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"Moscow Polytechnic University"

APPROVE Vice-President or International Affairs Yu.D. Davydova/ 2024 Dean of the Faculty of Economics and Management /A.V. Nazarenko/ 11 2024 belpaulie

## WORKING PROGRAM OF THE DISCIPLINE

"Foresight 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):**

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/O.N. Korotun/

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

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

The main goals of mastering the Foresight Management discipline include:

- developing students' knowledge and skills in the field of foresight technologies.

The main objectives of mastering the Foresight Management discipline include:

- Mastering the theory of Foresight methodology and technologies.

- Familiarization with domestic and foreign experience in the use of foresight technologies.

- Assessing the feasibility of using Foresight.

Training in the discipline "Foresight Management" is aimed at developing the following competencies in students:

| Code and name of   | Indicators of Competency Achievement   |
|--|--|
| competencies   |  |
| PK-5. Able to collect<br>information about business<br>problems and identify<br>business opportunities for<br>the organization | <b>IPK-5.1.</b> Knows the theory of interpersonal and group communication in business interaction; conflict theory; methods, techniques, processes and tools for managing stakeholder requirements; visual modeling languages; risk management theory; systems theory; subject area and specifics of the organization's activities to the extent sufficient to solve business analysis problems. <b>IPK-5.2.</b> Able to use stakeholder identification techniques; plan, organize and conduct meetings and discussions with stakeholders; use effective communication techniques; identify, register, analyze and classify risks and develop a set of measures to minimize them; collect, classify, systematize and ensure storage and updating of business analysis information; formalize the results of business analysis in accordance with the selected approaches; identify connections and dependencies between elements of business analysis information; present business analysis information in a variety of ways and formats for discussion with stakeholders; apply information technology to the extent necessary for business analysis purposes; analyze internal (external) factors and conditions affecting the organization's activities; analyze the requirements of stakeholders in terms of quality criteria determined by the selected approaches; formalize the requirements of stakeholder requirements in accordance with the selected approaches; document the requirements of interested parties in accordance with the selected approaches; manage changes in stakeholder requirements in accordance with the selected approaches; manage changes in stakeholder requirements in accordance with the selected approaches; manage changes in stakeholder requirements in accordance with the selected approaches; manage changes in stakeholder requirements in accordance with the selected approaches; manage changes in stakeholder requirements in accordance with the selected approaches; manage changes in stakeholder requirements in accordance with the selected approache; manaye the subject are |

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

The discipline refers to the part formed by the participants in the educational relations of block B1 "Disciplines (modules)".

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

- Management in industries and fields of activity
- Corporate management
- Organizational development management
- Forward-looking management

## **3.** Structure and content of the discipline

The total labor intensity of the discipline is 5 credit units (180 hours).

## **3.1** Types of educational work and labor intensity

(according to forms of study)

#### 3.1.1. Part-time education

| No. | Type of educational work    | Quantity | Semesters |  |
|-----|-----------------------------|----------|-----------|--|
|     | Type of educational work    | hours    | 7         |  |
| 1   | Auditory lessons            | 54       | 54        |  |
|     | Including:                  |          |           |  |
| 1.1 | Lectures                    | 18       | 18        |  |
| 1.2 | Seminars/practical sessions | 36       | 36        |  |
| 2   | Independent work            | 126      | 126       |  |
| 3   | Interim certification       |          |           |  |
|     | Test/differential test/exam | Exam     | Exam      |  |
|     | Total                       | 180      | 180       |  |

## **3.2** Thematic plan for studying the discipline

(according to forms of study)

## 3.2.1. Part-time and part-time education

|            |  | Labor intensity, hour |          |                                 |                         |                    |                  |
|------------|--|-----------------------|----------|---------------------------------|-------------------------|--------------------|------------------|
|            |  |                       |          | Classroom work                  |                         |                    | ırk              |
| No.<br>p/p | Sections/topics<br>disciplines                                     | Total                 | Lectures | Seminars/practic<br>al sessions | Laboratory<br>exercises | Practical training | Independent work |
| 1.1        | Topic 1 Foresight as a method of analysis and design of the future |                       | 2        | 4                               |                         |                    | 14               |
| 1.2        | Topic 2 Difference between foresight<br>and forecasting            |                       | 2        | 4                               |                         |                    | 14               |
| 1.3        | Topic 3 Basic elements of foresight                                |                       | 2        | 4                               |                         |                    | 14               |
| 1.4        | Topic 4 Bridges between situations<br>and concepts                 |                       | 2        | 4                               |                         |                    | 14               |
| 1.5        | Topic 5 Technological foresight                                    |                       | 2        | 4                               |                         |                    | 14               |
| 1.6        | Topic 6 Technology classification<br>system                        |                       | 2        | 4                               |                         |                    | 14               |
| 1.7        | Topic 7 Foresight tools  |                       | 2        | 4                               |                         |                    | 14               |
| 1.8        | Topic 8 Foresight techniques                                       |                       | 2        | 4                               |                         |                    | 14               |
| 1.9        | Topic 9 Processing the results of the expert survey                |                       | 2        | 4                               |                         |                    | 14               |
|            | Total  |                       | 18       | 36                              |                         |                    | 126              |

## **3.3** Contents of the discipline

### Topic 1 Foresight as a method of analysis and design of the future

The concept of foresight. Object and subject of foresight. Features of foresight in relation to the plan.

### Topic 2 Difference between foresight and forecasting

The difference between foresight and forecasting. Key features of foresight and forecasting. Features of expert opinions in forecasting and foresight.

### **Topic 3 Basic elements of foresight**

Horizon and subjects of foresight. Scenarios and roadmaps. Situational and conceptual approaches.

### **Topic 4 Bridges between situations and concepts**

The first, second and third bridges between situations and concepts. Benchmarking as a way to integrate situational and conceptual approaches. Option roadmap and set of projects.

## **Topic 5 Technological foresight**

Features of technological foresight. New technologies used in foresight. Original technology classification system. National features of technological foresight.

### **Topic 6 Technology classification system**

Sequence of technological foresight. Economy as a set of industrial units. Main features and features of industrial units.

### **Topic 7 Foresight tools**

Selection of experts. Conditions for conducting expert surveys. Taking into account the diversity of expert opinions.

#### **Topic 8 Foresight techniques**

Delphi method. Semantic differential and the Wa-Westendorp technique. Saaty's hierarchy method and TURF analysis.

#### **Topic 9 Processing the results of the expert survey**

Methods for processing expert assessments and judgments. Principles and stages of content analysis. Formulation of conclusions and recommendations.

## **3.4** Topics of seminars/practical and laboratory classes

#### 3.4.1. Seminars/practical sessions

| Topic 1 Foresight as a method of analysis and design of the future | Seminar lesson 1  |
|--|-------------------|
| Topic 2 Difference between foresight and forecasting               | Seminar session 2 |
| Topic 3 Basic elements of foresight                                | Seminar session 3 |
| Topic 4 Bridges between situations and concepts                    | Seminar session 4 |
| Topic 5 Technological foresight                                    | Seminar session 5 |
| Topic 6 Technology classification system                           | Seminar session 6 |
| Topic 7 Foresight tools  | Seminar session 7 |
| Topic 8 Foresight techniques                                       | Seminar session 8 |
| Topic 9 Processing the results of the expert survey                | Seminar session 9 |

### 4. Educational, methodological and information support

#### 4.1 Main literature

1. Litvak, B. G. Strategic management: a textbook for bachelors / B. G. Litvak. - Moscow: Yurayt Publishing House, 2022. - 507 p. — (Bachelor. Academic course). — ISBN 978-5-9916-2929-4. — Text: electronic // Educational platform Urayt [website]. — URL:https://urait.ru/bcode/508941

2. Chernomorchenko, S.I. Planning and design of organizations: textbook for universities / S.I. Chernomorchenko. — 2nd ed. - Moscow: Yurayt Publishing House, 2022. - 221 p. - (Higher education). — ISBN 978-5-534-11222-1. — Text: electronic // Educational platform Urayt [website]. — URL:<u>https://urait.ru/bcode/495648</u>

#### 4.2 additional literature

1. Mashunin, Yu. K. Forecasting and planning of socio-economic systems: a textbook for universities / Yu. K. Mashunin. - Moscow: Yurayt Publishing House, 2022. - 330 p. - (Higher education). — ISBN 978-5-534-14698-1. — Text: electronic // Educational platform Urayt [website]. — URL:<u>https://urait.ru/bcode/496702</u>

#### 4.3 Electronic educational resources

An electronic educational resource on the discipline is under development.

#### 5. Logistics support

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

#### 6. Guidelines

#### 6.1 Methodological recommendations for teachers on organizing training

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).

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.

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.

### 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 subsequently recall the studied educational material, supplement the content when working independently 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 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.

Guidelines 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. 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.

## 7. Appraisal Fund

## 7.1 Methods for monitoring and assessing learning outcomes

Indicator of the level of competence development

FORESIGHT MANAGEMENT

Federal State Educational Standard of Higher Education 38.03.02 "MANAGEMENT"

| competencies: |                   |                             |              |          |                                      |  |  |
|---------------|-------------------|-----------------------------|--------------|----------|--------------------------------------|--|--|
|               |                   |                             | Technology   | Form of  | Degrees of levels of mastering       |  |  |
| INDEX         | FORMULATION       |                             | for          |          | competencies                         |  |  |
|               |                   |                             | 1 0          | tool**   |                                      |  |  |
|               |                   |                             | competencies |          |                                      |  |  |
| <b>PK-5</b>   | Able to collect   | IPK 5.1.modern              | lecture,     | DS, T, E | A basic level of                     |  |  |
|               | information about | domestic and foreign        | independent  |          | - knowledge of basic theoretical     |  |  |
|               | business problems | experience in the use       | work,        |          | data about foresight                 |  |  |
|               | and identify      | of foresight                | seminar      |          | methodology and methods of its       |  |  |
|               | business          | technologies.               | classes      |          | application.                         |  |  |
|               | opportunities for | <b>IPK 5.2.</b> formulate   |              |          |                                      |  |  |
|               | the organization  | goals, objectives and       |              |          | Increased level                      |  |  |
|               | -                 | a set of measures for       |              |          | - possession of methods and          |  |  |
|               |                   | the use of foresight        |              |          | skills of economic forecasting;      |  |  |
|               |                   | technology.                 |              |          | - ability to apply a set of foresigh |  |  |
|               |                   | <b>IPK 5.3.</b> methods and |              |          | techniques.                          |  |  |
|               |                   | approaches to               |              |          | •                                    |  |  |
|               |                   | identifying the             |              |          |                                      |  |  |
|               |                   | reasons for using           |              |          |                                      |  |  |
|               |                   | foresight                   |              |          |                                      |  |  |
|               |                   | technologies,               |              |          |                                      |  |  |
|               |                   | forecasting skills.         |              |          |                                      |  |  |

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

#### 7.2 Scale and criteria for assessing learning outcomes

Scales for assessing the results of intermediate certification and their description: *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. Assessment of the degree to which students have achieved the planned learning outcomes in the discipline (module) is carried out by the teacher leading classes in the discipline (module) using the method of expert assessment. Based on the results of the intermediate certification for the discipline (module), a grade of "excellent", "good", "satisfactory" or "unsatisfactory" is given.

Only students who have completed all types of academic work provided for in the work program for the discipline "Foresight Management" (passed the intermediate control) are allowed to take part in the intermediate certification.

| Grading scale | Description   |
|---------------|---|
| Great         | All types of educational work provided for by the curriculum have<br>been completed. The student demonstrates compliance of knowledge,<br>abilities, and skills with those given in the tables of indicators, operates<br>with acquired knowledge, abilities, skills, and applies them in<br>situations of increased complexity. In this case, minor errors,<br>inaccuracies, and difficulties during analytical operations and the<br>transfer of knowledge and skills to new, non-standard situations may<br>be made. |
| Fine          | All types of educational work provided for by the curriculum have<br>been completed. The student demonstrates incomplete, correct   |

|                | compliance of knowledge, skills and abilities with those given in the tables of indicators, or if 2-3 insignificant errors were made.  |
|----------------|--|
| Satisfactorily | All types of educational work provided for by the curriculum have<br>been completed. The student demonstrates the consistency of<br>knowledge, which covers the main, most important part of the material,<br>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<br>have not been completed. The student demonstrates incomplete<br>compliance of knowledge, abilities, skills with those given in the tables<br>of indicators, significant mistakes are made, a lack of knowledge,<br>abilities, skills is manifested in a number of indicators, the student<br>experiences significant difficulties in operating knowledge and skills<br>when transferring them to new situations. |

#### 7.3 Evaluation tools

#### List of assessment tools for the discipline "Foresight management"

| OS<br>No. | Name of the assessment tool | Brief description of the evaluation tool   | Submission of the<br>assessment tool to the<br>Federal Fund |
|-----------|-----------------------------|--|---|
| 1         | Report,<br>message (DS)     | A product of a student's independent work, which<br>is a public speech presenting the results obtained<br>in solving a specific educational, practical,<br>educational, research or scientific topic | Topics of reports,<br>messages                              |
| 2         | Test (T)                    | A system of standardized tasks that allows you to<br>automate the procedure for measuring the level of<br>knowledge and skills of a student.   | Test task fund  |
| 3         | 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

#### Topics of reports on the discipline "Foresight management"

#### (formation of competence PK-5)

- 1. Methodological basis for organizing and conducting Foresight research
- 2. Define the object for conducting Foresight research.
- 3. How are challenges and threats identified when preparing Foresight?
- 4. Scope of Foresight (SCOPE).
- 5. Development of proposals for Foresight research participants.
- 6. Information support for foresight research.
- 7. Organizational support for Foresight.
- 8. Possible roles in the Foresight organization.
- 9. Methodology for selecting and forming expert groups to conduct Foresight research.

10.Methodological approach and the process of expert assessment when conducting Foresight. 11.Using the Delphi method in Foresight programs

12. Mission of Delphi in the programs of technological Foresight of the knowledge economy

13.Purposes of application and tools of the Delphi survey in Foresight programs

14. The need to carry out research on cultural and social aspects using the Delphi method

15. Processing the survey results and conducting the first stage of technology prioritization

16. Scenario as a tool for organizing ideas about alternatives for the development of the external environment

17. Key requirements for scenarios. Multiple types and types of scenarios; quantitative and qualitative characteristics of trends and state of the system for the future

18. Scenarios as a mechanism for the formation of adaptive strategy and adaptive policy

19. Difference between the scenario approach and other Foresight methods

20. Stages of evolution of the scenario approach

21. Approaches to constructing alternative scenarios. Advantages and Disadvantages of Developing and Using Scenarios

22. Scenarios in technological foresight programs

23. Formation of a scenario group. Methodology for writing and discussing scripts

24. Initial information for constructing scenarios. Stages of scenario development. Formation of scenario alternatives. Technology for constructing high-quality research scenarios

25. Development of script skeletons. Sequence of steps in constructing the skeleton of research scenarios

26. Development of technology roadmaps and method for analyzing the sequence of technology development

27. Expert panels and expert groups in Foresight programs

28. Scanning and monitoring - a stage in the research that precedes other Foresight methods

29. Tree of goals and morphological analysis - as methods of normative forecasting

30. SWOT analysis as a technique for the analytical stage of developing Foresight programs

- 31. Benchmarking is a tool for identifying weaknesses in one's own activities
- 32. Benchmarking process and benchmarking of results common features and differences
- 33. Using the brainstorming method in various Foresight methods

34. Analysis of the impact on trends - a methodology for overcoming other forecasting methods

35. Construction of a matrix of mutual influence of events

36. Monte Carlo method. Its content and significance in Foresight research

37. Simulation dynamic model of mutual influences

38. The method of critical technologies and its application in foresight

#### **Report evaluation criteria**

| Ν | Criterion                  | iterion Grade  |  |   |  |  |  |
|---|----------------------------|--|--|---|--|--|--|
| 0 |                            | ex.  | chorus   | satisfaction  | unsatisfactory   |  |  |
| • |                            |  |  |   |  |  |  |
| 1 | Structure of<br>the report | The report<br>contains semantic<br>parts balanced in<br>volume | The report<br>contains three<br>semantic parts,<br>unbalanced in<br>volume | One of the<br>semantic parts is<br>missing from the<br>report | The report does<br>not show the<br>presence of<br>semantic parts |  |  |
| 2 | Contents of                | The content  | The content does   | The content does  | The content  |  |  |
|   | the report                 | reflects the   | not fully reflect  | not fully reflect   | does not reflect   |  |  |
|   |                            | essence of the   | the essence of the   | the essence of the  | the essence of   |  |  |

|   |                            | problem under<br>consideration and<br>the main results<br>obtained   | problem under<br>consideration or<br>the main results<br>obtained  | problem under<br>consideration and<br>the main results<br>obtained  | the problem<br>under<br>consideration or<br>the main results<br>obtained   |
|---|----------------------------|--|--|---|--|
| 3 | Mastery of<br>the material | The student has<br>complete<br>command of the<br>material<br>presented, is<br>problem oriented,<br>and answers<br>questions freely | The student<br>knows the<br>material<br>presented, is<br>oriented in the<br>problem, finds it<br>difficult to answer<br>some questions | The student is not<br>fluent enough in<br>the material being<br>presented and is<br>poorly oriented in<br>the problem | The student<br>does not know<br>the material<br>being presented<br>and has poor<br>understanding<br>of the problem |
| 4 | Matching<br>theme          | The presented<br>material fully<br>corresponds to<br>the stated topic  | The presented<br>material contains<br>elements that are<br>not relevant to the<br>topic  | The material<br>presented<br>contains a large<br>number of<br>elements that are<br>not related to the<br>topic.       | The material<br>presented is<br>slightly relevant<br>to the topic  |

#### Tests by discipline "Foresight management" (formation of competence PK-5)

Foresight is based on:

A) forecasting

B) problems of industrial development

C) numerous expert assessments

D) risk management

ANSWER: C

Unlike what type of forecasts in foresight is multivariance minimized due to consensus in expert opinions?

A) research (search) forecast

B) normative forecast

C) expert forecast

D) outdated forecast

ANSWER: A

Sampling, in which experts are selected based on the opinions of the organizers themselves or people whose opinions they trust, is called:

A) random or superficial sampling

B) snowball sampling

C) cross-expert assessment

D) quota sampling

ANSWER: A

Why are "bridges" used in foresight?

A) to integrate conceptual and situational approaches

B) to separate conceptual and situational approaches

C) to improve foresight performance

D) to reduce the cost of foresight

ANSWER: A

Are there any restrictions on the number of experts in foresight?

A) there are no restrictions

B) there are restrictions of the form "not less than"

C) there are restrictions of the form "no more than"

D) depends on the type of foresight

ANSWER: A

What type of scales that influence the level of agreement between expert opinions include binary, nominal, ordinal, point, and quantitative scales?

A) one-dimensional scales

B) multidimensional scales

C) two-dimensional scales

D) rank ordinal scales

ANSWER: A

Which of the "bridges" in foresight refers to an analysis like "why not..."?

A) elements of social analysis and future forecasting

B) integration into the international division of labor

C) diversification of territory development

D) benchmarking

ANSWER: A

The disadvantages of which method of expert assessment include the increased degree of conformity of experts, as well as the fact that the conclusions of the minority, which are important for the problems under study, are often rejected?

A) Delphi method

B) semantic differential

C) TURF analysis

D) Saaty's hierarchy method

ANSWER: A

What foresights are aimed at developing both the economies of individual states and the economies of several states, the economies of several regions or the economies of individual regions?

A) corporate foresights

B) social foresight

C) technological foresights

D) territorial foresights

ANSWER: D

What parameters measure the "meeting point" indicator in the levels of research of the innovation process?

A) time and cost

B) time and income

C) inputs and outputs

D) the number of defects and technological losses

ANSWER: A

What type of foresight is considered the most popular in modern times?

A) social foresight

B) technological foresight

C) cultural foresight

D) economic foresight

ANSWER: B

Which type of economic effect is characterized by the fact that the results of one applied research can be used in the operation of different technological units?

A) distributive

B) fan

C) multiplicative

D) modernization

ANSWER: B

Which of the foresight research methods is considered the most promising, but also the most expensive?

A) virtual characters of the future

B) road map

C) scripts

D) real characters of the future

ANSWER: C

Which method of expert assessments is necessary to form a hierarchy of goals and criteria, for which purpose several matrices of paired comparisons are constructed and an index of agreement of opinions is calculated for each of them?

A) Delphi method

B) semantic differential

C) TURF analysis

D) Saaty's hierarchy method

ANSWER: D

Which peer review method is a method of obtaining the general opinion of experts through a set of questionnaires followed by controlled feedback?

A) Delphi method

B) Semantic differential

C) Wa-Westendorp technique

D) Saaty's Hierarchy Method

ANSWER: A

Which method of expert assessment was developed by the American psychologist J. Osgood and is a method in which pairs of adjectives and antonyms are used for assessment?

A) Delphi method

B) semantic differential

C) Wa-Westendorp technique

D) Saaty's hierarchy method

ANSWER: B

Which level of research into the innovation process represents the level of an individual economic entity?

A) micro level

B) macro level

C) media level

D) max level

ANSWER: A

Which level of research into the innovation process represents the level between the level of an individual economic entity and the regional level?

A) micro level

B) macro level

C) media level

D) max level

ANSWER: C

Which stage of technological foresight is based on the selection of specific experts and consulting companies, including the selection of methods and methods for organizing and conducting research? A) planning and execution

B) determination of essential terms

C) scanning

D) identification of future alternatives

ANSWER: C

A specific area of practical activity, which represents a very specific result of a foresight project, is:

A) foresight object

B) subject of foresight

C) foresight subject

D) the idea of foresight

ANSWER: B

The name of which expert assessment method is often translated as disjoint coverage analysis (NCA)?

A) Delphi method

B) semantic differential

C) TURF analysis

D) Saaty's hierarchy method

ANSWER: C

The subject of technological foresight is:

A) technologies that are already in use or will be used

B) outdated technologies that need to be modernized

C) areas of activity in which technology is used

D) event horizon

ANSWER: A

The combination of an object and a subject in foresight leads to the transformation of foresight into a set of projects, which makes this approach one of the most common trends in foresight:

A) contextual approach

B) project approach

C) process approach

D) systems approach

ANSWER: B

According to the key problem of foresight:

A) the future is not only impossible to design, but also impossible to predict even without design claims

B) neither the social, nor the economic, nor the political system develops linearly

C) the key goal of foresight is to focus on industrial development problems

D) foresight can be considered as a certain replacement for a plan in the context of planning at the national level

ANSWER: A

The period covered by the foresight is:

A) subject of foresight

B) foresight object

C) foresight horizon

D) foresight subject

ANSWER: C

It is believed that Russian foresight is aimed at:

A) business interests

B) the needs of the population

C) innovative development

D) preservation of outdated technologies

ANSWER: D

It is believed that foresights refer to:

A) controlled processes

B) unpredictable events

C) uncontrollable events

D) risk events

ANSWER: A

The term "foresight" was coined:

A) CIA consultant Bruce de Mesquita in 1930.

B) writer H.G. Wells in 1970

C) writer H.G. Wells in 1930

D) economist Adam Smith in 1970

ANSWER: C

The statement that in foresight one of the key goals is the interaction of participants, and in forecasting options for predicting the future are considered as the main goal, refers to the difference between foresight and forecasting in this category of parameters:

A) by purpose

B) by components

C) according to initial data

D) according to criteria

ANSWER: A

Foresight is considered:

A) a follower of traditional forecasting

B) a predecessor to traditional forecasting

C) a rival to traditional forecasting

D) killer of traditional forecasting

ANSWER: A

Foresight projects are focused on:

A) development of socio-economic development directions

B) formation of long-term prospects for the development of certain territories

C) creating informal connections between their participants, as well as creating a common understanding of future development processes

D) forecast of long-term development prospects of the company

ANSWER: C

Foresight, which is focused on the formation of socio-economic development directions, is:

A) social foresight

B) technological foresight

C) cultural foresight

D) economic foresight

ANSWER: A

The phenomenon when some experts can recommend other experts who, from their point of view, are suitable for a given foresight, is called:

A) conmination

B) nomination

C) sampling

D) selection

ANSWER: A

7.3.2. Interim certification

Questions for the discipline exam "Foresight management" (formation of competence PK-5)

- 1. The essence and ideology of Foresight.
- 2. Historical, political and economic prerequisites for the formation of technological forecasting
- 3. Historical, political and economic conditions for the formation of technological forecasting concepts
- 4. The current stage of development of future research.
- 5. What is Foresight?
- 6. Historical, cultural and social roots of Foresight
- 7. The origins of the emergence and development of Foresight
- 8. Three generations of Forsyte
- 9. Modern foreign experience in using Foresight research
- 10. The Club of Rome and its role in the study of future issues
- 11. History of the emergence and development of the concept of "technological forecasting" in Russia
- 12. What is meant by Forsyth horizon?
- 13. What is meant by Foresight focus?
- 14. Varieties of Foresight. Brief characteristics.
- 15. Foresight as a basis for studying development prospects
- 16. Foresight as a basis for making strategic decisions
- 17. The role, functions and forms of Foresight.
- 18. Foresight research as a way to combine the intellectual potential of government, business, civil society and science.
- 19. Main characteristics of the most used Foresight technologies.
- 20. Conceptual apparatus and methodological basis for forecasting.
- 21. The relationship between social, economic, political, demographic, technological and environmental forecasting.
- 22. Forecasting and foresight common features and differences.
- 23. Means and forms of design tools.
- 24. Structure of the design process. Design stages.
- 25. Technology of conducting Foresight research
- 26. Triangle of Foresight methods. Diamond of Foresight methods.
- 27. Stages of foresight research. Rules for forming foresight.
- 28. The practice of using Foresight to develop national development strategies.
- 29. The practice of using Foresight to develop regional development strategies
- 30. Principles and tools of qualitative forecasting.
- 31. Statistical methods for collecting information and processing it.
- 32. Expert methods of collecting information (interviews, questionnaires, group analysis methods).
- 33. Normative and search forecasting.
- 34. Foresight methods Delphi.
- 35. Foresight methods Critical technologies.
- 36. Foresight method Expert assessments.
- 37. Foresight methods Road mapping
- 38. Scenario approach to forecasting.
- 39. Factor models.
- 40. Regression models in forecasting.
- 41. Design methodology. Types of design.

#### Ticket form

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

Faculty of Economics and Management, Department of Management Discipline: Foresight management Direction of training: 38.03.02 "Management" Course: \_\_, group \_\_\_\_\_, form of study: full-time, part-time and part-time

#### TICKET No. 1.

1. Question assessing competence PK-5 2.Question assessing competence PK-5

Approved at the department meeting "\_\_\_" August 202\_, protocol No. 1.

Head Department of Management \_\_\_\_\_/Alenina E.E./