, contract, application.
6. For each operation, add existing flows (follow the rules for adding flows to the blocks of the diagram), detail the flows by responsibility.
7. For diagram 2 (decomposition to level 1), plot the feedback flows for this process.
8. Analyze the resulting diagrams of levels 1 and 2 for balance, answer the question - is this process balanced in terms of functions and operations.

Upload the finished business process in the form of a diagram-structure into the LMS system in the "task" section.

Case problem 4.

Topic 8: Organization of business processes in space. Graphic modeling of business processes. Graphical modeling of processes in UML notation.

The university has a significant number of diverse processes. The basis of the university's document flow is the formation and movement of orders for core activities. The implementation of the basic functions of the organization depends on the success of passing orders.

Below is the regulation of the business process "Preparation of the rector's order":

1. Draft orders of the rector are developed by department employees on behalf of the rector personally or on their own initiative.

2. Orders are signed personally by the rector, in case of his absence due to vacation - by the first vice-rector. Orders of special importance are signed exclusively by the rector.
3. Quality control of the preparation of the order is the responsibility of the directors of departments. The draft order is sent to the director from the executor for quality control.
4. If the directors of the department have an objection, the draft order is returned to the executor for revision, with objections attached in the form of a signed order with a list of comments to be eliminated.
5. The correctness of execution of orders is controlled by the general department; if there are no comments on the correctness of execution, the draft order is endorsed and sent to the legal service for examination for compliance with the law;
6. After approvals and registration checks are completed, an inspection is carried out by the university's legal service, and the order is sent to the rector for signature. If the order is a regular one (working hours on holidays, about re-testing), it is sent for signature to the first vice-rector, if the order is of particular importance, exclusively to the rector (see paragraph 2)
7. The signed order is registered in the archive. Any changes to the order are no longer allowed. The order for the main activity is stored in the archive for at least 10 years, the Order for personnel is stored for at least 50 years, after the expiration of the storage period, the order is subject to destruction.
8. After registration, the order is sent to the informatization department for publication on the university website.

Task: based on the process regulations, describe it. As part of the task you must:

1. Identify and list the main roles of subjects in this process.
2. Describe the functionality of each role, based on the business process regulations.
3. Identify and list the main events (operations) of the process.
4. Describe the interaction of roles in a business process in UML notation - use case diagram (based on materials in topic 3.2), including the implementation of the following elements:
   - place process field (system);
   - along the edges of the process field, place the main actors of the process in accordance with their role distribution;
   - In the process field, enter the main events of the process;
   - connect the main events of the process with the actors performing them;
   - add (if necessary) extended events to the main events of the process (extend function). Specify conditions for triggering extended events.
   - add (if necessary) additional events to the main events of the process (include function).
   - connect events with arrows to each other in the logic of business process deployment - preparation of the "rector's order".

Upload the finished business process in the form of a diagram-structure into the LMS system in the “task” section.

Sample topics for reports on the discipline
"Business Process Management"
formation of OPK-4 competence

1) Process approach in practice: problems of implementation.
2) Process approach: positive trends.
3) The importance of implementing a process approach to management
4) Detailing of value chain diagrams.
5) Features of constructing value chain diagrams.
6) Advantages and disadvantages of the methodology for constructing value chain diagrams.
7) Value chain analysis and business reorganization of companies
8) Optimization of the company's business model.
9) Ensuring effective cross-functional interaction between departments.
10) Regulation and standardization of activities in the form of processes.
11) Development of a system of indicators for process management.
12) Basic principles of building a process system.
13) Methodology for building a business process system
14) Methodology for developing a system of indicators.
15) Information and communication support for the indicator system
16) Regulation of processes at various levels of management.
17) Methodology for regulating processes.
18) Regulation of company management processes.
19) Regulation of the activities of structural divisions.
20) Delegation of powers.
21) Regulation and improvement of processes.
22) Analysis of the process in relation to given requirements.
23) Process management outsourcing.
24) Analysis of process execution.
25) Changing the process execution technology, process resources, process inputs.
26) Business process as a flow of work.
27) Theoretical foundations for constructing work flow diagrams.
28) Various forms of presentation of work flow diagrams.
29) Simple workflow diagrams.
30) Combining a diagram with a table to describe work flows.
31) Recommendations for the practical application of work flow diagrams
32) Collection, processing, accumulation and transfer of knowledge about processes.
33) Barriers to effective knowledge sharing and ways to overcome them.

Report evaluation criteria

	Criterion	Grade

No.		ex.	chorus	satisfaction	unsatisfactory
1	Structure of the report	The report contains semantic parts balanced in volume	The report contains three semantic parts, unbalanced in volume	One of the semantic parts is missing from the report	The report does not show the presence of semantic parts
2	Contents of the report	The content reflects the essence of the problem under consideration and the main results obtained	The content does not fully reflect the essence of the problem under consideration or the main results obtained	The content does not fully reflect the essence of the problem under consideration and the main results obtained	The content does not reflect the essence of the problem under consideration or the main results obtained
3	Mastery of the material	The student has complete command of the material presented, is problem oriented, and answers questions freely	The student knows the material presented, is oriented in the problem, finds it difficult to answer some questions	The student is not fluent enough in the material being presented and is poorly oriented in the problem	The student does not know the material being presented and has poor understanding of the problem
4	Matching theme	The presented material fully corresponds to the stated topic	The presented material contains elements that are not relevant to the topic	The material presented contains a large number of elements that are not related to the topic.	The material presented is slightly relevant to the topic

7.3.2. Interim certification

QUESTIONS FOR THE EXAM
in the discipline "Business Process Management"
(formation of OPK-4 competence)

1. Process-target approach to management and its features.
2. Basic terms and concepts of a business process: process client, process owner, process input and output.
3. Business process subjects and their roles in process management.
4. The concept and laws of business process development: the law of synergy.
5. The concept and laws of development of business processes: the law of development and its principles.
6. The main levels of a business process: strategic level, process level and operations level. Functions of subjects at these levels.
7. Self-government of the process and calculation of the share of self-government.
8. Systematic approach to process management. Business system as a set of business processes.
9. Input and output process, output and output situation in the system process model.
10. Types and categories of business systems.

11. Process management in a business system: management cycle. Disturbing variables, feedback variables, outcome variables.
12. The quality of business processes and methods for assessing it. Key indicators of business process quality.
13. The PDCA cycle in business process management.
14. Calculation of regulatory, production, consumer and economic indicators of the quality of a business process.
15. Key indicators and units of measurement of business processes.
16. Process efficiency, process productivity and process quality.
17. Process management structure of G. Mintzberg.
18. The main components of G. Mintzberg's process management model: strategic apex and technostructure, their roles and functions.
19. The main components of G. Mintzberg's process management model: the operating core and the median line, their roles and functions.
20. Principles of rational organization of processes: parallelism, proportionality, straightness, rhythm.
21. Design and calculation of processes, process parameters: operation, operating cycle.
22. Operating cycle and methods of its calculation. Process cycle as a set of operational cycles.
23. Organization of business processes in time, calculations of a business process: calculation of the rhythm of the process, the number of jobs.
24. Organization of business processes over time: calculation of process load.
25. Ensuring the process – forming a team of process subjects.
26. Role distribution within the process. Subject-object relations in the business process.
27. Management programming and formation of a decision table when modeling soft process connections.
28. Network scheduling of a business process is a PERT method in the distribution of process work.
29. Construction of a coordinate operogram into the distribution of process subjects.
30. Construction of symbolic operograms into the distribution of process subjects.
31. Description and modeling of a business process - BPMN notation.
32. Description and modeling of a business process - UML notation.
33. Description and modeling of a business process – IFEF0 notation (SADT method).
34. Description and modeling of a business process - WMS notation.
35. Construction of a Gantt chart with connections in micro-planning of a business process.
36. Algorithm for a comprehensive description of a business process.
37. Business process reengineering: reengineering methods and technologies.

38. Basic methods for optimizing a business process: the method of five questions - 5WH1 (why-why?), the method of eliminating time gaps.
39. Basic methods for optimizing a business process: balancing business process indicators, developing several business process options, a method for reducing the number of inputs and outputs of a business process.
40. Basic methods of business process optimization: coordination of process results with requirements, organization of control points.

Example of test tasks in the discipline "Management of business processes of an organization"
(in GIFT format for uploading to LMS)
(formation of OPK-4 competence)

1. In BPMN notation, a splitter is used to characterize the type of communication in a process:
A) Rigid process links
B) Soft process connections
C) Resource connections
D) Information communications
ANSWER:B

2. There are 4 operations in progress. Duration of operations (min): 2-4-2-1. In the process, product A and product B are sold. The duration of their processing is the same. The production plan for product A is 1,300 units. per month The production plan for product B is 4,000 units. per month How much is the total amount of work on the line per month in minutes?
A) 45,320;
B) 47,700;
C) 49,800;
D) 51,200.
ANSWER:B

3. The process diagram (by operations) is used as part of process modeling for:
A) sequence distribution and time of each operation
B) distribution of roles of participants in the process
C) allocation of resources and logistics between operations
D) distribution of operations across levels
ANSWER: A

4. In the graphical process model in BPMN notation, when characterizing soft (variable) connections of a business process, the following tool is inserted:
A) Action (event)
B) Subject
C) Splitter (gateway)
D) System
ANSWER: C

5.When creating a graphical process model in BPMN notation, the subjects (actors) of the process are placed:

A) As figures outside the process field
B) In the form of tracks (pool) horizontally through the process field
C) Subjects are placed inside the "action" tool
D) They subscribe to the schema structure
ANSWER:B

6.When creating a use case diagram in UML notation, in graphical process modeling, the “extend” function is applied to events that:
A) Can be alternative to each other
B) They are options (optional) added to first level events (extend function)
C) Can only be level 1 events
D) Combine two or more events
ANSWER:B

7. The business process was developed and planned for 8 months (for its full implementation). According to the plan, the process was supposed to sell 750 units of finished products. In fact, after 8 months. Only 698 units were sold. Can this production plan be considered adequate and of high quality:
A) The planning quality criterion is significantly exceeded
B) The planning quality criterion is slightly exceeded
C) The planning quality criterion is significantly exceeded
D) These indicators do not affect the quality of the process plan
ANSWER:B

8. The following business process layout meets the principle of proportionality:
A) All interoperational breaks are equal to each other
B) All operations and process flows are equal to each other
C) All operations are equal to interoperational breaks
D) All main operations are equal to auxiliary ones
ANSWER:B

9.How can you ensure compliance with the principle of parallelism in the main business process:
A) Through the use of a JIT information system
B) Due to the technological layout of production areas
C) Due to simultaneous execution of operations
D) Due to parallel points of sale
ANSWER: C

10. The presence of bottlenecks in a business process has the greatest negative impact on the following indicators of the rational organization of the process:
A) Specialization
B) Integrity
C) Flexibility
D) Continuity
ANSWER:D

11.The operating cycle of a business process is calculated as the product of:
A) planned volume for the piece time of the operation
B) planned volume of product per number of jobs
C) the number of jobs per process cost
D) number of jobs per output
ANSWER: A

12. With a sequential form of movement of objects of labor through business process operations...:
A) a number of works and operations in a business process are independent of each other and can be performed simultaneously
B) each business process operation is carried out on the entire batch of converted products
C) products are transferred from operation to operation in transfer batches
D) some of the products are converted entirely, some in the form of a transfer batch
ANSWER:B

13. There are 4 operations in progress. Duration of operations (min): 2-4-2-1. In the process, product A and product B are sold. The duration of their processing is the same. sales plan for product A - 1,300 units. per month sales plan for product B - 4,000 units. per month How much is the total amount of work in the process per month in minutes?
A) 45,320;
B) 47,700;
C) 49,800;
D) 51,200.
ANSWER:B

14. Define the term “productivity”:
A) It is the total number of products produced by the organization;
B) This is the total number of products produced by the organization per unit of time or resource expenditure;
C) It is the total amount of resources loaded into the business system;
D) This is the volume of man-hours spent on the production of 1 unit. products.
ANSWER:B

15.Operational core of the business process:
A) Provides everything necessary for the main process
B) Develops management influence on the main process
C) Response for just-in-time delivery of raw materials and spare parts (FA)
D) Ensures the transformation of raw materials and inventories into finished products or services.
ANSWER:D

16.What does (timax/qimax) mean in the formula for calculating the duration of the main process cycle?:
A) an operation in a business process that has a minimum duration
B) an operation in a business process that has a maximum duration
C) the totality of all operations in a business process
D) a collection of increasingly large operations in a business process
ANSWER:B

17. What is interoperative time (tmo)?:
A) this is the time between starting and stopping the process
B) is the time between the release of successive units of output
C) this is the time of movement of objects of labor between two adjacent operations
D) this is the duration of the main operations
ANSWER: C

18. There are three operations in the process. The estimated number of jobs for each operation was: 1. - 2.72. - 1.13. - 3.6. After calculating the actual jobs and the load factor of the production line, we can conclude that, according to the degree of workload, this line:
A) Severely overloaded;
B) Somewhat overloaded;

C) Underloaded;
D) Almost loaded;
ANSWER: A

19. Encoding 5ON + 3 days in a complex Gantt chart with connections can mean:
A) The current operation must begin 3 days after the start of operation 5
B) The current operation must begin 5 days after the start of operation 3
C) The current operation must begin 3 days after the end of operation 5
D) The current operation must begin 5 days after the end of operation 3
ANSWER: C

20. How can replacing a sequential form of organizing a process over time with a parallel one increase process productivity?:
A) due to a radical reduction in time lost in the process
B) due to a decrease in interoperative time
C) by eliminating bottlenecks
D) due to increased rhythm
ANSWER: A

21. A high-tech business process is:
A) The process of processing raw materials into a result that has value for the consumer.
B) The process of ensuring the activities of the organization;
C) The process of managing the organization's basic resources;
D) The process of relationships between the main participants in the management system.
ANSWER: A

22. Define the concept of "quality of business processes":
A) This is satisfaction of consumer requirements and norms and standards for a given process;
B) This is a process implementation based on the TQM system;
C) This is the formation of a process using information management systems;
D) It is the result of business process reengineering.
ANSWER: A

23.Description of a business process is...
A) Characteristics of its main elements by quantitative and graphical methods;
B) Characteristics of a business process using graphical methods;
C) Characteristics of the main subjects of the business process and their roles;
D) Qualitative characteristics of the main operations in the process.
ANSWER: A

24.Name the common notation for modeling and describing an organization's business processes:
A) FMEA
B) PDCA
C) BPMN
D) DLL
ANSWER: C

24.The use of common business process modeling notations should answer the questions:
A) Can this process be used for strategic planning?
B) Can process errors be immediately detected?
C) is it possible to obtain predictive data on the development of the process in the future?
D) can historical process information be analyzed?

ANSWER:B

25.As part of the description of business process cooperation, the following process elements are designed:
A) subjects and objects of the process
B) process input and output
C) basic process operations
D) process feedback variables
ANSWER:B

26. In the absence of regulation in the form of managerial influence, disturbing variables affect the business process:
A) positive
B) destructive
C) developing
D) neutral
ANSWER:B

27. Data saved in the form of statistics about the reaction of process operations to the loading of resources into them is called:
A) disturbing variables
B) feedback variables
C) outcome variables
D) management variables
ANSWER:B

28.Management variables are implemented in the business process in the form:
A) volume of loaded resources
B) plans, release programs
C) financial costs of the process
D) controlling data
ANSWER:B

29. The final result of the functioning of the business process is functionally dependent on the following factors:
A) Input, feedback, management influence
B) Exit, controlling, management influence
C) strategic apex, feedback, exit
D) operating core, input, feedback
ANSWER: A

30.The formulation of the law of synergy in the development of business processes sounds like:
A) elements of a process individually produce more than the process as a whole.
B) elements of the process individually produce less than the process as a whole.
C) all process elements can be aggregated
D) the result of processes is the totality of its individual elements
ANSWER:B

31. The value of the process self-preservation level was -40 units. What needs to be done with the process?:
A) nothing, the process is in a state of development
B) deciding on process reorganization
C) the process is in artificial, preferential conditions
D) the process should be terminated immediately

ANSWER:B

32. The organization of independent operations of business processes in the same period of time is an expression of the principle of rational organization of the process:
A) performance principle
B) parallelism principle
C) principle of proportionality
D) continuity principle
ANSWER:B

33.A business process has 7 operations. Duration of each operation: 2 – 2.2 – 1.9 – 2 -17 – 2 – 2.1. Operation number 5 violates the following principle of process organization:
A) performance principle
B) parallelism principle
C) principle of proportionality
D) continuity principle
ANSWER: C

34. Is the following definition of the concept quality correct: “Quality is a set of object properties that meet the requirements of the business process consumer according to the relevant parameters”:
A) The definition is correct
B) The definition is completely wrong
C) The definition is incomplete
D) The definition is quite complete, but there are incorrect terms
ANSWER: C

35.Processes related to the analysis of customer requirements refer to the following quality management standard:
A) ISO 9000: “Quality management systems. Fundamentals and Vocabulary"
B) ISO 9001: “Quality management systems. Requirements"
C) ISO 9004: “Managing for the sustainable success of an organization. Approach based on quality management"
D) National QMS standard in the Russian Federation - GOST R ISO 9001-2015 “Quality management systems. Requirements"
ANSWER:B

36. The organization conducted a consumer market research using a questionnaire survey and, based on the results, created an MVP design scheme. What type of process did these actions belong to?:
A) enterprise management processes
B) resource provision processes
C) product life cycle processes
D) analysis and disturbance measurement processes
ANSWER: C

37.What are feedback variables in a quality management system?:
A) Resource management
B) Measurement results
C) Obtaining customer requirements
D) Meeting customer requirements
ANSWER:B

38. The costs of resources of different types in a business process at a specific time point (date), for example on 07/31/2023 form:
A) Output situation
B) Output process
C) Input situation
D) Output process
ANSWER: C

39. Analysis of feedback from consumers revealed 7 complaints regarding product quality. What is the real damage to the organization, expressed in the number of lost orders, in accordance with the iceberg law in the organization's quality management?:
A) 1380
B) 1750
C) 1880
D) 2200
ANSWER:B

40.At the completion stage, the level of risk and the ability to influence the business process:
A) The level of risk is maximum, the possibility of influence is maximum
B) The level of risk is minimal, the possibility of influence is maximum
C) The level of risk is minimal, the possibility of influence is minimal
D) The level of risk is maximum, the possibility of influence is minimum
ANSWER: C

41.What could be an example of natural time loss in the calculation of a production process?:
A) regulated rest breaks for staff
B) equipment maintenance and repair
C) identifying defects in products
D) movement of raw materials from operation to operation
ANSWER: A

42. Formation of a process diagram for individual flows: financial, labor resources, material, documentary refers to the stage of describing the innovation process:
A) business process mapping
B) business process paths
C) business process table
D) process flow diagram
ANSWER:B

43.The organization has formed a trajectory for the movement of documents in the electronic document management system. At what stage of the description and modeling of the business process did she take this action?:
A) business process mapping
B) business process paths
C) business process table
D) process flow diagram
ANSWER:B

44. The value of the process self-preservation level was -40 units. What needs to be done with the process?:
A) nothing, the process is in a state of development
B) deciding on process reorganization
C) the process is in artificial, preferential conditions

D) the process should be terminated immediately
ANSWER:B

45.Qualimetry relates to the field of quality management of business processes:
A) Quality Assurance
B) Quality improvement
C) Quality assessment
D) Realization of quality
ANSWER: C

46.The “Splitter (gateway)” element in graphical process modeling in BPMN2.0 notation performs the following function:
A) determines the development of the process depending on specific conditions
B) this is the end of the process
C) this is the place where process metrics are entered
D) characterizes the process operators
ANSWER: A

47.When modeling a process in UML notation (use case diagram tool), there is the following chain of actions: “If the order size is larger than what is in stock, delivery is delayed.” The "delivery is delayed" event is:
A) extended event (extend)
B) augmented event (include)
C) generalized event
D) initial event
ANSWER: A

48. In the process described and modeled using a network calendar schedule (PERT method) there are three paths: 1st path - length 19 days, 2nd path - length 14.5 days, 3rd path - length 16 days. Which path is critical?:
A) path 2
B) paths 1 and 3
C) path 1
D) all paths below the critical level
ANSWER: C

49.The operation (work) is marked in the Gantt chart with connections as 5OH+2. Determine the nature of its connection with other operations:
A) the operation will begin after the end of operation 5 with a shift of 2 days
B) operation number 5 will begin after the end of the previous one with a shift of 2 days
C) the operation will begin two days earlier than operation number 5
D) the operation must end simultaneously with operation number 5
ANSWER: A

50. When the elements of a system are arranged at individual levels of a certain system and the subordination and subordination of the elements is observed, this refers to the property of a complex system:
A) system emergence
B) hierarchy of the system
C) system synergy
D) system efficiency
ANSWER:B

51. It has been recorded that if 4 elements of level 2 are lost, the system stops functioning. This is a property of a complex system:
A) hierarchy of the system
B) system synergy
C) system survivability
D) system complexity
ANSWER: C

52. The principle of quantitative certainty in systems analysis can be expressed as follows:
A) each element occupies a certain level in the system
B) each element interacts with the environment
C) Every item can be measured
D) each element is alternative to others
ANSWER: C
53. During the period from October 31, 2023 to October 31, 2023, 1,700 units were spent for the operation of the process. resources. This example characterizes:
A) output situation
B) input process
C) output process
D) input situation
ANSWER:B

54.Development of regulatory action based on feedback variables is the function of this subsystem in the system cyclic model:
A) controlled subsystem
B) control subsystem
C) system input pole
D) system output pole
ANSWER:B

55. Output variables reflect the result of the system's activity, generated by:
A) control subsystem
B) input pole of the system
C) output pole of the system
D) strategic apex of the system
ANSWER: C

56. A road map of the process was built, where each stage is positioned along a single time scale for the map. This is an example of formalizing information about the system:
A) abstract formalization
B) topological formalization
C) parametric formalization
D) system formalization
ANSWER:B

57. Works that are interconnected and collectively achieve the set goal of any system or structure is the definition of a business process:
A) ISO 9000:2000
B) M. Hammer, D. Ciampi
C) PMBOOK
D) is not a business process definition
ANSWER:D

58.The amount of resources loaded into a business process is characterized by a process element:
A) input
B) exit
C) level
D) operation
ANSWER:D

59. The owner of a business process is a person who:
A) is a user of the process results
B) is responsible for the output of the process
C) controls the execution of a specific operation
D) loads resources into the process
ANSWER:D

60. A business process client is a person who:
A) is a user of the process results
B) is responsible for the output of the process
C) controls the execution of a specific operation
D) loads resources into the process
ANSWER:D

61. A business process performs a technical service for another production department in that organization. In this case, the business process client is:
A) strategic
B) operational
C) internal
D) external
ANSWER:D

62. Define the concept of "business process function":
A) this is the amount of resources loaded into the process
B) is the assignment of each subject or process operation performed to achieve goals
C) this is the result of his work, expressed quantitatively
D) this is the dependence of the process on adjacent processes
ANSWER:D

63.Making management decisions, as well as the connection of the process with higher-level processes falls into the category of business processes:
A) strategic
B) operational
C) main
D) auxiliary
ANSWER: A

64. Characterize the content of the input situation of the business process:
A) costs
B) material resources
C) feedback variables
D) process control results
ANSWER:D

65. In a business system organized according to the “impulse-reaction” principle, the immediate reaction is:
A) stopping the process
B) being in the process of marriage
C) change in input situation
D) output process
ANSWER: C

66.Making management decisions, as well as the connection of the process with higher-level processes falls into the category of business processes:
A) strategic
B) operational
C) main
D) auxiliary
ANSWER:D

67.Scheduled repairs of high-tech equipment belong to the categories of business processes:
A) basic
B) auxiliary
C) serving
D) logistics
ANSWER:D

68.What is the name of a group of process elements that directly processes resources into a useful result?:
A) strategic apex
B) operating core
C) input process
D) output process
ANSWER:D

69.The formation of a diagram-structure of the designed business process relates to the management level:
A) strategic
B) operational
C) tactical
D) synergistic
ANSWER:D

70. According to the concept of G. Mintzberg, the structure of business processes can be defined as:
A) A set of ways to divide a process into separate tasks
B) The total cost of process resources
C) The set of process performers and their synergy
D) The totality of the output and the output of an individual process
ANSWER:D

71. The delivery of documents is carried out by the organization’s couriers. For this business process they play the role of:
A) strategic apex
B) midline
C) support staff
D) technostructure

ANSWER:D

72. What do the subjects of the business process that are part of the technostructure at the lower level of the process do?:
A) draw up schedules, perform methodological and time analysis of the work of operators, control
B) quality
C) develop systems for strategic planning and control over the implementation of goals
D) monitor the completion of tasks and motivate performers
E) distribute the resources necessary to support the business process
ANSWER:E

73. Define the concept of "process self-control":
A) is the ability of process subjects to automatically select activity goals
B) this is the ability of process subjects to independently allocate resources within their operations
C) this is the ability of process subjects to independently control their operations and identify errors and defects
D) this is the ability of the subjects of the process to independently organize the process in time and space
ANSWER:D