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MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION

Federal State Autonomous Educational Institution of Higher Education

"Moscow Polytechnic University"

(Moscow Poly)

APPROVE
Vice-President
for International Affairs
_____ /Yu.D. Davydova/
"30" 05 2022

Dean,
Faculty of Economics and Management
_____ /A.V. Nazarenko/
"30" 05 2022

WORKING PROGRAM OF THE DISCIPLINE

"System analysis in management"

Field of study
38.03.02 Management

Educational program (profile)
"Business Process Management"

Qualification (degree)
Bachelor

Form of study
Part-time

Moscow 2022

1. The goals of mastering the discipline

Main goalaboutWithinstudy of the discipline "System Analysis in Management" - consideration of the theoretical foundations and patterns of building and functioning of systems, including economic, methodological principles of their analysis and synthesis, application of the studied patterns to develop systemic approaches to decision-making.

The main tasks of mastering the discipline "System Analysis in Management" include:

- familiarization with the basic concepts and definitions of systems, the structure and general properties of systems, the factors of influence of the external environment, the possibilities and main approaches to using system analysis at the organization level;
- the acquisition by students of theoretical knowledge on a systematic approach to the study of systems and practical skills in their modeling;
- the acquisition by students of practical knowledge on the basic methods used in system analysis.

2. The place of the discipline in the structure of the bachelor's program

The discipline "System Analysis in Management" is one of the elective disciplines of the part (B1.2.ED) of the bachelor's degree program.

The discipline "System Analysis in Management" is interconnected logically and content-methodically with the following disciplines and practices of the EP:

- Project activity
- Fundamentals of Management
- Business process management
- Economic theory

3.The list of planned learning outcomes for the discipline (module), correlated with the planned results of mastering the educational program.

As a result of mastering the discipline, students form the following competence and the following learning outcomes should be achieved as a stage in the formation of the relevant competence:

Competency code	As a result of mastering the educational program, the student must have	List of planned learning outcomes by discipline
UK-1	Able to search, critically analyze and synthesize information, apply a systematic approach to	**know:** - the main provisions of the system approach, the terms of system analysis, - areas of application of methods for formalized

	solve tasks	representation of systems and methods for activating the experience and intuition of specialists, options for their mutual complement and intersection; **be able to:** - apply the laws, models and methods of general systems theory in practice; - to analyze and synthesize the structures of systems; own: - the skills of reasonable choice and use of methods of system analysis of the organization in the decision-making process in the management of the operational (production) activities of organizations

4. Structure and content of the discipline

Part-time education:

The total labor intensity of the discipline is 5 credit units, i.e. 180 academic hours (of which 144 hours are independent work of students).

Sections of the discipline "System Analysis in Management" are studied in the fifth year.

Ninth semester: lectures - 18 hours, seminars - 18 hours, form of control - exam.

The structure and content of the discipline "System Analysis in Management" in terms of terms and types of work are reflected in the Appendix.

The content of the sections of the discipline

Topic 1. Introduction to the discipline. Basic definitions. Concepts characterizing systems

Introduction to the discipline. Basic definitions: system, system element, connection, subsystem, purpose, structure, types of structures, control system, cybernetic system, system analysis, system approach.

Concepts that characterize systems: state, balance, development, stability. Classification of systems: the purpose of any classification, by interaction with the environment, the basis of the classification, the name of the classes of systems, the distinguishing features of the classes, examples of classes.

Fundamentals of systems theory: system and its components, representation forms, purpose of functioning. Concepts characterizing the structure and functioning of systems: elements, variables, parameters, system states, system behavior, program. Classification and patterns of systems. Formalized models of system analysis.

Topic 2. System approach and its main principles

System approach and its main principles. Fundamentals of the system approach: system approach, system objects, feed-forward, feedback, positive feedback, negative, feedback coefficient. Principles of a systematic approach: the principle of integrity, the principle of compatibility of elements in the system, the principle of organization, the principle of purposefulness and expediency.

The principle of neutralization of dysfunctions, the principle of labilization of functions, the principle of adaptability, the principle of evolution, the principle of isomorphism, the principle of polyfunctionality of a complex system, the principle of an integrated approach, the principle of expediency, the principle of a "complete system". The principle of complementarity and continuity of the processes of design and implementation of complex systems, the principle of taking into account the dynamics of the system.

Scheme of procedures for system analysis. Principles of system analysis. Panorama of methods of system analysis. Choice of modeling methods. Methods of formalized representation of systems. Direct resource allocation problem based on linear programming.

Topic 3. Models and methods of system analysis

Models and methods of system analysis. Model as the main means of studying systems: well-structured problems, unstructured problems, weakly structured problems, model, modeling of economic systems, experimental problem, meaningful statement of the problem, stages of practical modeling, classification of mathematical models, analytical mathematical models, algorithmic mathematical models.

Methods of formal representation of systems: analytical, statistical, graphic. Information approach to the analysis of systems: information, input information, output information, internal, intrasystem, amount of information.

Features of the application of the dual LP problem for the analysis of the economic system. Variants of transport tasks (TS). Criteria for choosing a goal and optimality of traffic flows. The sequence of solving the transport problem according to the cost criterion.

Topic 4. Specific models of system analysis

Specific models of system analysis. IDEF family standards 1. Types of IDEF standards: functional block, dominance, interface arc, branching arcs

IDEF0 methodology: arc merging, decomposition, stable subsystems, tunneling. The process of creating an IDEFO model: the main stages of the process, choosing a goal and point of view, compiling a list of data, compiling a list of features, constructing a diagram, decomposition and refinement, evaluation of the model. IDEF3 methodology: purpose of IDEF3, types of diagrams in IDEF3, classification of types of intersections, basic principles of ontological analysis, concepts of IDEF5, types of diagrams and diagrams of IDEF5.

Organization and evaluation of complex examinations: coefficients of concordance, Spearman and confusion. Methods for conducting expert procedures. Calculation of weight coefficients of criteria.

Topic 5. Analysis and formation of system goals

Analysis and formation of system goals. Purpose and its characteristics.

Goal analysis. Synthesis of goals (goal setting).

Solving the problem of optimizing the organization's production plan. Modeling the functioning of the organization when changing resources and structure.

Topic 6. Fundamentals of the theory of decision making

Decision making based on multiple criteria.

Experts. Methods of organizing group examinations. System analysis in strategic planning and management. Solving the problem of choosing a strategy, taking into account synergy, effects and costs. Particular problems of system analysis.

Topic7. Management Decision Making

General characteristics of the operational management of the main production and a set of tasks of the subsystem.

Description of the tasks of operational - scheduling of the main production.

System dynamics. The concept of analysis of resource flows by dynamic equations. Dynamics of development of business organizations.

Topic 8. System analysis in production management

System analysis in management. The concept of management. Principles of control theory. Control functions.

Solving typical problems for calculating the probabilities of system states, calculating technological and economic efficiency.

Topic 9. System analysis in the management of economic activities of the organization

Indicators of the effectiveness of economic activity. Analysis and evaluation of organizational management structures. Indicators of the effectiveness of economic activity.

System analysis in the management of the investment activity of the organization.

5. Educational technologies

The methodology for teaching the discipline "System Analysis in Management" and the implementation of a competency-based approach in the presentation and perception of the material provides for the use of the following active and interactive forms of conducting group, individual, classroom classes in combination with extracurricular work in order to form and develop the professional skills of students:

– lectures;

- preparation for seminars;

– preparation, presentation and discussion of reports at seminars;

- organization and conduct of current control of students' knowledge in the form of testing.

The proportion of classes conducted in interactive forms is determined by the main goal of the educational program, the peculiarity of the contingent of students and the content of the discipline"System Analysis in Management" and in general for the discipline makes up at least 50% of classroom lessons.

6. Evaluation tools for current monitoring of progress, intermediate certification based on the results of mastering the discipline and educational and methodological support for independent work of students

In the learning process, the following assessment forms of independent work of students, assessment tools for monitoring progress and intermediate assessments are used:

Evaluative means of monitoring progress include control questions and tasks in the form of blank testing, participation in a business game, and presentation of a report.

When performing current control, it is possible to use test material. Samples of control questions and tasks for conducting current control are given in the appendix. When implementing the undergraduate program, the organization has the right to use e-learning and distance learning technologies.

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

Samples of questions and tasks for conducting current control are given in the appendix.

6.1. Fund of assessment tools for conducting intermediate certification of students in the discipline (module).

6.1.1. A list of competencies indicating the stages of their formation in the process of mastering the educational program.

As a result of mastering the discipline (module), the following competence is formed:

Competency code	As a result of mastering the educational program, the student must have
UK-1	Able to search, critically analyze and synthesize information, apply a systematic approach to solve tasks

In the process of mastering the educational program, this competence, including their individual components, is formed in stages during the development of disciplines (modules), practices by students in accordance with the curriculum and calendar schedule of the educational process.

6.1.2. Description of indicators and criteria for assessing competencies formed on the basis of the results of mastering the discipline (module), description of assessment scales

An indicator of competency assessment at various stages of their formation is the achievement by students of the planned learning outcomes in the discipline (module). When implementing the undergraduate program, the organization has the right to use e-learning and distance learning technologies. All materials are posted in the LMS of the Moscow Poly (https://online.mospolytech.ru/course/view.php?id=10267)

UK-1 -Able to search, critically analyze and synthesize information, apply a systematic approach to solve tasks				
Index	**Evaluation criteria**			
	2	**3**	**four**	**5**
know: - the main provisions of the system approach, the terms of system analysis, - areas of application of methods for formalized representation of systems and methods for activating the experience and intuition of specialists, options for their mutual complement and intersection;	The student demonstrates the complete absence or insufficient correspondence of the following knowledge: the possibilities and basic approaches to using system analysis in project management and organizational change. .	The student demonstrates incomplete compliance with the following knowledge: the possibilities and basic approaches to using system analysis in project management and organizational change. Significant mistakes are made, lack of knowledge is manifested, for a number of indicators, the student experiences significant difficulties in operating knowledge when transferring it to new situations.	The student demonstrates partial compliance with the following knowledge: the possibilities and basic approaches to using system analysis in project management and organizational change, but minor errors, inaccuracies, and difficulties in analytical operations are allowed.	The student demonstrates full compliance with the following knowledge: the possibilities and basic approaches to using system analysis in project management and organizational change. Freely operates with acquired knowledge.
be able to: - apply the laws, models and methods of general systems theory in practice;	The student does not know how or insufficiently knows how to use the basic methods and techniques of system analysis in	The student demonstrates incomplete compliance with the following skills: use the basic methods	The student demonstrates partial compliance with the following skills: use the basic methods and techniques of	The student demonstrates full compliance with the following skills: use the basic methods and techniques of

- to analyze and synthesize the structures of systems;	project management and organizational change.	and techniques of system analysis in project management and organizational change. Significant mistakes are made, lack of skills is manifested, for a number of indicators, the student experiences significant difficulties in operating with skills when transferring them to new situations.	system analysis in project management and organizational change, but minor errors, inaccuracies, difficulties in analytical operations, transferring skills to new, non-standard situations are allowed.	system analysis in project management and organizational change. Freely operates with acquired skills, applies them in situations of increased complexity.
own: - the skills of reasonable choice and use of methods of system analysis of the organization in the decision-making process in the management of the operating room	The student does not know or insufficiently knows the methods of system analysis as applied to production, financial and organizational systems.	The student partially owns the methods of system analysis as applied to production, financial and organizational systems, but significant mistakes are made, there is a lack of skills in a number of indicators, the student experiences significant difficulties in applying skills in new situations.	The student owns the methods of system analysis as applied to production, financial and organizational systems, the skills are mastered, but minor errors, inaccuracies, difficulties in analytical operations, transferring skills to new, non-standard situations are allowed.	A student who is fully trained in the methods of system analysis applied to production, financial and organizational systems, freely applies the acquired skills in situations of increased complexity.

Scales for assessing the results of intermediate certification and their description:

Form of intermediate certification: exam.

Intermediate certification of students in the form of an exam is carried out based on the results of all types of educational work provided for by the curriculum for a given discipline (module), while taking into account the results of current monitoring of progress during the semester. The assessment of the degree of achievement by students of the planned learning outcomes in the discipline (module) is carried out by the teacher conducting classes in the discipline (module) by the method of expert assessment. Based on the results of the intermediate attestation for the discipline (module), the mark "excellent", "good", "satisfactory" or "unsatisfactory" is given.

Only students who have completed all types of educational work provided for by the work program in the discipline "System Analysis in Management" (passed the intermediate control) are allowed to the intermediate certification

Evaluation scale	**Description**

Excellent	All types of educational work provided for by the curriculum were completed. The student demonstrates the correspondence of knowledge, skills and abilities given in the tables of indicators, operates with the acquired knowledge, skills, skills, applies them in situations of increased complexity. In this case, minor errors, inaccuracies, difficulties in analytical operations, transferring knowledge and skills to new, non-standard situations can be made.
Good	All types of educational work provided for by the curriculum were completed. The student demonstrates incomplete, correct correspondence of knowledge, skills, and abilities given in the tables of indicators, or if 2-3 minor errors were made at the same time.
Satisfactorily	All types of educational work provided for by the curriculum were completed. The student demonstrates the conformity of knowledge, which covers the main, most important part of the material, but at the same time one significant error or inaccuracy was made.
unsatisfactory	One or more types of educational work provided for by the curriculum have not been completed. The student demonstrates incomplete correspondence of knowledge, skills and abilities given in the tables of indicators, significant errors are made, the lack of knowledge, skills and abilities is manifested in a number of indicators, the student experiences significant difficulties in operating knowledge and skills when transferring them to new situations.

The evaluation funds are presented in the annex to the work program.

7. Educational, methodological and information support of the discipline "System Analysis in Management"

a)Main literature:

1. Prokofieva, T. A. System analysis in management: a textbook for universities - Moscow: Yurayt Publishing House, 2021. - 313 p. - ISBN 978-5-534-10451-6. — Text: electronic // Educational platform Urayt [website]. — URL: https://urait.ru/bcode/475448

2. Zagranovskaya A. V. System analysis: a textbook for universities - M .: Yurayt Publishing House, 2021. - 424 p. - (Higher education). — ISBN 978-5-534-13893-1. — Text: electronic // Educational platform Urayt [website]. - url:https://urait.ru/bcode/467205f

b)additional literature:

1. Belov P. G. System analysis and program-target risk management: textbook and workshop for universities / P. G. Belov. - Moscow: Yurayt Publishing House, 2021. - 289 p. - (Higher education). - ISBN 978-5-534-04690-8. — Text: electronic // Educational platform Urayt [website]. — URL: https://urait.ru/bcode/473132

The possibility of using e-learning, distance learning technologies is provided.

eight. Logistics support of discipline.

Audience for lectures and seminars of the general fund. Training tables with benches, classroom board, portable multimedia complex (projector, projection screen, laptop). Teacher's workplace: table, chair.

9. Guidelines for students when working on lecture notes during the lecture

Lecture - a systematic, consistent, monologue presentation by the teacher of educational material, as a rule, of a theoretical nature. When preparing a lecture, the teacher is guided by the working program of the discipline. In the course of lectures, it is recommended to take notes, which will later allow you to recall the studied educational material, supplement the content during independent work with literature, and prepare for the exam.

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 fields in the working notes on which to make notes from the recommended literature, supplementing the material of the lecture heard, as well as emphasizing the particular importance of certain theoretical positions.

Lecture conclusions summarize the teacher's reflections on educational issues. The teacher provides a list of used and recommended sources for studying a particular topic. At the end of the lecture, students have the opportunity to ask questions to the teacher on the topic of the lecture. When lecturing on the discipline, electronic multimedia presentations can be used.

Guidelines for students when working at the seminar

Seminars are implemented in accordance with the working curriculum with consistent study of the topics of the discipline. In preparation for the seminars, the student is recommended to study the basic literature, get acquainted with additional literature, new publications in periodicals: magazines, newspapers, etc. In this case, the recommendations of the teacher and the requirements of the curriculum should be taken into account. It is also recommended to refine your lecture notes by making appropriate entries in it from the literature recommended by the teacher and provided by the curriculum. Abstracts should be prepared for presentations on all educational issues submitted to the seminar.

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

Guidelines for students on the organization of 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. During independent work, the student interacts with the recommended materials with the participation of the teacher in the form of consultations. To perform independent work, methodological support is provided. 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.

10.Methodological recommendations for the teacher (Guidelines for making presentations)

A presentation (from the English word - presentation) is a set of color slide pictures 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 that 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 of the speaker with the demonstration material;
- mobility and compactness of information carriers and equipment;
- ability to update, supplement and adapt information;
- low cost.

Rules for the design of computer presentations

General Design Rules

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

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

Font design rules:

- Serif fonts are easier to read than sans-serif fonts;
- Capital letters are not recommended 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 perceived by the audience and not cause negative emotions (subconscious or completely conscious), it is necessary to follow the rules for its design.

The presentation involves a combination of information of various types: text, graphics, musical and sound effects, animation and video clips. Therefore, it is necessary to take into account the specifics of combining fragments of information of various types. In addition, the design and demonstration of each of the listed types of information is also subject to certain rules. So, for example, for textual information, the choice of font is important, for graphic information - brightness and color saturation, for their best joint perception, optimal relative position on the slide is necessary.

Consider recommendations for the design and presentation of various types of materials on the screen.

Formatting text information:

- font size: 24-54 pt (headline), 18-36 pt (plain text);
- font color and background color should contrast (the text should be well read), but not hurt the eyes;
- font type: smooth sans-serif font for body text (Arial, Tahoma, Verdana), decorative font can be used for heading if it is legible;
- italics, underlining, bold, capital letters are recommended to be used only for semantic highlighting of a text fragment.

Formatting graphic information:

- drawings, photographs, diagrams are designed to supplement textual information or convey it in a more visual form;
- it is desirable to avoid drawings in the presentation that do not carry a semantic load if they are not part of the style design;
- the color of graphic images should not contrast sharply 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 well readable.

The content and location 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 of the slide size;
- it is desirable to have on the page blocks with different types of information (text, graphs, diagrams, tables, figures) that complement each other;

- keywords in the information block must be highlighted;
- information blocks should be placed 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 the presentation should correspond to the logic of its presentation.

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

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

The work program was compiled on the basis of the Federal State Educational Standard of Higher Education in the direction of training bachelors on March 38, 02 "Management", approved by order of the Ministry of Education and Science of the Russian Federation of August 12, 2020 No. 970 (Registered in the Ministry of Justice of Russia on August 25, 2020 No. 59449).

The program was made by:
Candidate of Economics, Associate Professor of the Department of Management
/ Zyulina V.V. /



The program was approved at a meeting of the department "Management"
August 29, 2022, Protocol No. 1

Head of the Department "Management"
k. e. PhD, Associate Professor



/ Alenina E.E. /

Structure and content of the discipline
"System Analysis in Management"
in the direction of preparation 38.03.02 "Management" (bachelor)
educational program "Business Process Management"
Part-time education

Chapter	Semester	A week semester	Types of educational work, including independent student work, and labor intensity in hours					Types of independent work students					Forms of attestation	
			L	F/N	Lab	SRS	DAC	K.R.	K.P.	K/R	T	DC	E	Z
Topic 1. Introduction to the discipline. Basic definitions. Concepts characterizing systems	9	1-2	2	2		16						+		
Topic 2. System approach and its main principles	9	3-4	2	2		16						+		
Topic 3. Models and methods of system analysis	9	5-6	2	2		16								
Topic 4. Specific models of system analysis	9	7-8	2	2		16						+		
Topic 5. Analysis and formation of system goals	9	9-10	2	2		16						+		
Topic 6. Fundamentals of the theory of decision making	9	11-12	2	2		16						+		
Topic7. Management Decision Making	9	13-14	2	2		16						+		
Topic 8. System analysis in production management	9	15-16	2	2		16						+		
Topic 9. System analysis in the management of economic activities of the organization	9	17-18	2	2		16								
Appraisal Form												one	**E**	
Total hours per discipline			eighteen	eighteen		144								

Appendix 2 to
work program

MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION

FEDERAL STATE BUDGETARY EDUCATIONAL INSTITUTION OF HIGHER EDUCATION

"MOSCOW POLYTECHNIC UNIVERSITY"

(MOSCOW POLYTECH)

Direction of training: 38.03.02 "Management"

EP (educational program): "Business Process Management"

Form of study: full-time, part-time

Type of professional activity: organizational and managerial, information and analytical, entrepreneurial

Department: "Management"

VALUATION FUND

BY DISCIPLINE

"System Analysis in Management"

Composition: 1. Passport of the fund of appraisal funds

2. Description of evaluation tools

Compiled by:

Candidate of Economics, Associate Professor Zyulina V.V.

Moscow, 2022

INDICATOR OF THE LEVEL OF FORMATION OF COMPETENCES

System analysis in management					
GEF VO 38.03.02 "MANAGEMENT"					
In the process of mastering this discipline, the student forms and demonstrates the following **competencies**:					
COMPETENCES		**List of components**	**Competence formation technology**	**Assessment Tool Form****	**Degrees of levels of development of competencies**
INDEX	**FORMULATION**				
UK-1	Able to search, critically analyze and synthesize information, apply a systematic approach to solve tasks	**know:** - the main provisions of the system approach, the terms of system analysis, - areas of application of methods for formalized representation of systems and methods for activating the experience and intuition of specialists, options for their mutual complement and intersection; **be able to:** - apply the laws, models and methods of general systems theory in practice; - to analyze and synthesize the structures of systems; **own:** - the skills of reasonable choice and use of methods of system analysis of the organization in the decision-making process in the management of the operational (production) activities of organizations	lecture, independent work, seminars	DS, E, T	A basic level of - methodological bases for defining goals and criteria for achieving goals in the study of systems and system analysis. Advanced level - able to use the main methods and techniques of system analysis in the study of complex objects.

Appendix 3
to work program

List of assessment tools by discipline

System analysis in management

OS number	Name of the evaluation tool	Brief description of the evaluation tool	Presentation of the evaluation tool in the FOS
one	Report, message (DS)	The product of the student's independent work, which is a public performance on the presentation of the results of solving a specific educational, practical, educational, research or scientific topic	Topics of reports, messages
2	Test (T)	A system of standardized tasks that allows you to automate the procedure for measuring the level of knowledge and skills of a student.	Fund of test tasks
3	Exam (E)	The final form of knowledge assessment. In higher education institutions are held during the session.	Questions for the exam

Questions for the examby discipline "System Analysis in Management" formation of competencies UK-1

1. Development of systemic ideas in economics and management. Systems methodology as a research theory
2. The main directions in scientific research (elementarism, structural approach).
3. Main directions in scientific research (functional approach, system approach)
4. System approach and system analysis in economics. Principles and postulates of system analysis
5. The concept of "system". Constructive description of the socio-economic system
6. Systemic description of the socio-economic object of study.
7. Matrix of system characteristics and principles of its formation. 8. External and internal environment for the functioning of social
economic system
9. Matrix of system characteristics. Input and output parameters
10. Function and goals of system development. The concept of polyfunctionality.
11. Structure of the system. The concept of polystructurality.
12. System characteristics. Links and elements of the system. The concept of a subsystem.
13. System characteristics. System processor. Components of a processor.
14. Principles of system classification. Classification of systems according to the degree of complexity and conditionality of action
15. Principles of system classification. Classification of systems according to the nature of interaction with the external environment
16. Laws and principles of systematic research. Black box method, possibilities of use.

17. Laws and principles of systematic research. Feedback principle. Positive and negative feedback. Automatic regulation formula.
18. Laws and principles of systematic research. Feedback principle. The concept of a homeostatic system.
19. Laws and principles of systematic research. Feedback principle. Automatic regulation formula.
20. Laws and principles of the study of socio-economic systems. Law of Necessary Variety, examples.
21. Features of socio-economic systems. Specificity of purposeful behavior.
22. Features of socio-economic systems. Specificity of external dynamics.
23. Features of socio-economic systems. Specifics of internal dynamics.
24. System methods for studying the internal environment of socio-economic objects. Matrix of system characteristics.
25. Matrix of system characteristics. Physical and dynamic measurement of system elements
26. Matrix of system characteristics. Predictive and control measurement of system elements
27. Morphological method of studying the external environment of the socio-economic system. Basic steps of morphological research
28. System analysis of the external environment. Stratification of the environment and expert determination of the significance of factors.
29. Analysis of the external environment of the socio-economic system. Methods for identifying key external factors of functioning and development
30. Construction and evaluation of scenarios for the development of the external environment of the socio-economic system - optimistic, pessimistic and most probable.
31. Methods for identifying and describing the "problem field" of the organization using a system classifier
32. System analysis of the goals of the organization. Methods for the formation of targets. Identification and evaluation of key goals.
33. Methods of decomposition of the goals of the organization. Basic requirements and principles for building a "goal tree"
34. Evaluation of the current strategy of the organization. Analysis of the possibilities of changing the current strategy, taking into account scenarios for the development of the external environment.

Exam ticket form

Question number 1 - the formation of the competence of UK-1.
Question number 2 - the formation of the competence of UK-1

MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION
FEDERAL STATE AUTONOMOUS EDUCATIONAL INSTITUTION OF HIGHER EDUCATION
"MOSCOW POLYTECHNICAL UNIVERSITY"
(MOSCOW POLYTECH)

Faculty of Economics and Management, department "Management"
Discipline: System analysis in management
Direction of training: 38.03.02 "Management"
Course: 4, group _____, form of education: full-time, part-time

EXAMINATION TICKET No. 1.

one.Formation of the competence of UK-1.
2. Formation of the competence of UK-1

Approved at the meeting of the department "_29" _August_ 2022, protocol No. _1_.

Head Department of "Management" _____ /Alenina E.E./

Topics of reports by discipline
"System Analysis in Management"
(formation of the competence of UK-1)

1. System approach in economics and management.
2. The concept and essence of system analysis and the scope of its application.
3. Principles of system analysis.
4. The concept of a system and its properties.
5. System structure: black box model.
6. The structure of the economic system and its formalized representation.
7. Characteristics of the functioning and development of the system.
8. Classification of systems.
9. Patterns of functioning and development of systems: interaction of part and whole.
10. Patterns of hierarchical ordering of systems.
11. Regularities of systems emergence.
12. Patterns of systems development.
13. Patterns of target formation systems.
14. Analytical approach to management: characteristics of the main components.
15. Synthetic approach to management: characteristics of the main components.
16. Synthetic approach to management: management of a simple system.
17. Synthetic approach to management: management of a complex system.
18. Synthetic approach to management: control by parameters.
19. Synthetic approach to management: management by structure.
20. Synthetic approach to management: management by objectives.
21. Synthetic approach to management: management of large systems.
22. Synthetic approach to management: management in the absence of information about the ultimate goal.
23. The sequence of the system analysis.
24. System analysis technology: fixing and diagnosing problems.

25. Technology of system analysis: formation of a group of stakeholders.
26. Technology of system analysis: definition of a problematic mess.
27. Technology of system analysis: definition of a configurator.
28. Technology of system analysis: methods of targeting.
29. Technology of system analysis: formation of criteria.
30. Technology of system analysis: methods of experimental research of systems.
31. Technology of system analysis: construction and improvement of the model.
32. System analysis technology: ways to generate alternatives.
33. Methods of choice or decision making in system analysis.
34. Technology of systems analysis: implementation of improving intervention.
35. Comparative characteristics of methods for optimizing management decisions.
36. Method of simple multi-criteria selection: essence and algorithm.
37. Management decision-making based on system analysis of hierarchies: essence and algorithm.
38. TOPSIS method: essence and algorithm.
39. Tree and decision analysis method: essence and algorithm.
40. Simulation modeling: essence and algorithm.

Report Evaluation Criteria

No.	Criterion	Grade			
		ex.	choir.	satisfactory	unsatisfactory
one	Report Structure	The report contains semantic parts, balanced in volume	The report contains three semantic parts, unbalanced in volume	One of the semantic parts of the report is missing	The report does not trace the presence of semantic parts
2	Content 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	Ownership of the material	The student fully owns the material presented, is oriented in the problem, freely answers questions	The student owns the material presented, is oriented in the problem, finds it difficult to answer some questions	The student is not fluent enough in the material presented, poorly oriented in the problem	The student does not own the material presented, poorly oriented in the problem
four	Relevance to the topic	The presented material is fully consistent with the stated topic.	The material presented 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.

Tests by discipline "System analysis in management» (formation of the competence of UK-1)

The main task of Business Process Management:

A) bring clarity, draw the company's attention to possible growth points that allow you to get the maximum

B) the emergence of free time for subordinates, profit growth and an increase in the number of customers

C) engaging employees in the new process by explaining the prospects for obtaining new opportunities and benefits as a result of the implementation of new processes

D) introduction of new business process algorithms into the current scheme of work upon completion of staff training

ANSWER: A

Special methods of system modeling:

A) graphical modeling

B) topological modeling

C) combinatorial modeling

D) dynamic simulation

ANSWER:D

One of the founders of set theory. He accepted the multitude as "many, conceived by us as one."

A) G. Kantor

B) G.Gant

C) J. Buhl

D) W.Churchman

ANSWER: A

_____ is understood as "a set of semantic elements of a language with given semantic relationships", and is used to characterize a particular language and its multi-level structure.

A) thesaurus

B) grammar

C) semantics

D) pragmatics

ANSWER: A

A simplicial complex is a natural mathematical generalization of the concept of a planar graph, reflecting the _____ nature of a binary relation.

A) Physical

B) Combined

C) Multidimensional

D) Monomeric

E) Multifaceted

ANSWER: C

According to the content, the goals are divided into:

A) Specific, special, administrative, technical, economic, technological.

B) Social, marketing, administrative, scientific and technical, industrial, geographical, technical.

C) Social, marketing, administrative, scientific and technical, industrial, economic, technological.

D) Administrative, popular science, economic, technological, market, managerial.

ANSWER: C

The division of a large number of goals into levels is called

A) Classification

B) Stratification

C) Ranking

D) Verification

ANSWER: B

One approach to building a goal tree involves building

A) task tree, activity tree and reserve tree
B) job tree, identity tree and recursion tree
C) task tree, celebration tree and angle tree
D) task tree, activity tree and resource tree
ANSWER:D
Business process management approaches:
A) Adoption of business process management standards
B) Business Process Improvement
C) Information technology
D) Systematization of business processes
ANSWER: C
When building a goal tree
A) during decomposition, the independence of goals should be increased, and the union of subgoals of one branch of the tree leads to the achievement of a goal of a higher level
B) when decomposing, the independence of goals should be reduced, and the union of subgoals of one branch of the tree leads to the achievement of a goal of a higher level
C) when decomposing, the dependence of goals should be increased, and the division of subgoals of one branch of the tree leads to the achievement of a goal of a higher level
D) during decomposition, the dependence of goals should be increased, and the union of subgoals of one branch of the tree leads to the achievement of a goal of a lower level
ANSWER: B
Elements influencing operational management:
A) the composition and number of vehicles used
B) mathematical support for production planning problems
C) composition of leaders
D) planning and accounting units used in the enterprise
E) calendar and planning standards
F) the composition of planning and accounting documentation, as well as its content
G) nature of information flows
H) all of the above
I) none of the above
ANSWER: H
To develop optimal management decisions, apply
A) information models
B) economic and mathematical models
C) mathematical models
D) simulation models
ANSWER: B
Operational management functions
A) In violation of the established deadlines, partially complete the program for the release of products.
B) Irrational use of labor resources and production facilities.
C) In production, use as much working capital as possible and speed up production as little as possible.
D) Provide conditions for the development of advanced forms of organization of recreation at work.
E) Transfer to manual labor the main planning, accounting and accounting work, prepare all the necessary documentation.
F) all of the above
G) none of the above
ANSWER: G
Types of calendar plans

A) step-by-step, step-by-step, schedule-list of parts
B) one-shift schedule, irregular schedule, flexible schedule, shift schedule, shift schedule
C) line graph, histogram, chart, geographical chart
D) line graph, planar graph, volumetric graph
ANSWER: A
Stages of development of the organization:
A) birth, development, adulthood, depression, demoralization
B) awakening, formation, ripeness, collapse, splitting
C) formation, establishment, experience, atrophy, ammonification
D) emergence, formation, maturity, decline, decay
ANSWER:D
The control system includes:
A) universal system, control object and combined system
B) control system, control object and communication system
C) controlled system, subject of control and mixed system
D) developing system, control object and stable system
ANSWER: B
Factors of production can be classified according to various criteria.
A) Synthetic
B) Analytical
C) Internal
D) External
E) all of the above
F) none of the above
ANSWER:E
What economic reserves of the enterprise are the main source of increasing the efficiency of the organization?
A) Synthetic
B) Analytical
C) Internal
D) External
ANSWER: C
The main goal of management analysis is:
A) making intuitive decisions in enterprise management
B) making tactical decisions in enterprise management
C) formulation of the vector of managerial decisions
D) formulation of the scalar of managerial decisions
ANSWER: C
The main concepts of complex analysis include:
A) completeness or comprehensiveness of the analysis
B) systematic analysis
C) the presence of a single goal of analysis
D) consistency and simultaneity of analysis
E) all of the above
F) none of the above
ANSWER:E
The methodology of complex economic analysis for management purposes should NOT contain the following components:
A) definition of goals and objectives of economic analysis
B) a set of indicators to achieve goals and objectives
C) frequency and timing of management reviews
D) ways of obtaining information and processing it

E) the procedure for reporting the results of the analysis and their evaluation
F) all of the above
G) none of the above
ANSWER: G
How many stages of business process management?
A) 4
B) 5
C) 2
D) 3
ANSWER:D
Signs of compliance of the information used in the analysis of economic activity with the requirements:
A) Usability
B) completeness
C) timeliness of formation
D) credibility
E) all of the above
F) none of the above
ANSWER:E
A systematic approach to business process management, the main purpose of which is to organize the company's activities in such a way as to combine the goals of the organization and the expectations of customers, is:
A) BPMS (Business Process Management System)
B) BPMN (Business Process Model and Notation)
C) BPM (Business Process Management)
ANSWER: C
Special software, without which it will be extremely difficult to implement the necessary business processes, is:
A) BPMN (Business Process Model and Notation)
B) BPMS (Business Process Management System)
C) BPM (Business Process Management)
ANSWER: B
According to the classification of systems, it is this subsystem that includes the flora and fauna of the planet, incl. human body:
A) biological
B) social
C) technical
ANSWER: A
Among the stages of business process management, this stage includes the planned modernization of the business process:
A) separation of business processes
B) business process development
C) business process improvement
ANSWER: C
A way of describing business processes that helps specialists convey the main ideas of BPM to business people is:
A) BPMS (Business Process Management System)
B) BPMN (Business Process Model and Notation)
C) BPM (Business Process Management)
ANSWER: B
In mathematical linguistics and semiotics, the term expressing the rules by which the semantic elements of the language are formed is:

A) grammar
B) semantics
C) pragmatics
ANSWER: A
Documented standards:
A) provide high quality work
B) assist in the adaptation of new employees
C) reduce risks in production
D) all of the above
E) none of the above
ANSWER:D
When analyzing and managing business processes, a stable, purposeful set of interrelated activities that, using a certain technology, transforms inputs into outputs that are of value to the consumer (client) is:
A) process
B) operation
C) verification
D) validation
E) event
ANSWER: A
CRM system is:
a) customer relationship management system
B) an enterprise system that uses operating resources to transform an input factor of production into a finished product or service
C) an organized set of tools, methods and activities used for the regular processing of information to solve a problem
D) a working system whose activities are aimed at collecting, transmitting, storing, retrieving, processing and displaying information
ANSWER: A
In the analysis and management of business processes, the material or information object required to complete the process is:
A) consumer
B) event
C) resource
D) process output
E) process instance
ANSWER: C
In the analysis and management of business processes, the transformable or control resource required to complete the process, supplied by other processes:
A) supplier
B) process instance
C) process input
D) process output
E) through resource
ANSWER: C
When analyzing and managing business processes, the resource transformed during the execution of the process:
A) consumer
B) process instance
C) process input
D) process output
E) through resource

ANSWER:D

Organization business process management is presented in the standard:

A) ISO 9000

B) ISO 9001

C) ISO 9010

D) ISO 9100

ANSWER: B

Business process content does NOT include:

A) Inputs

B) Outputs

C) Artist

D) Project

ANSWER:D

In mathematical linguistics and semiotics, the term expressing the rules by which the semantic elements of the language are formed is:

A) grammar

B) semantics

C) pragmatics

ANSWER: A

The method in which general goals are divided into private ones using decomposition methods is called:

A) goal tree

B) decision tree

C) work tree

ANSWER: A

This is how a group of methods used to evaluate complex systems at a qualitative level by specialists is called (for example, the Thurstone and von Neumin-Morgenstern methods):

A) peer review methods

B) structuring methods

C) Score Matching Methods

ANSWER: A

This special system modeling method is one of the types of physical modeling, representing a relatively small number of activity factors necessary and sufficient to appropriately display a specific control situation:

A) dynamic simulation

B) structural-linguistic modeling

C) situational modeling

ANSWER: C

A connected generalizing set, within which operations are performed on sets (their removal, addition of new ones, union, intersection, etc.), is:

A) aggregate

B) continuum

C) set

ANSWER: B

In set-theoretic representations, sets that are specified by specifying some characteristic property A are called:

A) intensional

B) extensional

C) existential

ANSWER: B

In mathematical linguistics and semiotics, the term expressing the content, meaning, meaning of the formed or recognizable constructions of the language is:

A) semantics
B) pragmatics
C) grammar
ANSWER: A

These methods are a means of involving managers in the development of a collective leadership style, increase the motivation and involvement of participants in solving the problems discussed:

A) brainstorming method
B) "scripts" type method
C) discussion methods
ANSWER: C

This method is based on the hypothesis that among a large number of ideas, there are at least a few good ones that are useful for solving a problem that need to be identified:

A) "scripts" type method
B) discussion methods
C) brainstorming method
ANSWER: C

These methods allow you to divide a complex problem with a lot of uncertainty into smaller ones that are better amenable to research (for example, “objective tree”, “decision tree”, portfolio analysis methods):

A) peer review methods
B) structuring methods
C) Score Matching Methods
ANSWER: B

These methods are used in the processing of individual expert assessments and have many options that differ in the way in which a generalized one is obtained from individual assessments (for example, the Delphi method, the combinatorial topology method):

A) structuring methods
B) Methods for reconciling scores
C) peer review methods
ANSWER: B

Methods that represent real objects and processes in the form of points that make various movements in space or interact with each other are:

A) methods of discrete mathematics
B) strategic methods
C) analytical methods
ANSWER: C

When classifying goals, this category includes the creation and introduction into production of new and improvement of existing product samples, bringing them to the level of world standards:

A) marketing
B) scientific and technical
C) social
ANSWER: B

Can an organizational structure object be decomposed into a process?

A) Yes, but only to the top level process
B) Yes, but only the Organizational Unit object
C) Yes, but only to the top level process
D) No
ANSWER:D

The highest level of strategic management is:

A) corporate
B) public

C) business

ANSWER: A

According to the concept of strategic management, what should an employee indicate when setting a task?

A) Strictly on the scope of his duties

B) Strictly on the area of application of efforts

C) On the desired result, and not on his responsibilities and area of \u200b\u200beffort

ANSWER: C

When classifying goals, this category includes the achievement of high manageability, reliable interaction between departments and individual employees, high discipline and coherence in work:

A) economic

B) administrative

C) production

ANSWER: B

When classifying goals, this category includes the conquest of new sales markets, attracting new customers, continuing the life cycle of products, achieving leadership in sales:

A) marketing

B) economic

C) production

ANSWER: A

The simulation modeling approach, which allows studying the structure and behavior of complex systems in time, taking into account a set of system elements and interactions between them, is called:

A) organization dynamics

B) system dynamics

C) business analysis

ANSWER: B

When the operational management system coordinates the schedules of sections and workshops interacting in the production process, this is:

A) operational scheduling

B) volumetric planning

C) operational accounting

ANSWER: A

Decomposition, which is based on the analysis of system functions, is called:

A) structural decomposition

B) physical process decomposition

C) life cycle decomposition

D) functional decomposition

ANSWER:D

The task of system analysis, which consists in finding various kinds of properties of a system or environment surrounding the system, is called:

A) decomposition problem

B) synthesis problem

C) analysis task

ANSWER: C

When classifying goals, this category includes strengthening the financial stability of the organization, increasing profitability:

A) administrative

B) economic

C) social

ANSWER: B

Which of the following options does not apply to graphical methods of system modeling?

A) diagrams
B) Gantt chart
C) Delphi method
D) tree structures
E) none of the above
F) all of the above
ANSWER: C
The object of dispatching control in a single and small-scale production:
A) providing the plant with everything necessary for the production of products and the release of these products
B) lead times
C) compliance with the rhythms of work at each stage
ANSWER: B
The fact that the adopted decision should neither lag behind nor outstrip the needs and tasks of the socio-economic system means:
A) comprehensive justification of the decision
B) consistency of decision with previous decisions
C) timeliness of decision
ANSWER: C
The decision made by the manager affects:
A) Employees of the organization.
B) The organization as a whole.
C) to the external environment.
D) To the person who made the decision.
ANSWER: B
The set of solution parameters that satisfy a particular consumer and ensure the reality of its implementation is:
A) The effectiveness of the management decision.
B) The quality of the management decision.
C) Reliability of the management decision.
D) Optimality of the managerial decision.
ANSWER: B
The set of rules for decision-making that guides an organization in its activities is:
A) strategic decisions
B) strategic goals
C) organization strategy
ANSWER: C
What is the form of organization of the system:
A) adaptation
B) Structure
C) dynamics
ANSWER: B
What is the name of the dynamic model of the state of the system in the future:
A) matrix
B) scenario
C) project
ANSWER: B
Management decision ... with previous decisions:
A) does not agree
B) depends on the situation
C) must be agreed
ANSWER: C

Problems that support the decision-making process include:

A) The problem of the result: the study of the process of formation of the results of the functioning of the enterprise and their evaluation.

B) The problem of goals: clarification of the process of formation of the goal of the functioning of the enterprise and their assessment in a certain direction or situation.

C) Both answers are correct.

ANSWER: C

Management decision-making technologies include:

A) Methods and means of collecting and processing information and techniques for effectively influencing personnel.

B) Principles, laws and patterns of organization and management and control systems.

C) Methods and means of collecting and processing information, techniques for effectively influencing personnel, principles, laws and patterns of organization and management and control systems.

D) Factors of the external / internal environment, methods and conditions for the use of active means, criteria for comparing and choosing solutions, and components of logical and methodological rationality.

ANSWER: C

The system property of a management decision is:

A) collegiality

B) smoothness

C) complexity

D) relevance

ANSWER: C

The totality (system) of information about all types of enterprise activities, reflecting all aspects of the process of social reproduction, distribution, exchange and consumption of material goods and services, is:

A) economic analysis

B) information flow

C) economic information

ANSWER: C

The consumer of economic information and at the same time the channel for issuing information for making managerial decisions at any level is:

A) economic analysis

B) thematic analysis

C) managerial analysis

ANSWER: A

In the classification of reserves, such reserves, the presence of which is necessary for the continuous rhythmic activity of the enterprise, are called:

A) on-farm reserves

B) reserves as opportunities

C) external reserves

D) reserve stocks

ANSWER:D

According to the period of use, the reserves are divided into:

A) overt and covert

B) external and on-farm

C) current and prospective

ANSWER: C

The main goal of management analysis is:

A) tasks of system analysis and synthesis

B) search for optimal or close to optimal solutions

C) justification of management decisions
ANSWER: B
Factors in economic analysis that are controlled by the enterprise are called:
A) external
B) internal
C) general
D) private
ANSWER: B
There are no positions in an organization, only business roles. Is it possible to develop a model of an organizational structure?
A) It is possible only by linking business roles to the processes of the VAD model
B) It is possible only if there are departmental regulations
C) Can
D) Impossible
ANSWER: C
Economic information is information...
A) necessary for solving various kinds of economic problems
B) characterizing production relations in society
C) arising in various areas of economic activity
ANSWER: B
An information system is...
A) a system for producing information
B) a system for storing information about a particular object
C) a communication system for collecting, transferring, processing information about a particular object, supplying employees with information to implement management functions
ANSWER: C
BPM stands for:
A) Business Process Management
B) Business Process Model
C) Business Process Machinery
ANSWER: A
Types of business processes:
A) Management
B) Development processes
C) Production
D) Provision
E) Auxiliaries
F) All of the above
G) None of the above
ANSWER:D
This business process management is the longest and most complex.
A) Separation
B) Development of business processes
C) Process improvement
ANSWER: B
How many stages of business processes in the organization need to be implemented:
A) 5
B) 6
C) 9
D) 14
ANSWER: B
Methods aimed at enhancing the use of intuition and experience of specialists include:

A) Graphic
B) Expert opinions
C) Cognitive Approach
D) Statistical
E) Delphi Methods
F) Semiotic
G) Linguistic
ANSWER:E

What are the names of the methods that appeared as a result of mixing the means of MAIS and MPFS?

A) Structural
B) Special
C) Imitation
D) Dynamic
E) Additional
F) General
ANSWER: B

One of the types of physical modeling, which reproduces a combination of conditions and circumstances that create a certain situation

A) dynamic simulation
B) situational modeling
C) cognitive approach
D) structural-linguistic modeling
E) informational approach to system modeling and analysis
F) an approach based on the idea of gradual formalization of decision-making models through the alternate use of IAIS and IPPF tools
ANSWER: B

What mathematical theories have appeared on the basis of statistical representations?

A) mathematical statistics
B) the theory of statistical tests
C) the theory of proposing and testing statistical hypotheses
D) the theory of potential noise immunity
E) all of the above
F) none of the above
ANSWER:E

How can you set a set?

A) intensionally
B) extensionally
C) binary
D) exponentially
E) expansively
ANSWER: B

An important concept for mastering and using set-theoretic representations is

A) aporia
B) predicate
C) thesaurus
D) continuum
E) antinomy
ANSWER:D

What is a quantifier?

A) an expression grammatically having the form of a statement, but containing variables of some subsets on which they are defined

B) a general name for logical operations that limit the scope of the truth of a predicate and create a proposition

C) a special case of a polynomial consisting of two terms of monomials

D) an elementary particle, a quantum of the Higgs field, which necessarily arises in the Standard Model of elementary particle physics

ANSWER: B

An algebra of logic in which a variable can take on only two truth values is called

A) ternary logic

B) multivalued logic

C) mathematical logic

D) Russell's logic algebra

E) the Hilbert logic algebra

F) binary Boolean algebra of logic

ANSWER: F

Basic concepts on which linguistic representations are built

A) thesaurus

B) predicate

C) grammar

D) punctuation

E) semantics

F) pragmatics

ANSWER: F

Graphic methods for displaying information include

A) infographic

B) charts

C) graffiti

D) diagrams

E) histograms

F) Scenarios

G) staging

H) tree structures

I) Gantt charts

ANSWER: I

Methods for activating the use of intuition and experience of specialists are called:

A) qualitative (expert) methods

B) methods of discrete mathematics

C) mathematical linguistics

D) Boolean binary algebra of logic

ANSWER: A

Brainstorming is a method that

A) is built on the principle of preparing a logical chain of events or a list of ways to solve tasks, stretched in time

B) lies in the fact that a team is involved in solving the problem posed, allowing a group solution to be developed

C) is based on the opinion that among the sea of ideas there are a couple of really worthwhile ones that are worth looking for

D) is the basis of many methods of system analysis, any complex algorithm for organizing design or making a management decision

ANSWER: C

What is the BCG matrix used for?

A) To evaluate the components of this structure in terms of strengths, weaknesses, opportunities and threats

B) For portfolio analysis

C) To build a goal tree

D) To form the structure of goals and functions based on the allocation of social, technological, economic and political components

ANSWER: B

The essence of the Delphi method is

A) studying connectivity in complex systems and conducting complex examinations

B) selection of possible solutions to the tasks set for individual parts of the problem and their subsequent combination to obtain a complete solution to the problem

C) applying a series of sequential actions to achieve maximum agreement in obtaining a solution to the problem

D) sequential translation of already existing knowledge into unexplored areas of the field, trying to cover it completely

ANSWER: C

Functions of the OS OP system:

A) Vegetative, mental, reproductive

B) Elemental, organizational, functional

C) Production, regulation, socialization

D) Economic, economic, consumer

ANSWER: B

What is the operational management system?

A) Volume planning

B) Operational scheduling

C) Operational accounting

D) All of the above

E) None of the above

ANSWER:D

Dispatching includes:

a) Quick elimination of production failures

B) control of the execution of work in accordance with the production plan

C) directing the rapid preparation of everything that is needed to fulfill schedules and daily shift tasks

D) analysis of the causes of deviations and non-fulfillment of planned targets, elimination of these causes

E) coordination of the work of links that interact with each other during production

F) All of the above

G) None of the above

ANSWER: F

What is a process approach to management?

A) a view of business as a system of interrelated processes managed to achieve goals

B) process automation system

C) assigning process owners

ANSWER: A

The process approach to managing the activities of an organization is understood as ...

A) the appointment of process owners, the definition of suppliers and consumers of all processes

B) optimal distribution of powers and responsibilities in processes

C) the use of a matrix organizational structure in the organization

D) a view of the activities of the organization as a system of interrelated and complementary processes that need to be managed in order to achieve goals

E) using the results of modeling the subject areas of the organization's activities in the decision-making process

ANSWER:D
Is it possible to use BPMN notation to describe different levels of procedures:
A) not possible, only one level of procedure
B) only possible after top-level modeling in VAD notation
C) yes, you can if you need
D) this notation cannot be used for procedures
E) mandatory for different levels of procedures
ANSWER: C