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Информация о владельце:

ФИО: МАКСИМОВ МАКСИМОВ МЕТЕТ OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN

Должность: директор департамента по образовательной политике Дата подписания: 31.05.2024 14:51:41

FEDERATION

Уникальный программный Fedderal State Autonomous Educational Institution of Higher Education 8db180d1a3f02ac9e60521a5672742735c18b1d6

"Moscow Polytechnic University"

APPROVE Vice-President for International Affairs Yu.D. Davydova/ 2024

Dean of the Faculty of Economics and Management /A.V. Nazarenko/

2024

## WORKING PROGRAM OF THE DISCIPLINE

"Quality Management"

Field of study 38.03.02 Management

Educational program (profile) "Business Process Management"

> Qualification (degree) Bachelor

> > Form of study Part-time

## **Developer(s):**

Art. Lecturer at the Department of Management

Kow

/I.S. Koshel/

## 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 discipline "Quality Management" include: developing in students a holistic systemic understanding of the theory and practice of quality management, the need to use these achievements in all areas of activity of organizations, regardless of their industry affiliation, as well as skills and abilities in the field of quality management products, services, works, activities of domestic enterprises and organizations.

The main objectives of mastering the discipline "Quality Management" include:

- master the basic categorical apparatus of social security law;
- study the current legislation on pensions and benefits;
- to develop in students special knowledge on issues of types of pensions and benefits in the Russian Federation, principles of establishment;
  - to develop in students the ability and skills to apply in practical activities
  - acquired knowledge and norms of social security law to solve specific problems;
  - reveal the general provisions of social security in the Russian Federation.

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

#### Code and name of **Indicators of Competency Achievement** competencies IPK-4.1.Knows visual modeling languages; collection, analysis, systematization, PK-4. Able to prepare storage and maintenance of business analysis information; information technologies implementation, (software) used in the organization, to the extent necessary for business analysis monitor parameters and purposes; systems theory; subject area and specifics of the organization's activities to assess the success of the extent sufficient to solve business analysis problems; theory of interpersonal and changes carried out in group communication in business interaction; conflict theory; requirements the organization management methods, techniques, processes and tools; risk management theory; methods of planning the organization's activities; methods and techniques for determining indicators for assessing the current or desired state of the organization; methods for assessing the effectiveness of decisions. IPK-4.2. Able to plan, organize and conduct meetings and discussions with stakeholders; identify, register, analyze and classify risks and develop a set of measures to minimize them; 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 degree of stakeholder participation; explain the need for business analysis work; make changes in accordance with the chosen solution; assess the organization's readiness to change in accordance with the chosen solution; develop indicators and assess the state of the organization; evaluate the business opportunity to implement the solution in terms of selected target indicators; analyze the organization's activities; model the scope and boundaries of work; collect, classify, systematize and ensure storage and updating of business analysis information; formalize the results of business analysis in accordance with the selected approaches; analyze the requirements of stakeholders in terms of quality criteria determined by the selected approaches; analyze the subject area; analyze the requirements for the solution in terms of quality criteria determined by the selected approaches; evaluate the effectiveness of the solution in terms of selected criteria. **IPK-4.3.** Have the skills to analyze the organization's readiness to implement changes; development and implementation of measures to prepare the organization for changes; monitoring ongoing changes in terms of achieving the developed solution targets; management of interaction with stakeholders (satisfaction, degree of involvement); managing risks caused by changes carried out in the organization; analysis and evaluation of the effectiveness of the implemented solution; analyzing the reasons and developing ways to refine the solution if the solution fails to achieve the set business

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

goals; analysis and development of ways to adapt the organization to the use of a new

The discipline belongs to the mandatory part of block B1 "Disciplines (modules)".

solution.

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

- Project activities
- Process management
- Consulting management

## 3. Structure and content of the discipline

The total labor intensity of the discipline is 3 credit units (108 hours).

## **3.1** Types of educational work and labor intensity (according to forms of study)

#### 3.1.1. Part-time education

No.	Type of advectional work	Quantity	Semesters	
	Type of educational work	hours	5	
1	Auditory lessons	18	18	
	Including:			
1.1	Lectures	8	8	
1.2	Seminars/practical sessions	10	10	
2	Independent work	90	90	
3	Interim certification			
	Test/differential test/exam	Test	Test	
	Total	108	108	

## 3.2 Thematic plan for studying the discipline

(according to forms of study)

#### 3.2.1. Part-time education

		Labor intensity			sity, hour		
			Classroom work				ork
No. p/p	Sections/topics disciplines	Total	Lectures	Seminars/practic al sessions	Laboratory exercises	Practical training	Independent work
1.1	Topic 1. Management and leadership		1	1			10
	in quality management						
1.2	Topic 2. Philosophy and fundamentals		1	1			10
	of quality						
1.3	Topic 3. Elements of a quality		1	1			10
	management system						
1.4	Topic 4. Design of products,		1	1			10
	processes and services in quality						
	management						
1.5	Topic 5. Control of products and		1	1			10
	business processes in quality						
	management						

1.6	Topic 6. Continuous improvement in	1	1		10
	quality management				
1.7	Topic 7. Waste reduction	1	1		10
1.8	Topic 8. Waste reduction	1	1		10
1.9	Topic 9. Risks of quality management		2		10
	Total	8	10		90

## 3.3 Contents of the discipline

#### Topic 1. Management and leadership in quality management

The main historical milestones of management and leadership in quality management are considered. The experience of E. Deming in the field of quality management has been studied.

## Topic 2. Philosophy and fundamentals of quality

Approaches to the concept of quality are considered, key figures - theorists and practitioners of quality are presented, the philosophy of quality is characterized

#### Topic 3. Elements of a quality management system

The key elements of the quality system used at different stages of the life cycle are considered. HOLM - "house of quality" - and its elements are characterized.

## Topic 4. Design of products, processes and services in quality management

An approach to the design of products and processes according to the Toyota production system is considered

## Topic 5. Control of products and business processes in quality management

Methods for monitoring products and business processes are considered. A general view of FMEA analysis is presented. The response plan is described as an independent document for workers and quality engineers. The stages of carrying out HACCP analysis are highlighted.

### **Topic 6. Continuous improvement in quality management**

The key tools for continuous improvement in quality management are considered: flowcharts, Ishikawa diagrams, control charts and histograms.

## **Topic 7. Waste reduction (part 1)**

The causes of losses as a result of overproduction of finished products, production of defective products and processing waste are considered.

#### **Topic 8. Waste reduction (part 2)**

The causes and consequences of losses caused by excess inventories, excessive waiting, unnecessary movements,

#### **Topic 9. Risks of quality management**

The definition of risk according to ISO is given. The risk management process and its main stages are characterized. Approaches to risk are considered: proactive and reactive, decentralized and centralized.

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

## 3.4.1. Seminars/practical sessions

Topic 1 Formation of the foundations of social policy	Seminar session 1
Topic 2 Goals and objects of state social policy	Seminar session 2
Topic 3 Social structure of modern society	Seminar session 3
Topic 4 National models of state social policy	Seminar session 4
Topic 5 Social policy as the basis for state development	Seminar session 5
Topic 6 Social transformation: trends and features	Seminar session 6
Topic 7 Social problems and social risks	Seminar session 7

Topic 8 Main directions of state social policy in the Russian Federation	Seminar session 8
Topic 9 Ways to analyze the results of state social policy	Seminar session 9

## 4. Educational, methodological and information support

#### 4.1 Main literature

1. Vasin, S. G. Quality management. Universal approach: textbook for bachelor's and master's degrees / S. G. Vasin. - Moscow: Yurayt Publishing House, 2019. - 404 p. — (Bachelor and Master. Academic course). — ISBN 978-5-9916-3739-8. — Text: electronic // Educational platform Urayt [website]. — URL: <a href="https://urait.ru/bcode/425062">https://urait.ru/bcode/425062</a>

#### 4.2 Additional literature

- 1. Staroverova, K. O. Management. Management efficiency: textbook for universities / K. O. Staroverova. 2nd ed., rev. and additional Moscow: Yurayt Publishing House, 2021. 269 p. (Higher education). ISBN 978-5-534-09017-8. Text: electronic // Educational platform Urayt [website]. URL:https://urait.ru/bcode/471203
- 2. Rozhkov, N. N. Statistical methods of monitoring and managing product quality: textbook for universities / N. N. Rozhkov. 2nd ed., revised. and additional Moscow: Yurayt Publishing House, 2022. 154 p. (Higher education). ISBN 978-5-534-06591-6. Text: electronic //Educational platform Urayt [website]. URL: <a href="https://urait.ru/bcode/493357">https://urait.ru/bcode/493357</a>

#### 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 test.

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

#### **Quality management**

Federal State Educational Standard of Higher Education 38.03.02 "MANAGEMENT"

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

competencies:

COMPETENCIES	List of	Technology for	Form of	Degrees of levels of
INDEXFORMULATION	components	developing	assessment	mastering competencies
		competencies	tool**	
Able to prepare for	IPK-4.1.Knows visual modeling languages; collection, analysis, systematization, storage and maintenance of business analysis information IPK-4.2.Able to plan, organize and conduct meetings	competencies lecture, independent work, seminar classes	tool** DS, T, Z	A basic level of - has the skills to work with regulatory documentation and methods for assessing the financial position of an enterprise, the profitability of projects, and the degree of risk; - has the skills to work with models for predicting the likelihood of bankruptcy at an enterprise.
PK-4 implementation, monitor parameters and assess the success of changes carried out in the organization	and discussions with stakeholders; identify, register, analyze and classify risks and develop a set of measures to minimize them; IPK-4.3. Have the skills to analyze the organization's readiness to implement changes; development and implementation of measures to prepare the organization for			Increased level - has the skills to work with regulatory documentation and methods for assessing the financial position of an enterprise, the profitability of projects, and the degree of risk; - has the skills to work with models for predicting the likelihood of bankruptcy at an enterprise.  The student is able to apply these skills in new non-standard situations (when analyzing emerging risks).

## 7.2 Scale and criteria for assessing learning outcomes

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

#### Interim certification form: test.

Interim certification of students in the form of a test 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 interim assessment, the student is given a "pass" or "fail" rating.

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

Grading scale	Description
Passed	All types of educational work provided for by the curriculum have been completed. The student demonstrates compliance with the knowledge, skills and abilities given in the tables of indicators, operates with acquired knowledge, skills

	and abilities, and applies them in situations of increased complexity. In this case, minor errors, inaccuracies, and difficulties during analytical operations and the transfer of knowledge and skills to new, non-standard situations may be made.
Not accepted	One or more types of educational work provided for by the curriculum have not been completed. The student demonstrates incomplete compliance of knowledge, abilities, and skills with those given in the tables of indicators; significant mistakes are made; a lack of knowledge, abilities, and skills is evident in a number of indicators; the student experiences significant difficulties in operating knowledge and skills when transferring them to new situations.

#### 7.3 Evaluation tools

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

OS No.	Name of the assessment tool	Brief description of the evaluation tool	Submission of the assessment tool to the Federal Fund
1	Report, message (DS)	A product of a student's independent work, which is a public speech presenting the results obtained in 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.	Test task fund
3	Test (G)	Final form of knowledge assessment. In higher education institutions they are held during examination sessions.	Questions for testing

#### 7.3.1. Current control

Topics of reports on the discipline "Quality management" (formation of competence PK-4)

- 1. Positions of the quality management system based on combining data from global experience.
- 2. Representation of quality, its relationship with other economic categories (efficiency, profitability, labor intensity, price and costs), its varieties.
  - 3. "Stars" of quality, their right to exist, place and significance in management.
  - 4. Organizational structures and models for quality management.
  - 5. Quality is a worldwide field of competition.
  - 6. Japanese quality management method.
  - 7. Russian and international approach to quality management
  - 8. Development of technology and the concept of quality.
  - 9. Quality as an economic category.
  - 10. Basic approaches to quality management.
  - 11. Quality management using the basics of ISO standards.
  - 12. Systematic approach to quality management.
  - 13. Customer focus in the quality management system.

- 14. The importance of personnel training in the quality system.
- 15. The place of metrology in the quality management system.
- 16. Methods and techniques for working in continuous quality improvement
- 17. The place of organization and remuneration in the process of quality improvement.
- 18. Organization of the certification system in the Russian Federation and its role in the international system of organization
  - 19. Making decisions in the quality management system based on facts.
  - 20. Involving subcontractors in the quality improvement process.
  - 21. Legal basis for certification of products and services.
  - 22. The role of documentation in the quality management system.
  - 23. Legal basis for certification of products and services.
  - 24.Legal basis and periods for certification of quality systems.

### **Report evaluation criteria**

N	Criterion	Grade			
0.		ex.	chorus	satisfaction	unsatisfactory
1	Structure of the report	The report contains semantic parts balanced in volume	The report contains three semantic parts, unbalanced in volume	One of the semantic parts is missing from the report	The report does not show the presence of semantic parts
2	Contents of the report	The content reflects the essence of the problem under consideration and the main results obtained	The content does not fully reflect the essence of the problem under consideration or the main results obtained	The content does not fully reflect the essence of the problem under consideration and the main results obtained	The content does not reflect the essence of the problem under consideration or the main results obtained
3	Mastery of the material	The student has complete command of the material presented, is problem oriented, and answers questions freely	The student knows the material presented, is oriented in the problem, finds it difficult to answer some questions	The student is not fluent enough in the material being presented and is poorly oriented in the problem	The student does not know the material being presented and has poor understanding of the problem
4	Matching theme	The presented material fully corresponds to the stated topic	The presented material contains elements that are not relevant to the topic	The material presented contains a large number of elements that are not related to the topic.	The material presented is slightly relevant to the topic

Tests by discipline
"Quality management"
(formation of competence PK-4)

A graphical representation of data that is used to make objective conclusions about the frequency of events and their number is:

- A) block diagrams
- B) control charts

- C) control cards
- D) histograms

ANSWER: D

What level of company management in the field of quality management is assigned the roles of asset management, resource management, risk management, performance management?

- A) senior management
- B) middle management
- C) line managers

ANSWER: A

ISO 31000:2009 defines this concept as "the extent to which a set of characteristics satisfies necessary requirements":

- A) risk
- B) quality
- C) risk management

ANSWER: B

ISO 31000:2009 defines this concept as "the level of coordinated activity to direct and control an organization taking into account risk":

- A) risk
- B) quality
- C) risk management

ANSWER: C

This type of waste can be caused by delays in transporting materials, breakdowns of machinery or equipment, operators working too quickly or too slowly, or not enough employees:

- A) waste caused by excess inventory
- B) waste caused by excessive waiting
- C) traffic waste ANSWER: B

This type of waste occurs when there is a movement of people or information that does not add value to the product or service:

- A) waste caused by excess inventory
- B) waste caused by excessive waiting
- C) traffic waste ANSWER: C

What type of waste is considered the most destructive of all wastes today?

- A) behavioral waste
- B) recycling waste
- C) waiting waste

ANSWER: A

How many types of waste are meant by the term muda?

- A) 7
- B) 9
- C) 5

ANSWER: A

This type of waste can relate to any inventory, both finished product inventory and inventory of raw materials, equipment, etc.:

- A) waste caused by excess inventory
- B) waste caused by excessive waiting
- C) traffic waste

ANSWER: A

An action that does not add value to a product or service from a customer's perspective is:

- A) recycling waste
- B) product change without process change

C) additional copies/redundant information

ANSWER: A

The critical muda (waste), which generates all other waste and increases the amount of space required for storing both raw materials and finished products, is:

- A) overproduction
- B) underproduction
- C) poor quality production

ANSWER: A

Creating more product than is required by the next process or end user is:

- A) overproduction
- B) underproduction
- C) poor quality production

ANSWER: A

What control charts are used for discrete data types?

- A) I-MR charts
- B) P and Np diagrams
- C) X-Bar and R-charts
- D) X-Bar and S-charts
- E) Diagrams C and U

ANSWER: E

Which control charts are used for continuous data type?

- A) I-MR charts
- B) P and Np diagrams
- C) X-Bar and R-charts
- D) X-Bar and S-charts
- E) Diagrams C and U

ANSWER: D

This quality control tool can be used to summarize data from a process and plot a frequency distribution, present and interpret large volumes of data, showing the relative frequency of different data values:

- A) block diagrams
- B) control charts
- C) control cards
- D) histograms

ANSWER: D

Which Japanese company actually started modern quality management?

- A) Toyota
- B) Sony
- C) Motorola

ANSWER: A

The purpose of this quality control tool is to graphically present an analysis of factors (causes) that relate to a specific problem or effect:

- A) block diagrams
- B) cause and effect diagrams
- C) control cards
- D) histograms

ANSWER: B

In this quality control tool, the structure and flows within blocks are described using the OMG Systems Modeling Language (SysML):

- A) block diagrams
- B) diagrams
- C) control cards

D) histograms

ANSWER: A

A drawing illustration of a system whose main parts or components are represented by blocks, is it?

- A) block diagrams
- B) diagrams
- C) control cards
- D) histograms

ANSWER: A

Which of the 7 principles of the HACCP plan is characterized by the fact that, using a systematic approach, all possible risks to food safety should be identified?

- A) hazard analysis
- B) taking corrective actions
- C) monitoring ANSWER: A

Which of the 6 steps of FMEA involves forming a team that is familiar with the FMEA method and execution, preparing all the necessary documents and FMEA form sheets, and setting objectives and goals?

- A) Step 1 Preparation
- B) step 2 Structural analysis
- C) step 3 Functional analysis

ANSWER: A

Are product oriented and identify potential errors and failures that occur on parts or during system assembly:

- A) system FMEA
- B) structural FMEA
- C) economic FMEA

ANSWER: B

The main attention is paid to the functional interaction of individual components of a complex system in order to avoid errors already during the design of the system and check its performance and safety:

- A) system FMEA
- B) structural FMEA
- C) economic FMEA

ANSWER: A

The risk priority indicator or potential error assessment indicator is:

- A) FMEA
- B) NASA
- C) R.P.Z.

ANSWER: C

The method of quality management using the analysis of risks arising in the process of the organization's activities is:

- A) FMEA
- B) NASA
- C) R.P.Z.

ANSWER: A

What type of problems (waste) that reduce the effectiveness of a lean production system are characterized as "variability"?

- A) muda
- B) muri
- C) mura

ANSWER: C

What type of problems (waste) that reduce the effectiveness of a lean production system is characterized as "instability"?

- A) muda
- B) muri
- C) mura

ANSWER: B

What type of problems (waste) that reduce the effectiveness of a lean production system are characterized as "waste"?

- A) muda
- B) muri
- C) mura

ANSWER: A

Who identified the seven basic wastes (7Ws): defects, overproduction, waiting, transportation, moving, improper handling and inventory?

- A) Dennis Cuneo
- B) Taichi Oono
- C) Philip Crosby

ANSWER: B

Which company developed the production management concept called "lean Six Sigma" (or "6 Sigma")?

- A) Toyota
- B) Sony
- C) Motorola ANSWER: C

#### 7.3.2. Interim certification

## Questions for testing in the discipline

"Quality management"

(formation of competence PK-4)

- 1. Quality Policy
- 2. Types of quality indicators
- 3. Measuring and assessing quality indicators
- 4. Documentation of quality requirements
- 5. Statistical series and its characteristics
- 6. Checklist
- 7. Control cards
- 8. Stages of formation and types of costs for product quality
- 9. Information base for cost analysis of product quality
- 10. Principles and methods of standardization
- 11. Organizational and legal basis for standardization in the Russian Federation
- 12. International standardization
- 13. International Organizations for Standardization (ISO)
- 14. Essence and types of certification
- 15. Certification procedure in Russia
- 16. Law on Consumer Protection". Basic provisions.
- 17. Law "On Certification of Products and Services": main provisions.
- 18. The impact of quality on profit.
- 19. Definition of the term "certification"
- 20. Types of certification established in the Law of the Russian Federation "On Certification of Products and Services".

- 21. Prerequisites for introducing certification of products and services in the Russian Federation.
  - 22. Purposes of certification of products and services.
- 23. Concepts of competitiveness of products and services. Domestic quality management systems, what are their commonalities and differences from quality systems developed according to ISO 9000 series.
- 24. Standardization activities in accordance with the Law of the Russian Federation "On Standardization".
- 25. Basic features, concepts of "measurement". The role of metrology in quality management.
  - 26. Documents regulating relations in the field of consumer rights protection.
- 27. Documents regulating human rights in the world and in Russia in relation to products and their quality.
  - 28. Rights and functions of the State Standard of Russia.
  - 29. The main stages of development of quality management activities.
  - 30. Single European market and standardization of quality management.
  - 31. Goals of developing standards for parametric series products.
- 32. Methods for calculating (classifying) financial costs for quality recommended in MS quality systems.
  - 33. Organization of quality work
  - 34. Staff training and motivation
  - 35. Quality control
  - 36. Calculation of quality costs using the AML method.
  - 37. Areas of application of statistical methods in product quality management.
  - 38. Classification of the main factors influencing product quality.
- 39. The procedure for implementing state metrological supervision over the release and use of measuring instruments and compliance with metrological rules and regulations.
  - 40. The concept of measurement quality.
  - 41. Sources of economic losses from measurement errors.
  - 42. Procedure for certification and services.
- 43. Product certification schemes adopted in the Russian Federation and in what cases they are applied,
- 44. The main reasons prompting enterprises to implement quality systems in accordance with ISO 9000. How are international standardization activities differentiated between ISO and IEC? Russian Government Award for Ouality
  - 45. Law of the Russian Federation on the protection of consumer rights
  - 46. Law of the Russian Federation on certification of products and services
  - 47. Diagram of the relationship between Russian laws that determine quality
  - 48. Mandatory requirements of state standards.
- 49. What caused the need to develop international standards ISO 9000 series for quality systems?
  - 50. The mechanism of influence of quality improvement on efficiency improvement.
  - 51. Quality as a factor of enterprise success in a market economy.
  - 52. The problem of trust in product quality.
  - 53. Principles of quality assurance. Particular and general quality factors.
  - 54. Subject, object and functions of quality management.
  - 55. Statistical methods of quality control.
  - 56. Brief description of recommended elements and quality systems.
  - 57. Methodology for the development and implementation of quality systems.
  - 58. Functional and structural diagram of quality management
  - 59. The role and tasks of the quality management service.
  - 60. Improving quality systems.

- 61. Definition, purpose and purposes of certification
- 62. The evolution of relationships between suppliers and customers in the field of quality.
- 63. Certification of international practice.
- 64. Product certification. Certification schemes.
- 65. Responsibility of manufacturers and sellers for product quality.
- 66. Comprehensive quality indicators
- 67. Matrix analysis of the functioning of production systems
- 68. End-to-end quality management mechanism in Russia.
- 69. Main stages of development of quality systems
- 70. Principles of product quality assurance
- 71. Principles of product quality management
- 72. Quality management experience gained in the USA and Japan.
- 73. The concept of total quality management.
- 74. Japanese concept of four quality conditions