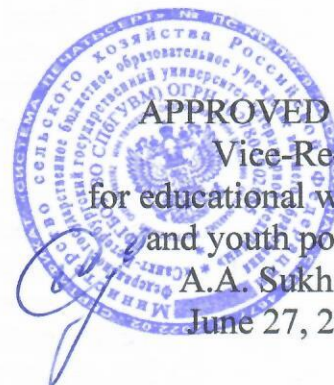


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Информация о владельце:  
ФИО: Сухинин Александр Александрович  
Должность: Проректор по учебно-воспитательной работе  
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**Ministry of Agriculture of the Russian Federation**  
**Federal State Budgetary Educational Institution of higher education**  
**«Saint Petersburg State University of**  
**Veterinary Medicine»**



**APPROVED BY**  
**Vice-Rector**  
**for educational work**  
**and youth policy**  
**A.A. Sukhinin**  
**June 27, 2025**

**Department of Epizootiology named after V. P. Urban**

**WORKING PROGRAM**  
for the discipline  
**«EPIZOOTIOLOGY AND INFECTIOUS DISEASES OF ANIMALS»**  
Level of higher education  
**SPECIALITY**  
**Specialty 36.05.01 Veterinary Medicine**  
**Profile: «General clinical veterinary medicine»**  
Full-time education  
Education starts in 2025

Considered and accepted  
at the meeting of the department  
June 26, 2025.

Protocol № 12

Head of the Department of Epizootiology  
Candidate of veterinary science, docent  
L.S. Fogel

Saint Petersburg  
2025

## 1. AIMS AND OBJECTIVES OF THE DISCIPLINE

The **main goal** of the discipline is to give students knowledge of the epizootological patterns of occurrence, manifestation and spread as well as the means and methods of prevention and control of animal infectious diseases, and to study the main sections of general and special epizootology and veterinary sanitation.

In order to achieve the goal, the following **problems** should be solved:

a) The general educational task is to familiarize students in-depth with the causes of emergence, unequal manifestation, spread, fading and disappearance of infectious diseases, as well as the influence of various environmental conditions on the intensity of this process;

b) Applied task highlights issues related to complex methods of diagnostics of animal infectious diseases as well as the means and methods of therapeutic and preventive treatment of animals with infectious diseases, and creates a conceptual basis for the realization of interdisciplinary structural and logical links with the aim of developing medical thinking.

c) The special task is to familiarize students with modern directions and methodological approaches of anti-epizootic work used in epizootology to solve the problems of livestock production and veterinary medicine, as well as existing achievements in this field.

## 2. LIST OF PLANNED LEARNING OUTCOMES OF THE DISCIPLINE (MODULE), CORRELATED WITH THE PLANNED LEARNING OUTCOMES OF THE EDUCATIONAL PROGRAM

As a result of mastering the discipline, the student is prepared for the following types of activities, in accordance with the educational standard FGOS VO 36.05.01 Veterinary Medicine.

Area of professional activity:

13 Agriculture

13 012 Veterinarian

Types of professional activity tasks:

- Medical;
- Expertise and control;
- Scientific and educational.

### Competencies of the student, formed as a result of mastering the discipline.

The study of the discipline should form the following **competences**:

#### A) General professional competences:

**GPC-1** To be able to determine the biological status and normative clinical indicators of animal organs and body systems:

GPC-1<sub>ID-1</sub> To know safety precautions, including fixation methods, and personal hygiene rules when examining animals as well as the schemes of clinical examination of the animal and the examination order of individual body systems;

GPC-1<sub>ID-2</sub> To be able to collect and analyze anamnestic data, conduct laboratory and functional studies using digital computer technologies necessary to determine the biological status of animals;

GPC-1<sub>ID-3</sub> To possess practical skills to independently conduct clinical examination of an animal using classical research methods and digital technologies.

**GPC-6** To be able to analyze, identify and perform hazard assessment of disease emergence and spread risk:

GPC-6<sub>ID-1</sub> To know existing programs for control and prevention of zoonoses, contagious diseases, emerging or re-emerging infections, application of animal identification, traceability and control systems from relevant veterinary services' side;

GPC-6<sub>ID-2</sub> To be able to conduct risk assessment of animal diseases, including importation of animals and animal products and other veterinary services activities, as well as to control the presence of prohibited substances in animals, animal products and feed;

GPC-6<sub>ID-3</sub> To possess the skills to carry out procedures for identification, selection and implementation of measures that can be used to reduce the risk level.

## **B) Professional competences:**

Type of professional tasks: medical

**PC-11** Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures;

PC-11<sub>ID-1</sub> To be able to collect and analyze information, including veterinary statistics data, necessary for planning preventive anti-epizootic measures as well as prevention of non-contagious animal diseases, and veterinary sanitary measures;

PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases.

**PC-13** Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures:

PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine.

**PC-14** Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them:

PC-14<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies;

PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures;

PC-14<sub>ID-3</sub> Know the types of anti-epizootic measures and requirements for their implementation in accordance with guidelines, instructions, manuals, rules of diagnostics, disease prevention and treatment of animals.

**PC-16** Organization of disinfection and disinsection of livestock premises for veterinary sanitary well-being in accordance with the plan of veterinary and sanitary measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them:

PC-16<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of the end-to-end digital technologies;

PC-16<sub>ID-2</sub> To know the types of measures necessary to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine.

## **3. THE PLACE OF THE DISCIPLINE IN THE STRUCTURE OF MPEP**

Discipline B1.O.35 "Epizootology and Infectious Diseases of Animals" is a discipline of Block 1 of the mandatory part of the federal state educational standard of higher education on specialty 36.05.01 "Veterinary Medicine" (specialist level).

It is mastered in 7-8-9 semesters (full-time study); 9, 10 and 11 semesters (part-time study); 5 and 6 courses (extramural study).

The discipline "Epizootology and infectious diseases of animals" uses knowledge and skills acquired by students when mastering such disciplines as Veterinary microbiology and mycology, Virology, Immunology, Histology, Biochemistry, Physiology, Laboratory Diagnostics, Parasitology and invasive diseases, Fish and Bees diseases, Pathological anatomy of animals, Clinical Diagnostics, Methodology of scientific research, Bird diseases.

The discipline "Epizootology and Infectious Diseases of Animals" is a basic discipline that provides basis for such disciplines as:

1. Veterinary sanitary expertise;
2. Organization of veterinary business;
3. Sectional course and forensic veterinary medicine;
4. State veterinary supervision;
5. Zoonoses risk management.

#### **4. SCOPE OF THE DISCIPLINE "EPIZOOTOLOGY AND INFECTIOUS DISEASES OF ANIMALS"**

##### **4.1. Scope of the discipline "Epizootology and Infectious Diseases of Animals" for full-time study**

Type of study work	Total hours	Semester		
		7	8	9
<b>Auditorium classes (total)</b>	<b>115</b>	<b>32</b>	<b>32</b>	<b>51</b>
Including:	-	-	-	-
Lectures, including interactive forms	56	16	16	16
Practical lessons (PL), including interactive forms:	59	16	16	34
Practical training (PT)	14	4	4	6
<b>Independent work (total)</b>	<b>110</b>	<b>40</b>	<b>40</b>	<b>40</b>
Knowledge control	27			18
Course project	+		+	
Type of intermediate and final certification (test, exam)	<b>Test, exam</b>	<b>test</b>	<b>test</b>	<b>exam</b>
<b>Total labor input hours / credit units</b>	<b>252/7</b>	<b>72/2</b>	<b>72/2</b>	<b>108/3</b>

## 5. CONTENT OF THE DISCIPLINE "EPIZOOTOLOGY AND INFECTIOUS DISEASES OF ANIMALS"

### 5.1. Content of the discipline "Epizootology and Infectious Diseases of Animals" for full-time study

№	Title	Formative competences	Semester	Types of academic work, including independent work of students and labor intensity (in hours)			
				L	PL	PT	IW
1.	Epizootology as a science. Subject and problems of epizootology. Familiarization with the Department and educational literature. Safety precautions.	<p>GPC-6 To be able to analyze, identify and perform hazard assessment of disease emergence and spread risk</p> <p>GPC-6<sub>ID-1</sub> To know existing programs for control and prevention of zoonoses, contagious diseases, emerging or re-emerging infections, application of animal identification, traceability and control systems from relevant veterinary services' side</p> <p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-1</sub> To be able to collect and analyze information, including veterinary statistics data, necessary for planning preventive anti-epizootic measures as well as prevention of non-contagious animal diseases, and veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p>	7	2	2		5

2.	Epizootologic aspects of infection and the infectious process	<p>GPC-6 To be able to analyze, identify and perform hazard assessment of disease emergence and spread risk</p> <p>GPC-6<sub>ID-2</sub> To be able to conduct risk assessment of animal diseases, including importation of animals and animal products and other veterinary services activities, as well as to control the presence of prohibited substances in animals, animal products and feed</p> <p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p> <p>PC-16 Organization of disinfection and disinsection of livestock premises for veterinary sanitary well-being in accordance with the plan of veterinary and sanitary measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-16<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of the end-to-end digital technologies</p> <p>PC-16<sub>ID-2</sub> To know the types of measures necessary to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p>	7	2	1	1	5
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3.	Serological method of diagnosing infectious diseases	<p>GPC-1 To be able to determine the biological status and normative clinical indicators of animal organs and body systems</p> <p>GPC-1<sub>ID-1</sub> To know safety precautions, including fixation methods, and personal hygiene rules when examining animals as well as the schemes of clinical examination of the animal and the examination order of individual body systems</p> <p>GPC-1<sub>ID-2</sub> To be able to collect and analyze anamnestic data, conduct laboratory and functional studies using digital computer technologies necessary to determine the biological status of animals</p> <p>GPC-1<sub>ID-3</sub> To possess practical skills to independently conduct clinical examination of an animal using classical research methods and digital technologies</p> <p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-1</sub> To be able to collect and analyze information, including veterinary statistics data, necessary for planning preventive anti-epizootic measures as well as prevention of non-contagious animal diseases, and veterinary sanitary measures</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p>	7	2	2	5
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4.	Epizootic process and regularities of its development	<p>GPC-6 To be able to analyze, identify and perform hazard assessment of disease emergence and spread risk</p> <p>GPC-6<sub>ID-1</sub> To know existing programs for control and prevention of zoonoses, contagious diseases, emerging or re-emerging infections, application of animal identification, traceability and control systems from relevant veterinary services' side</p> <p>GPC-6<sub>ID-2</sub> To be able to conduct risk assessment of animal diseases, including importation of animals and animal products and other veterinary services activities, as well as to control the presence of prohibited substances in animals, animal products and feed</p> <p>GPC-6<sub>ID-3</sub> To possess the skills to carry out procedures for identification, selection and implementation of measures that can be used to reduce the risk level</p> <p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-1</sub> To be able to collect and analyze information, including veterinary statistics data, necessary for planning preventive anti-epizootic measures as well as prevention of non-contagious animal diseases, and veterinary sanitary measures</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p>	7	2	1	1	5
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5.	Allergic method of diagnosis of infectious diseases. Bacteriological method of diagnosis.	<p>GPC-1 To be able to determine the biological status and normative clinical indicators of animal organs and body systems</p> <p>GPC-1<sub>ID-1</sub> To know safety precautions, including fixation methods, and personal hygiene rules when examining animals as well as the schemes of clinical examination of the animal and the examination order of individual body systems</p> <p>GPC-1<sub>ID-2</sub> To be able to collect and analyze anamnestic data, conduct laboratory and functional studies using digital computer technologies necessary to determine the biological status of animals</p> <p>GPC-1<sub>ID-3</sub> To possess practical skills to independently conduct clinical examination of an animal using classical research methods and digital technologies</p> <p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-1</sub> To be able to collect and analyze information, including veterinary statistics data, necessary for planning preventive anti-epizootic measures as well as prevention of non-contagious animal diseases, and veterinary sanitary measures</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p>	7	2	2	5
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6.	Epizootic focus and natural focus of infectious diseases. Epizootologic research.	<p>GPC-6 To be able to analyze, identify and perform hazard assessment of disease emergence and spread risk:</p> <p>GPC-6<sub>ID-1</sub> To know existing programs for control and prevention of zoonoses, contagious diseases, emerging or re-emerging infections, application of animal identification, traceability and control systems from relevant veterinary services' side</p> <p>GPC-6<sub>ID-2</sub> To be able to conduct risk assessment of animal diseases, including importation of animals and animal products and other veterinary services activities, as well as to control the presence of prohibited substances in animals, animal products and feed</p> <p>GPC-6<sub>ID-3</sub> To possess the skills to carry out procedures for identification, selection and implementation of measures that can be used to reduce the risk level</p> <p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-1</sub> To be able to collect and analyze information, including veterinary statistics data, necessary for planning preventive anti-epizootic measures as well as prevention of non-contagious animal diseases, and veterinary sanitary measures</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p>	7	2	1	1	5
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7.	Antiepidemic measures. General and specific prevention of infectious diseases.	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-1</sub> To be able to collect and analyze information, including veterinary statistics data, necessary for planning preventive anti-epizootic measures as well as prevention of non-contagious animal diseases, and veterinary sanitary measures</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p> <p>PC-16 Organization of disinfection and disinsection of livestock premises for veterinary sanitary well-being in accordance with the plan of veterinary and sanitary measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-16<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of the end-to-end digital technologies</p> <p>PC-16<sub>ID-2</sub> To know the types of measures necessary to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p>	7	2	2	5
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8.	Methods of disinfection. Disinfection. Familiarization with drugs of different groups. Deratization and disinsection as preventive and extermination measures. Sanitary cleaning of the area.	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-1</sub> To be able to collect and analyze information, including veterinary statistics data, necessary for planning preventive anti-epizootic measures as well as prevention of non-contagious animal diseases, and veterinary sanitary measures</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p>	7	2	1	1	5	
9.		TOTAL FOR THE 7 <sup>TH</sup> SEMESTER			16	12	4	40

10.	Glanders	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p>	8	2	1	1	5
11.	Stranglers. Epizootic lymphangitis	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-16 Organization of disinfection and disinsection of livestock premises for veterinary sanitary well-being in accordance with the plan of veterinary and sanitary measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-16<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of the end-to-end digital technologies</p> <p>PC-16<sub>ID-2</sub> To know the types of measures necessary to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p>	8	2	2		5

12.	Equine influenza, rhinopneumonia, respiratory infectious diseases of horses	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p> <p>PC-16<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of the end-to-end digital technologies</p> <p>PC-16<sub>ID-2</sub> To know the types of measures necessary to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p>	8	2	1	1	5
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13.	EIA, Blackleg, Malignant edema	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p> <p>PC-16 Organization of disinfection and disinsection of livestock premises for veterinary sanitary well-being in accordance with the plan of veterinary and sanitary measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-16<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of the end-to-end digital technologies</p> <p>PC-16<sub>ID-2</sub> To know the types of measures necessary to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p>	8	2	2	5
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14.	Bovine leukosis	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p>	8	2	2		5
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15.	Nodular dermatitis, sheep pox, ovine ecthyma	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p>	8	2	2		5
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16.	Bovine viral diarrhea, PI-3, IBR, Respiratory syncytial disease	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p> <p>PC-16 Organization of disinfection and disinsection of livestock premises for veterinary sanitary well-being in accordance with the plan of veterinary and sanitary measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-16<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of the end-to-end digital technologies</p> <p>PC-16<sub>ID-2</sub> To know the types of measures necessary to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p>	8	2	1	1	5
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17.	Exotic diseases (blue-tongue, Schmallenberg disease)	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p>	8	2	3	1	5
<b>TOTAL FOR 8<sup>TH</sup> SEMESTER</b>				<b>16</b>	<b>12</b>	<b>4</b>	<b>40</b>

18.	Slow viral infections, adenomatosis of sheep and goats	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p>	9	2	3	1	4
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20.	Prion diseases, Scrapie	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p> <p>PC-16 Organization of disinfection and disinsection of livestock premises for veterinary sanitary well-being in accordance with the plan of veterinary and sanitary measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-16<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of the end-to-end digital technologies</p> <p>PC-16<sub>ID-2</sub> To know the types of measures necessary to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p>	9	2	2	1	4
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21.	Infectious mastitis of sheep and goats, contagious agalactia	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p> <p>PC-16 Organization of disinfection and disinsection of livestock premises for veterinary sanitary well-being in accordance with the plan of veterinary and sanitary measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-16<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of the end-to-end digital technologies</p> <p>PC-16<sub>ID-2</sub> To know the types of measures necessary to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p>	9	2	2	1	4
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22	Foot rot, necrobacteriosis	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p> <p>PC-16 Organization of disinfection and disinsection of livestock premises for veterinary sanitary well-being in accordance with the plan of veterinary and sanitary measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-16<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of the end-to-end digital technologies</p> <p>PC-16<sub>ID-2</sub> To know the types of measures necessary to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p>	9	2	2	1	4
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23.	Viral diseases and bacterial diseases of young farm animals	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p> <p>PC-16 Organization of disinfection and disinsection of livestock premises for veterinary sanitary well-being in accordance with the plan of veterinary and sanitary measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-16<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of the end-to-end digital technologies</p> <p>PC-16<sub>ID-2</sub> To know the types of measures necessary to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p>	9	2	2	1	4
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24.	Foot and mouth disease, listeriosis	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p> <p>PC-16 Organization of disinfection and disinsection of livestock premises for veterinary sanitary well-being in accordance with the plan of veterinary and sanitary measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-16<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of the end-to-end digital technologies</p> <p>PC-16<sub>ID-2</sub> To know the types of measures necessary to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p>	9	2	2	1	4
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25.	ASF, CSF, swine erysipelas, PRRS	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p> <p>PC-16 Organization of disinfection and disinsection of livestock premises for veterinary sanitary well-being in accordance with the plan of veterinary and sanitary measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-16<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of the end-to-end digital technologies</p> <p>PC-16<sub>ID-2</sub> To know the types of measures necessary to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p>	9	2	2	1	6
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26.	Aujeszky's disease	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p> <p>PC-16 Organization of disinfection and disinsection of livestock premises for veterinary sanitary well-being in accordance with the plan of veterinary and sanitary measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-16<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of the end-to-end digital technologies</p> <p>PC-16<sub>ID-2</sub> To know the types of measures necessary to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p>	9	2	4		6
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27.	Anaerobic infections	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p> <p>PC-16 Organization of disinfection and disinsection of livestock premises for veterinary sanitary well-being in accordance with the plan of veterinary and sanitary measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-16<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of the end-to-end digital technologies</p> <p>PC-16<sub>ID-2</sub> To know the types of measures necessary to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p>	9	2	6	-	6
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29.	Peculiarities of pathologies in pigs	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p> <p>PC-16 Organization of disinfection and disinsection of livestock premises for veterinary sanitary well-being in accordance with the plan of veterinary and sanitary measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-16<sub>ID-1</sub> To be able to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of the end-to-end digital technologies</p> <p>PC-16<sub>ID-2</sub> To know the types of measures necessary to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p>	9	2	4	1	6
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30.	Gastrointestinal diseases of pigs	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p>	9	2	4	1	4
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31.	Paratuberculosis of ruminants	<p>PC-11 Development of annual plan of anti-epizootic measures, plan of non-contagious animal diseases prevention, plan of veterinary sanitary measures</p> <p>PC-11<sub>ID-2</sub> To know the methods of collecting and analyzing information for veterinary planning, including the use of information databases</p> <p>PC-13 Organization of protective measures against the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures</p> <p>PC-13<sub>ID-1</sub> To know the types of measures to ensure veterinary sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine</p> <p>PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of preventive measures against animal diseases in order to improve them</p> <p>PC-14<sub>ID-2</sub> To know the order of clinical examination of animals when planning preventive measures</p>	9	2	4	1	6
TOTAL FOR 9 <sup>TH</sup> SEMESTER				16	28	6	58

## **5. List of educational and methodical support for independent work of students in the discipline «Epizootiology and Infectious Diseases of Animals»**

### **5.1. Methodological instructions for independent work**

1. Methodological recommendations for the performance of course work in the discipline "Epizootology" / compiled by: V. A. Kuzmin [and others]; Ministry of Agriculture of the Russian Federation, SPbGUVU. - St. Petersburg, 2014. - 18 c. - Text (visual): direct.
2. Sanitary cleaning of the area in the system of anti-epizootic measures: educational and methodical manual / author-composer: O. R. Polyakova [et al]; Ministry of Agriculture of the Russian Federation, SPbSUVM. - St. Petersburg: Publishing house SPbSUVM, 2020. - 28 c. - URL: <https://clck.ru/frFSr> (access date: 26.06.25). - Access mode: for authorized users of the EB SPbGUVU.
3. Disinfection in the system of anti-epizootic measures: teaching manual / O.R. Polyakova, V.A. Kuzmin, Y.Y. Danko [et al] ; Ministry of Agriculture of the Russian Federation, SPbGAVM. - St. Petersburg: Izd-vo SPbGAVM, 2016. - 72 p.- URL: <https://clck.ru/eMeRo> (date of address: 26.06.25). - Access mode: for avtoriz. users of EB SPbGUVU.
4. Educational and methodical manual on the discipline "Epizootology and infectious diseases": Disinsection in the system of anti-epizootic measures / author.-comp: O. R. Polyakova [and others]; Ministry of Agriculture of the Russian Federation, SPbGAVM. - St. Petersburg : FGBOU VO SPbGUVU, 2019. - 14 c. - UR: <https://clck.ru/frDAG> (date of access: 27.04.24). - Access mode: for authorized users of the EB SPbGUVU.
5. Deratization in the system of anti-epizootic measures: a manual / O.R. Polyakova, V.A. Kuzmin, Y.Y. Danko [et al] ; Ministry of Agriculture of the Russian Federation, SPbGAVM. - St. Petersburg: Izd-vo SPbGAVM, 2016. - 17 c. - URL: <https://clck.ru/frDmy> (date of reference: 26.06.25). - Access mode: for avtoriz. users of EB SPbGAVM.

### **5.2. Literature for independent work**

1. Cattle: maintenance, feeding, diseases: diagnosis and treatment: [recommended by UMO RF]: textbook for university students / A. F. Kuznetsov, A. A. Stekolnikov, I. D. Alemaykin [et al.]; ed. by A. F. Kuznetsov. - 2nd ed., supplement - St. Petersburg: Lan, 2016. - 752 c. - (Textbooks for universities. Special literature). - Text (visual): direct.
2. Reference book on veterinary medicine: a textbook / A.A. Stekolnikov, A.F. Kuznetsov, A.A. Aliev [et al.]; ed. by A.A. Stekolnikov and A.F. Kuznetsov. - St. Petersburg: Prospect Nauki, 2011. - 543 c. - Text (visual): immediate.
3. OIE list and transboundary animal infections: a monograph / V. V. Makarov, V. A. Rude, K. N. Gruzdev, O. I. Sukharev. - Vladimir: VIT-print, 2012. - 160 c. - Text (visual): direct.
4. Makarov, V.V. Sketches of the history of the fight against infectious diseases: textbook; supplemented by the Ministry of Agriculture of the Russian Federation. Ч. 1: From the ancient world to the present / Makarov V.V., Rude V.A. - Vladimir: VIT-print, 2013. - 230 c. - Text (visual): direct.
5. Rabies: etiology, epizootology, diagnostics: textbook / A. V. Ivanov, N. A. Khismatullina, A. N. Chernov, A. M. Gulukin. - Moscow: Kolos, 2010. - 54 c. - Text (visual): non-medium.
6. Sanitary cleaning of the area in the system of anti-epizootic measures: educational and methodical manual / author-composer: O. R. Polyakova [et al]; Ministry of Agriculture of the Russian Federation, SPbSUVM. - St. Petersburg: Publishing house SPbGUVU, 2020. - 28 c. - URL: <https://clck.ru/frFSr> (access date: 26.06.25). - Access mode: for authorized users of the EB SPbGUVU.
7. Smirnov, A.M. Veterinary and sanitary measures at African swine fever : monograph / A.M. Smirnov, M.P. Butko. - Moscow: NIPKTS Voskhod-A, 2013. - 452 c. - Text (visual): direct.
8. Methodological recommendations for the recovery of reindeer breeding farms from brucellosis of reindeer / author: L. S. Vogel, A. S. Kisil, V. V. Veretennikov, K. A. Laishv [and others]; Ministry of Agriculture of the Russian Federation, SPbGUVU, NWCPPO-SPb FIC RAS, NIISKh and EA FKNTs SB RAS. - St. Petersburg: FGBOU VO SPbGUVU, 2021. - 46 c. - URL: <https://clck.ru/32bfrG> (date of reference: 26.06.25). - Access mode: for authorized users of EB SPbGUVU.
9. Methodical recommendations on disinfection of objects of veterinary supervision in poultry farming enterprise / author: E. D. Javadov, O. F. Khokhlachev, O. B. Novikova; Ministry of Agriculture of the Russian Federation, St. Petersburg State University of Veterinary Medicine. - St. Petersburg: FGBOU VO SPbGUVU, 2021. - 25 c. - URL: <https://clck.ru/32bfyG> (date of reference: 26.06.25). - Access mode: for authorized users of the EB SPbGUVU.



## 6. List of basic and additional literature necessary for mastering the discipline

### a) basic literature:

1. Epizootology and infectious diseases: textbook for students of higher agricultural educational institutions specializing in "Veterinary" / A. A. Konopatkin, B. T. Artemov, I. A. Bakulov [et al.]; ed. by A. A. Konopatkin. - 2nd ed., revision and supplement - Moscow: Kolos, 1993. - 688 c. - (Textbooks and textbooks for students of higher educational institutions). - URL: <https://clck.ru/eMj6p> (access date: 26.06.25). - Access mode: for authorized users of the EB SPbGUVU.

2. Practicum on epizootology and infectious diseases with veterinary sanitation / V. P. Urban, M. A. Safin, A. A. Sidorchuk, M. V. Kharitonov. - Moscow: KolosS, 2004. - 216 p.: il. - (Textbooks and educational materials for students of higher educational institutions). - Text (visual): direct.

### b) additional literature:

2. Fundamentals of planning and control of veterinary measures: educational and methodical manual / N.M. Ka-lishin, A.I. Shnur, I.I., N.N. Zubareva ; Ministry of Agriculture of the Russian Federation, SPbGAVM. - St. Petersburg: Publishing house SPbGAVM, 2008. - 67 c. URL: <https://clck.ru/Vf5i8> (date of address: 26.06.25). - Access mode: for authorized users of EB SPbGAVM.

4. Epizootologic monitoring of infectious diseases of animals. Modern geoinformation technologies in epizootology and epidemiology: methodical recommendations / compiled by: Y. Y. Danko [and others]; Ministry of Agriculture of the Russian Federation, SPbGAVM. - St. Petersburg: SPbGAVM, 2015. - 48 c. - URL: <https://clck.ru/frCLT> (date of access: 26.06.25). - Access mode: for authorized users of the EB SPbGUVU.

5. Fundamentals of active immunoprophylaxis of infectious diseases of animals: educational and methodical manual / comp: O. R. Polyakova [et al]; SPbGAVM. - St. Petersburg: SPbGAVM, 2014. - 30 c. - URL: <https://clck.ru/eMew9> (date of reference: 26.06.25). - Access mode: for authorized users of the EB SPbGAVM.

## 7. RESOURCES LIST FROM INFORMATION AND TELECOMMUNICATION NETWORK "INTERNET" NECESSARY FOR MASTERING THE DISCIPLINE

To prepare for laboratory classes and perform independent work, students can use the following Internet resources:

1. [www.mgavm.ru](http://www.mgavm.ru) - K.I. Skryabin MGAVMiB information site
2. <http://www.fsvps.ru/> - official website of Rosselkhoz nadzor
3. <http://www.oie.int/> - official website of World Organisation for Animal Health
4. <https://meduniver.com/> - medical information website.

### Digital library systems:

1. [ELS «SPbGUVU»](#)
2. "ConsultantPlus" legal reference system
3. Scientific electronic library ELIBRARY.RU
4. Russian Science Network
5. [Database of international scientific citation indices Web of Science](#)
6. E-books by «Prospect Nauki» Publishing House <http://prospektnauki.ru/ebooks/>
7. ELS of Kvadro Publishing House Elibrika <https://elibrika.com/>

## 8. METHODOLOGICAL INSTRUCTIONS FOR STUDENTS ON MASTERING THE DISCIPLINE

Methodological recommendations for students is a set of recommendations and explanations that allow the student to optimally organize the process of studying a given discipline. Содержание методических рекомендаций, как правило, может включать:

The content of methodological recommendations may include:

- Tips for planning and organizing the time needed to study the discipline. A description of the student's sequence of activities, or "learning scenario".

Morning time is the most fruitful time for study work (from 8-14 hours), followed by afternoon (from 16-19 hours) and evening (from 20-24 hours). The most difficult material is recommended to be studied at the beginning of each time interval after rest. After 1.5 hours of work a break is necessary (10-15 minutes), after 4 hours of work the break should be 1 hour. Part of the scientific organization of work is mastering the technique of mental work. Normally, a student should devote about 10 hours a day to studying (6 hours at university, 4 hours at home).

- Recommendations for working on the lecture material

In preparing for the lecture, the student is advised to:

- 1) review the notes of the previous lecture and recollect the previously studied material;
- 2) review upcoming material for a future lecture (it is also useful);
- 3) if you have been assigned to independently study some fragments of the topic of the previous lecture, you should do it without delay;
- 4) psych yourself up for the lecture.

This work includes two main stages: lecture notes and subsequent work on the lecture material.

Outlining means making an outline, i.e. a brief written summary of the content of something (an oral presentation - speech, lecture, report, etc. or a written source - a document, article, book, etc.).

The method of work in outlining oral speeches differs significantly from the method of work in outlining written sources.

When taking notes from written sources, the student has the opportunity to repeatedly read the necessary passage of text, reflect on it, highlight the main thoughts of the author, briefly formulate them and then write them down. If necessary, he/she can note his/her attitude to this point of view. When listening to a lecture, the student should postpone most of the complex of the above-mentioned works for another time, trying to use every minute to record the lecture, not to comprehend it - there is no time left for that. Therefore, when taking notes on the lecture, it is recommended to separate fields for subsequent notes in addition to the lecture notes on each page.

Having written down the lecture or made its outline, one should not leave the work on the lecture material until the beginning of preparation for the credit. It is necessary to do as early as possible the work that accompanies the outlining of written sources and that could not be done during the recording of the lecture - to read their notes, deciphering certain abbreviations, to analyze the text, to establish logical links between its elements, in some cases to show them graphically, to highlight the main ideas, to note the issues that require additional processing, in particular, consultation with the teacher.

When working on the text of the lecture, the student should pay special attention to the problematic issues posed by the instructor during the lecture, as well as to his assignments and recommendations.

For each lecture, practical training and laboratory work, the number, topic, list of issues covered, volume in hours and references to the recommended literature should be given. For classes conducted in interactive forms, their organizational form should be indicated: computer simulation, business or role-playing game, case study, etc.

- Recommendations for preparation for practical training

Practical (seminar) classes form an important part of students' professional training. The main purpose of practical (seminar) classes is to form students' analytical, creative thinking by acquiring practical skills. Also practical classes are held in order to deepen and consolidate knowledge gained in lectures and in the process of independent work on normative documents, educational and scientific literature. In preparation for a practical lesson for students should study or repeat the theoretical material on a given topic.

When preparing for the practical training, students are recommended to follow the algorithm;

- 1) familiarize themselves with the plan of the upcoming class;
- 2) Work through the literature sources that have been recommended and familiarize yourself with the introductory notes to the relevant sections.

Methodical instructions for practical (seminar) classes in the discipline along with the working program and the schedule of the educational process are among the methodical documents that determine the level of organization and quality of the educational process.

The content of practical (seminar) classes is fixed in the working training programs of disciplines in the sections "List of topics of practical (seminar) classes".

The most important component of any form of practical classes are assignments. The basis of the assignment is an example, which is analyzed from the standpoint of the theory developed in the lecture. As a rule, the main attention is paid to the formation of specific skills, skills, which determines the content of students' activities - problem solving, laboratory work, clarification of categories and concepts of science, which are a prerequisite for proper thinking and speech.

Practical (seminar) classes fulfill the following tasks:

- stimulate regular study of recommended literature as well as attentiveness to the lecture course;
- consolidate the knowledge gained in the course of lecture training and independent work on literature;
- expand the scope of professionally relevant knowledge, skills and abilities;
- allow to check the correctness of previously acquired knowledge;
- instill independent thinking skills, oral presentation skills;
- promote fluency in terminology;
- provide the instructor with an opportunity to systematically monitor the level of students' independent work.

Methodical instructions for practical (seminar) classes in the discipline should be oriented on modern conditions of economic management, current regulatory documents, advanced technologies, on the latest achievements of science, technology and practice, on modern ideas about those or other phenomena of the studied reality.

- Recommendations for working with the literature.

Work with literature is an important stage of independent work of the student to master the subject, contributing not only to the consolidation of knowledge, but also to the expansion of horizons, mental abilities, memory, the ability to think, state and confirm their hypotheses and ideas. In addition, the skills of research work necessary for further professional activity are developed.

When starting to study the literature on the topic, it is necessary to make outlines, extracts, notes. It is obligatory to take notes on the works of theorists, which allow you to comprehend the theoretical basis of the study. Otherwise, you can limit yourself to extracts from the studied sources. All extracts, quotations must necessarily have an accurate "return address" (author, title of the work, year of publication, page, etc.). It is desirable to write the abbreviated name of the question to which the extract or quotation refers. In addition, it is necessary to learn to immediately make a card index of special literature and publications of sources, both proposed by the teacher and identified independently, as well as to refer to bibliographic directories, annals of journal articles, book annals, abstract journals. In this case, publications of sources (articles, book titles, etc.) to write on separate cards, which should be filled out according to the rules of bibliographic description (surname, initials of the author, title of the work. Place of publication, publishing house, year of publication, number of pages, and for journal articles - the name of the journal, year of publication, page numbers). On each card it is advisable to record the idea of the author of the book or a fact from this book only on one specific issue. If the work, even in the same paragraph or phrase, contains more judgments or facts on another issue, they should be written out on a separate card. The statement should be concise, precise, without subjective assessments. On the back of the card you can make your own notes about the book or article, its content, structure, what sources it was written on, etc.

- Explanations about working with test materials for the course, recommendations for completing homework.

Testing allows you to determine whether the actual behavior of the program corresponds to the expected behavior by performing a specially selected set of tests. A test is the fulfillment of

certain conditions and actions necessary to verify the operation of the function being tested or its part. Each question in the discipline must be answered correctly by choosing one option.

- Recommendations for completing coursework (if it is included in the curriculum), defining their thematic focus, goals and objectives of implementation, requirements for content, volume, design and organization of management of their preparation by departments and teachers.

According to the guidelines presented in the list of guidelines.

## 9. EDUCATIONAL WORK

Within the framework of realization of the discipline the educational work is carried out for formation of modern scientific worldview and system of basic values, formation and development of spiritual and moral, civil and patriotic values, system of aesthetic and ethical knowledge and values, attitudes of tolerant consciousness in the society, formation of students' need to work as the first necessity of life, the highest value and the main way to achieve success in life, to realize the social significance of their future profession.

## 10. LIST OF INFORMATION TECHNOLOGIES USED IN THE IMPLEMENTATION OF THE EDUCATIONAL PROCESS

11.1 The use of information technologies is envisaged in the educational process of the discipline:

- lecturing and conducting practical classes with the use of multimedia;
- interactive technologies (dialog lectures, collective discussion of different approaches to solving a particular educational and professional task);
- interaction with students via e-mail;
- joint work in the Electronic Information and Educational Environment of SPbGUVU:

<https://spbguvu.ru/academy/eios/>

### 10.2. Software

**List of licensed and freely distributed software,  
including domestically produced software**

№ п/п	Name of technical and computer teaching aids recommended by sections and topics of the program	License
1	MS PowerPoint	67580828
2	LibreOffice	free software
3	OS Alt Education 8	AAO.0022.00
4	АБИС "МАРК-SQL"	02102014155
5	MS Windows 10	67580828
6	System ConsultantPlus	503/KL
7	Android OC	free software

## 11. MATERIAL-TECHNICAL BASE NECESSARY FOR IMPLEMENTATION OF EDUCATIONAL PROCESS ON DISCIPLINE

Name of discipline (module), practices in accordance with the curriculum	Name of special rooms and rooms for independent work	Equipment of special rooms and rooms for independent work
Epizootiology and infectious diseases of animals	014 (196084, St. Petersburg, 99, Moskovsky Prospekt St.) Classroom for seminar-type classes, group and individual consul-	<i>Specialized furniture:</i> desks, chairs, stools, blackboard. <i>Visual aids and educational materials:</i> computer programs and multimedia

	tations, current control and interim certification (capacity - 48 people)	presentations on epizootology and infectious diseases, educational films. Tables, posters, slides, photos. Moulages, micropreparations, biopreparations (vaccines, diagnostics, sera, etc.) Digitized computer tables for educational purposes.
	113 (196084, St. Petersburg, 99 Moskovsky Prospekt St.) Classroom for seminars, group and individual consultations, current control and interim certification (capacity - 48 people)	<i>Specialized furniture:</i> desks, chairs, stools, blackboard. <i>Technical teaching aids:</i> projector, screen, computer. <i>Visual aids and teaching materials:</i> computer programs and multimedia presentations on epizootology and infectious diseases, educational films. Tables, posters, slides, photographs. Plates, micropreparations, biopreparations (vaccines, diagnostics, sera, etc.) Digitized computer tables for educational purposes.
	114 (196084, St. Petersburg, 99 Moskovsky Prospekt St.) Classroom for seminars, group and individual consultations, current control and interim certification (capacity - 26 people)	<i>Specialized furniture:</i> desks, chairs, stools, blackboard. <i>Technical teaching aids:</i> projector, screen, computer. <i>Visual aids and teaching materials:</i> tables, posters, slides, photos. Moulages, micropreparations, biopreparations (vaccines, diagnostics, sera, etc.) Digitized computer tables for educational purposes.
	206 Large Reading Room (196084, St. Petersburg, 5 Chernigovskaya St.) Room for independent work	<i>Specialized furniture:</i> tables, chairs <i>Technical means of education:</i> computers with connection to the Internet and access to the electronic information and educational environment.
	214 Small reading room (196084, St. Petersburg, 5 Chernigovskaya St.) Room for independent work	<i>Specialized furniture:</i> tables, chairs <i>Technical means of education:</i> computers with Internet connection and access to the electronic information and educational environment.

Head of the Department of Epizootiology  
named after V. P. Urban  
Candidate of veterinary science, docent



L.S. Fogel

Ministry of Agriculture of the Russian Federation  
Federal State Budgetary Educational Institution  
of higher education  
"Saint Petersburg State University of Veterinary Medicine"

**Department of Epizootiology named after V. P. Urban**

FUND OF ASSESMENT TOOLS  
for the discipline

Level of higher education

**SPECIALITY**

Specialty 36.05.01 Veterinary Medicine

Profile: «General clinical veterinary medicine»

Full-time education

Education starts in 2025

Saint Petersburg  
2025

## 1. PASSPORT OF THE FUND OF ASSESMENT TOOLS

№	Acquired competence	Assessed modules of a discipline	Assesment tool
1.	GPC-1 Able to determine the biological status and normative clinical indicators of organs and systems of animal organism	Section 1: General epizootology and veterinary sanitation	Seminar, tests
1.	GPC-1 ID-1 Know the safety technique and rules of personal hygiene during the examination of animals, methods of their fixation; schemes of clinical examination of the animal and the order of examination of separate systems of the organism, including with the help of digital technologies; methodology of recognition of pathological process.	Section 2: Private epizootology and infectious diseases	Seminar, tests, term paper
3.		Section 3. Bacterial diseases of animals	Seminar, tests
4.	GPC-1 ID-2 Be able to collect and analyze anamnestic data, conduct laboratory and functional studies with the help of digital computer technologies necessary to determine the biological status of animals.	Section 4: Viral diseases common to several species animal species	Seminar, testsc
	GPC-1 ID-3 Possess practical skills to independently conduct clinical examination of an animal using classical research methods and digital technologies.	Section 5. Disinfection, disinsection, deratization	Seminar, testsc
	GPC-6 Be able to analyze, identify and perform hazard assessment of the risk of disease emergence and spread: GPC-6 ID-1 Know existing programs for prevention and control of zoonotic diseases, contagious diseases, emergent or re-emerging infections, application of animal identification, tracing and control systems by the relevant veterinary services; GPC-6 ID-2 Be able to carry out, including through digital		

	<p>technologies, risk assessment of animal diseases, including importation of animals and animal products and other activities of veterinary services, control of prohibited substances in animals, animal products and feed;</p> <p>GPC-6 ID-3 Possess the skills to carry out procedures for identification, selection and implementation of measures that can be used to reduce the level of risk.</p> <p>PC-11 Develop an annual plan of anti-epizootic measures, a plan of prevention of non-communicable diseases of animals, a plan of veterinary and sanitary measures</p> <p>PC-11 ID-1 Know how to collect and analyze information, including veterinary statistics, necessary for planning preventive anti-epizootic measures, prevention of non-communicable animal diseases, veterinary and sanitary measures.</p> <p>PC-11 ID-2 Know the methods of collecting and analyzing information for veterinary planning, including the use of information databases.</p> <p>PC-13 Organization of measures to protect the organization from the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures:</p> <p>PC-13 ID-1 Know the types of measures to ensure veterinary and sanitary safety and requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine;</p> <p>PC-14 Organize prophylactic immunizations (vaccinations), therapeutic and preventive treatments</p>		
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	<p>of animals in accordance with the plan of anti-epizootic measures, analyze the effectiveness of measures to prevent animal diseases in order to improve them:</p> <p>PC-14 ID-1 Know how to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies;</p> <p>PC-14 ID-2 Know the procedure of clinical examination of animals when planning preventive measures;</p> <p>PC-14 ID-3 Know the types of anti-epizootic measures and requirements for their implementation in accordance with guidelines, instructions, instructions, rules of diagnostics, prevention and treatment of animals.</p> <p>PC-16 Organize disinfection and disinsection of livestock premises to ensure veterinary and sanitary well-being in accordance with the plan of veterinary and sanitary measures, analyze the effectiveness of measures to prevent animal diseases in order to improve them</p> <p>PC-16 ID-1 Be able to evaluate the effectiveness of preventive measures and methods of their implementation, including with the help of end-to-end digital technologies</p> <p>PC-16 ID-2 Know the types of measures to ensure veterinary and sanitary safety and requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine Section</p>		
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### List of assessment tools

№	Name of the assessment tool	Brief description of the assesment tool	Presentation of the assessment tool in the fund
1.	Seminar	A means of control is organized as a conversation between the teacher and the student on topics related to the discipline, and designed to clarify the amount of knowledge that students have on a certain module, topic, problem, etc. May be conducted in written form.	Questions on topics/modules of the discipline presented in relation to the competencies provided by the work program of the discipline
2.	Test	A system of standardized tasks, which allows to automate the assessment of students knowledge and skills	A fund of test assignments
4.	Term paper	A means of testing the ability to apply acquired knowledge to solve problems of a certain type on a topic or section	A set of response scales

# 1. INDICATORS AND CRITERIA FOR ASSESSING COMPETENCIES AT VARIOUS STAGES OF ITS FORMATION, DESCRIPTION OF ASSESSMENT SCALES

Planned results of competency acquired	The level of development				Assesment tool
	Unsatisfactory	Satisfactory	Good	Exellent	
GPC - 1 Able to determine the biological status and normative clinical indicators of organs and systems of the animal organism					
GPC-1 ID-1 Know the safety technique and rules of personal hygiene during the examination of animals, methods of their fixation; schemes of clinical examination of the animal and the order of examination of separate systems of the organism, including with the help of digital technologies; methodology of recognition of pathological process.	The level of knowledge is below the minimum requirements, gross errors have occurred	The minimum acceptable level of knowledge, many minor errors have been made	The level of knowledge corresponds to the training program, several minor errors have been made	The level of knowledge corresponds to the training program, no errors have been made	Seminar, Test, Term paper
GPC-1 ID-2 Be able to collect and analyze anamnestic data, conduct laboratory and functional studies with the help of digital computer technologies necessary to determine the biological status of animals.	Basic skills were not demonstrated in solving standard tasks, and gross errors occurred	Basic skills have been demonstrated, typical problems have been solved with minor errors, all tasks have been completed, but not in full	All the basic skills have been demonstrated, all the main tasks have been solved with minor errors, all the tasks have been completed in full, but some with flaws	All basic skills have been demonstrated, all main tasks have been solved with some minor flaws, all tasks have been completed in full	Seminar, Test, Term paper

GPC-1 ID-3 Possess practical skills to independently conduct clinical examination of an animal using classical research methods and digital technologies.	When solving standard problems basic skills were not demonstrated, gross errors occurred	There is a minimum set of skills to solve standard tasks with some shortcomings	When solving standard problems basic skills were not demonstrated with some flaws	Skills were demonstrated in solving non-standard tasks without errors and flaws	Seminar, Test, Term paper
GPC-6 Able to analyze, identify and perform hazard assessment of the risk of disease outbreak and spread of diseases					
GPC-6 ID-1 Know existing programs for prevention and control of zoonotic diseases, contagious diseases, emergent or re-emerging infections, application of animal identification, tracing and control systems by the relevant veterinary services;	The level of knowledge is below the minimum requirements, gross errors have occurred	The minimum acceptable level of knowledge, many minor errors have been made	The level of knowledge corresponds to the training program, several minor errors have been made	The level of knowledge corresponds to the training program, no errors have been made	Seminar, Test, Term paper
GPC-6 ID-2 Be able to carry out, including through digital technologies, risk assessment of animal diseases, including importation of animals and animal products and other activities of veterinary services, control of prohibited substances in animals, animal products and feed;	Basic skills were not demonstrated in solving standard tasks, and gross errors occurred	Basic skills have been demonstrated, typical problems have been solved with minor errors, all tasks have been completed, but not in full	All the basic skills have been demonstrated, all the main tasks have been solved with minor errors, all the tasks have been completed in full, but some with flaws	All basic skills have been demonstrated, all main tasks have been solved with some minor flaws, all tasks have been completed in full	Seminar, Test, Term paper

GPC-6 ID-3 Possess the skills to carry out procedures for identification, selection and implementation of measures that can be used to reduce the level of risk.	When solving standard problems basic skills were not demonstrated, gross errors occurred	There is a minimum set of skills to solve standard tasks with some shortcomings	When solving standard problems basic skills were not demonstrated with some flaws	Skills were demonstrated in solving non-standard tasks without errors and flaws	Seminar, Test, Term paper
PC-11 Development of an annual plan of anti-epizootic measures, a plan of prevention of non-communicable animal diseases, a plan of veterinary and sanitary measures					
PC-11 ID-1 Know how to collect and analyze information, including veterinary statistics, necessary for planning preventive anti-epizootic measures, prevention of non-communicable animal diseases, veterinary and sanitary measures.	Basic skills were not demonstrated in solving standard tasks, and gross errors occurred	Basic skills have been demonstrated, typical problems have been solved with minor errors, all tasks have been completed, but not in full	All the basic skills have been demonstrated, all the main tasks have been solved with minor errors, all the tasks have been completed in full, but some with flaws	All basic skills have been demonstrated, all main tasks have been solved with some minor flaws, all tasks have been completed in full	Seminar, Test, Term paper
PC-11 ID-2 Know the methods of collecting and analyzing information for veterinary planning, including the use of information databases	The level of knowledge is below the minimum requirements, gross errors have occurred	The minimum acceptable level of knowledge, many minor errors have been made	The level of knowledge corresponds to the training program, several minor errors have been made	The level of knowledge corresponds to the training program, no errors have been made	Seminar, Test, Term paper
PC-13 Organization of measures to protect the organization from the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures:					

PC-13 ID-1 Know the types of measures to ensure veterinary and sanitary safety and requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine;	Basic skills were not demonstrated in solving standard tasks, and gross errors occurred	Basic skills have been demonstrated, typical problems have been solved with minor errors, all tasks have been completed, but not in full	All the basic skills have been demonstrated, all the main tasks have been solved with minor errors, all the tasks have been completed in full, but some with flaws	All basic skills have been demonstrated, all main tasks have been solved with some minor flaws, all tasks have been completed in full	Seminar, Test, Term paper
PC-14 Organize prophylactic immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analyze the effectiveness of measures to prevent animal diseases in order to improve them:					
PC-14 ID-1 Know how to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies;	The level of knowledge is below the minimum requirements, gross errors have occurred	The minimum acceptable level of knowledge, many minor errors have been made	The level of knowledge corresponds to the training program, several minor errors have been made	The level of knowledge corresponds to the training program, no errors have been made	Seminar, Test, Term paper
PC-14 ID-2 Know the procedure of clinical examination of animals when planning preventive measures;	Basic skills were not demonstrated in solving standard tasks, and gross errors occurred	Basic skills have been demonstrated, typical problems have been solved with minor errors, all tasks have been completed, but not in full	All the basic skills have been demonstrated, all the main tasks have been solved with minor errors, all the tasks have been completed in full, but some with flaws	All basic skills have been demonstrated, all main tasks have been solved with some minor flaws, all tasks have been completed in full	Seminar, Test, Term paper
PC-14 ID-3 Know the types of anti-epizootic measures and requirements for their implementation in accordance with guidelines, instructions, instructions, rules of	When solving standard problems basic skills were not demonstrated,	There is a minimum set of skills to solve standard tasks	When solving standard problems basic skills were not demonstrated with	Skills were demonstrated in solving non-standard tasks	Seminar, Test, Term paper

diagnostics, prevention and treatment of animals.	gross errors occurred	with some shortcomings	some flaws	without errors and flaws	
PC-16 Organize disinfection and disinsection of livestock premises to ensure veterinary and sanitary well-being in accordance with the plan of veterinary and sanitary measures, analyze the effectiveness of measures to prevent animal diseases in order to improve them					
PC-16 ID-1 Be able to evaluate the effectiveness of preventive measures and methods of their implementation, including with the help of end-to-end digital technologies	The level of knowledge is below the minimum requirements, gross errors have occurred	The minimum acceptable level of knowledge, many minor errors have been made	The level of knowledge corresponds to the training program, several minor errors have been made	The level of knowledge corresponds to the training program, no errors have been made	Seminar, Test, Term paper
PC-16 ID-2 Know the types of measures to ensure veterinary and sanitary safety and requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine Section	Basic skills were not demonstrated in solving standard tasks, and gross errors occurred	Basic skills have been demonstrated, typical problems have been solved with minor errors, all tasks have been completed, but not in full	All the basic skills have been demonstrated, all the main tasks have been solved with minor errors, all the tasks have been completed in full, but some with flaws	All basic skills have been demonstrated, all main tasks have been solved with some minor flaws, all tasks have been completed in full	Seminar, Test, Term paper

## **4. MATERIALS NECESSARY FOR THE ASSESSMENT OF KNOWLEDGE, SKILLS, ABILITIES, SKILLS AND WORK EXPERIENCE**

### **4.1 Typical tasks for current progress control**

#### **4.1.1 Tests**

**GPC - 1** Able to determine the biological status and normative clinical indicators of organs and systems of animal organism.

**GPC-1 ID-1** Know the safety technique and rules of personal hygiene when examining animals, methods of their fixation; schemes of clinical examination of the animal and the order of examination of separate systems of the organism, including with the help of digital technologies; methodology of recognition of pathological process.

#### **1. What does epizootology as a science study?**

1. The causative agents and immunologic aspects of infectious animal diseases.
2. Laws of emergence, development, spread and extinction of infectious animal diseases.
3. Obtaining livestock products of high sanitary quality.
4. General mechanisms of body defense against pathogens of infectious diseases.

#### **2. Which of the listed features distinguishes infectious diseases from non-infectious diseases?**

1. Presence of complications.
2. One-stage occurrence.
3. The presence of a specific causative agent of the disease.
4. Infectious disease is not able to be transmitted from healthy to sick person

#### **3. How is the continuity of the epizootic process ensured?**

1. Low level of veterinary and sanitary service.
2. Interaction of the three links of the epizootic chain.
3. Insufficient coverage of animals with preventive vaccinations.
4. Insufficient diagnostic tests

#### **4. What refers to the concept of "eradication of infectious disease"?**

1. elimination of an infectious disease within a large territory (country, continent).
2. Elimination of the source of the infectious agent, its transmission mechanism, and susceptible animals.
3. A high immune layer among animals susceptible to a given infectious agent.
4. Mass vaccination of susceptible animals

#### **5. What should be considered the source of the infectious agent?**

1. A place where the infectious agent is long-lasting and persistent.
2. An environment in which the infectious agent can persist, multiply and accumulate.
3. The natural habitat where the pathogen multiplies, multiplies, accumulates and is released into the external environment.
4. carcass of a dead animal

#### **6. What is meant by the term "virulence" of a microorganism?**

1. The degree of pathogenicity of a strain of a microorganism.
2. The ability to cause infection of animals.
3. The ability of the pathogen to multiply rapidly in an animal or human body.
4. The ability to grow rapidly on nutrient media



**7. Which definition refers to the primary drivers of the epizootic process?**

1. the source of the infectious agent.
2. The conditions under which the animals are kept.
3. Natural conditions.
4. Socio-economic factors

**8. Which definition correctly summarizes the concept of "mechanism of transmission of an infectious agent"?**

1. A set of objects in which an infectious agent can persist for long periods of time.
2. All elements of the external environment (living and non-living nature) involved in the transmission of an infectious agent, but are not their natural habitat.
3. The ability of a pathogenic microorganism, developed through evolution, to be transmitted from the source of the pathogen to a susceptible animal.
4. The ability of a pathogenic microorganism to persist for long periods of time on items used in the exploitation of animals.

**9. What is the first link in the epizootic process?**

1. epizootic focus.
2. the source of the infectious agent.
3. an infectious focus.
4. Secondary driving forces.

**10. Which link in the epizootic chain is determined to be the leading link in anthrax prophylaxis?**

1. The source of the infectious agent.
2. Mechanism of transmission.
3. The susceptible animal.
4. All three links in the epizootic chain are defined by leading.

**11. What is understood by the term enzootic?**

1. Prolonged persistence of the pathogen in soil, water.
2. The spread of infectious diseases among wild animals in a certain area.
3. the usual incidence of a disease in an animal population, its constant presence in a certain area.
4. The spread of an infectious disease over several countries, continents.

**12. What is meant by the term "Epizootic"?**

1. The occurrence of isolated cases of a disease in an animal population.
2. Mass spread of an infectious disease among animals.
3. The incidence of disease in animals that is peculiar to a given area.
4. Sporadic outbreaks of an infectious disease

**13. Which animals pose the greatest epizootic risk as a source of the infectious agent?**

1. With a severe course of the disease.
2. Bacterio- and virus carriers.
3. With a mild course of the disease.
4. Reconvalescent animals

**OPK-1 ID-2** Be able to collect and analyze anamnestic data, conduct laboratory and functional studies using digital computer technology necessary to determine the biological status of animals.

**14. Which of the listed diseases are quarantine infections?**

1. tuberculosis.
2. bovine emphysematous carbuncle.
3. leptospirosis
4. Brucellosis

**15. What actions are allowed during the period of quarantine imposition?**

1. Removal of animals to a specially equipped meat processing plant.
2. Export of animals for breeding and user purposes.
3. Movement of animals within the farm.
4. Acquisition of new animals by the farm.

**16. Who heads the work of the emergency anti-epizootic commission on localization and elimination of epizootic focus in especially dangerous infections?**

1. The district veterinary service.
2. Chief veterinarian of the farm.
3. The chairman of the PSC.
4. Chief veterinary surgeon of the district.

**17. Which definition refers to the concept of "secondary drivers of the epizootic process"?**

1. Mechanism of transmission of the infectious agent.
2. Natural and geographical factors.
3. Susceptible animal.
4. Source of the infectious agent.

**18. What is an "epizootic focus"?**

1. A group of calves among which diseased calves have been identified.
2. The intestine of a calf with salmonellosis.
3. The location of all three links in the epizootic chain and the transmission factors within which the infectious disease can spread.
4. The farm where there has been an outbreak of an infectious disease.

**19. Which example fits the definition of "infectious focus"?**

1. A group of calves among which diseased calves have been identified.
2. The intestine of a calf with salmonellosis.
3. A barn with sick animals in it.
4. A farm where there has been an outbreak of an infectious disease.

**20. What does the term "reservoir of an infectious agent" refer to?**

1. An infected animal organism in which the pathogenic microorganism persists, multiplies, and is released into the external environment
2. The entire set of factors involved in the transmission of an infectious agent under specific conditions, in a specific space and at a specific time.
3. a particular animal species that is susceptible to a pathogenic microorganism and ensures its existence in nature.
4. A set of animals, certain species of animals, that are natural hosts of a pathogenic microorganism and ensure its reproduction and existence in nature.

**21. What clinical signs are accompanied by the abortive form of the disease?**

1. Weakly expressed clinical signs.
2. Manifestation of abortions.

3. Sudden interruption of the course of the disease and recovery.
4. Overdisease with further carrier.

**22. Which treatment modality is a specific etiotropic therapy?**

1. antibiotic therapy.
2. Administration of hyperimmune serum.
3. The use of interferon.
4. Dietary therapy

**23. How are sick animals treated in an epizootic outbreak?**

1. treatment, slaughter/destruction.
2. Vaccination.
3. Daily clinical examination with thermometry.
4. Regrouping and forming a separate herd for isolation.

**GPC-1 ID-3** Possess practical skills to independently conduct clinical examination of an animal using classical research methods and digital technologies.

**24. What is allergy?**

1. A reaction that increases the sensitivity of cells and tissues of the organism
2. a response of a non-sensitized organism to repeated introduction of an allergen.
3. The response of a sensitized/infected organism to repeated administration of an allergen.
4. Increased immune response to the initial introduction of the allergen

**25. Which biologics are diagnostic?**

1. anatoxins.
2. bacteriophages.
3. allergens.
4. Vaccine strains.

**26. By what route is active natural immunity acquired?**

1. By spontaneous re-exposure to an infectious disease.
2. By administration of a vaccine.
3. Administration of hyperimmune serum or specific globulin.
4. Transmission of antibodies from mother to fetus.

**27. By what route is active artificial immunity created?**

1. By spontaneous re-exposure to an infectious disease.
2. By administration of a vaccine.
3. Administration of hyperimmune serum or specific globulin.
4. Transmission of antibodies from mother to fetus.

**28. What measures are taken to localize the infection?**

1. Establishment of quarantine.
2. Vaccination of animals in the epizootic focus.
3. Treatment of animals in the epizootic focus.
4. Destruction of animals

**29. What activities are carried out to eliminate infection?**

1. Establishment of quarantine.
2. Vaccination of animals in the epizootic focus.

3. Vaccination of animals in the threatened zone.
4. Treatment or destruction of animals in an epizootic focus.

**30. What issues does veterinary sanitation study?**

1. Zoohygienic conditions of animal housing and feeding.
2. Obtaining livestock products of high sanitary quality.
3. Mechanisms of transmission of infectious diseases common to humans and animals.
4. Treatment of the territory after the introduction of the pathogen
5. Correct 2

**31. Types of disinfection:**

1. Chamber, immersion.
2. Prophylactic, forced.
3. Wet, aerosolized.
4. Pre-launch, final.
5. Correct 2

**32. What is the purpose of disinfection?**

1. To destroy pathogenic microflora in the environment.
2. To destroy all forms of microorganisms in the environment.
3. To neutralize toxins produced by microorganisms in the environment.
4. To produce products of high veterinary and sanitary quality

**33. What activities are called disinsection?**

1. The destruction of microorganisms.
2. Destruction of harmful rodents.
3. Destruction of harmful insects, vectors of infectious diseases.
4. Elimination of unpleasant odors.

**34. What activities are called deratization?**

1. The destruction of microorganisms.
2. Destruction of harmful rodents, carriers and spreaders of contagious diseases.
3. Destruction of harmful insects.
4. Elimination of unpleasant odors.
5. Correct 2

**35. What activities are called deodorization?**

1. Destruction of microorganisms.
2. Destruction of harmful rodents.
3. Extermination of harmful insects.
4. Elimination of unpleasant odors.

**36. What products are used for deratization?**

1. Rathindane, phentolacin, "storm".
2. Gluck, metaphor, Glufar.
3. Carbophos, phosphamide, thuringin.
4. Fullerene-based drugs.

**37. Which method of manure disinfection is the most rational for non-spore-forming bacterial infections?**

1. chemical (application of 5% solution of technical sulfuric acid).
2. biothermal.

2. Biothermal.
3. Incineration.
4. By prolonged incubation in tanks.

**38. How is manure biothermally decontaminated?**

1. The manure is buried in the ground to a depth of at least 2 meters.
2. Manure is placed in a Beccari pit.
3. manure is placed in a pile.
4. Manure is decontaminated in a treatment plant.

**39. Which is the most efficient way to dispose of cadavers for non-spore-forming bacterial infections?**

1. Disposal in a Beccari pit.
2. Processing for meat and bone meal.
3. Incineration.
4. Burial in the ground.

**40. What are the different forms of trichophytosis:**

1. Superficial, deep, and erased.
2. Genital, ulcerative, and cutaneous.
3. Intestinal, pulmonary, and nervous.
4. Mixed, septic.

**GPC-6** Be able to analyze, identify and perform hazard assessment of the risk of disease emergence and spread:

**GPC-6 ID-1** Know existing programs for prevention and control of zoonotic diseases, contagious diseases, emergent or re-emerging infections, application of animal identification, tracer and control systems by appropriate veterinary services

**1. What are the main clinical signs of FMD?**

1. fever, jaundice of mucous membranes.
2. Aphthae on the oral mucosa, udder skin and other parts of the body.
3. ulcers on the skin of the vault of the hoof gap.
4. Necrosis of the eyeball.

**2. Which of the following is considered the most effective method of controlling FMD in our country?**

1. Animals are not immunized against FMD, but when it occurs, all susceptible animals are killed.
2. Animals are not vaccinated against FMD, and when FMD occurs in a FMD hotspot they are killed and ring vaccination is carried out around them.
3. Systematic prophylactic vaccination in certain areas, if FMD occurs - slaughter of patients with further ring immunization.
4. Universal vaccination in all regions of the Russian Federation.

**3. What diseases can foot-and-mouth disease be differentiated from?**

1. tuberculosis, brucellosis
2. Leptospirosis, Lestiriosis
3. Vesicular stomatitis, viral diarrhea
4. Trichophytosis, microsporia.

**4. How are animals with rabies treated?**

1. isolate and treat.
2. Slaughtered for meat.
3. Exterminate.
4. Send corpses for technical disposal.

**5. What are the main routes of rabies virus excretion from a sick animal?**

1. With saliva.
2. With urine.
3. With milk.
4. With feces

**6. What is the veterinary observation period for dogs that have bitten humans?**

1. 10 days.
2. 14 days.
3. 30 days.
4. 50-60 days.

**7. In what sequence do the stages in the process of pox formation appear?**

1. Roseola, papule, vesicle, pustule, scab.
2. Vesicle, papule, pustule, rozeola, scab.
3. Papule, rozeola, vesicle, scab, pustule.
4. Roseola, pustule, pustule, scab

**8. What animals are used for bioassay for Aujeszky's disease?**

1. Guinea pigs, hamsters.
2. Rabbits, cats.
3. Piglets, lambs.
4. Pigeons

**9. What are the main routes of infection in Aujeszky's disease?**

1. alimentary, transmissible.
2. Airborne, contact.
3. Intrauterine.
4. Contact

**10. What is the treatment for animals with Aujeszky's disease?**

1. Sulfonamide drugs and antibiotics.
2. Hyperimmune serum or gamma globulin and antibiotics.
3. Vaccine and antimicrobial agents (antibiotics and sulfonamides).
4. Dietary therapy

**11. What is the mechanism of transmission in malignant catarrhal fever?**

1. alimentary, aerogenic
2. Airborne, contact.
3. transmission mechanism is unknown.
4. transmissible

**12. Who is the causative agent of bovine spongiform encephalopathy?**

1. Viruses.
2. Prions.
3. Chlamydiae.

4. Fungi

**13. How are animals with spongiform encephalopathy treated?**

1. Destroy them.
2. Slaughtered for meat.
3. Isolate and treat.
4. Vaccinate.

**GPC-6 ID-2** Be able to conduct, including through digital technologies, risk assessment of animal diseases, including importation of animals and animal products and other activities of veterinary services, control of prohibited substances in animals, animal products and feed;

**14. The length of the incubation period for scrapie disease?**

1. 1 month.
2. 6 months.
3. 12 months or more.
4. 15 days.

**15. What laboratory diagnostic methods are used in bovine leukemia?**

1. Virological, serologic RDP, PCR
2. Hematologic, serologic and PCR.
3. Serologic, PCR and bioassay.
4. Bacteriologic.

**16. How are animals with leukemia treated?**

1. sick animals are isolated and treated with antibiotics.
2. Sick animals are isolated and vaccinated.
3. Sick animals are slaughtered for meat.
4. They are treated with hyperimmune serum.

**17. What are the main routes of infection in infectious rhinotracheitis of cattle?**

1. Aerogenic and by direct contact during mating.
2. Alimentary and by indirect contact.
3. transmissible and intrauterine.
4. Iatrogenic route

**18. Who is the causative agent of infectious bovine rhinotracheitis?**

1. Viruses.
2. Chlamydiae.
3. Rickettsiae.
4. Prions

**19. What are the main sources of bovine parainfluenza-3 pathogen?**

1. Sick and infected virus-carrying animals.
2. Animals vaccinated against parainfluenza.
3. carcasses of dead animals, infected fodder, milk and manure.
4. Work equipment

**20. What is the main route of infection in bovine parainfluenza-3?**

1. alimentary.
2. Through damaged mucous membranes.

3. Aerogenic.
4. transmissible

**21. How is viral bovine diarrhea diagnosed?**

1. Clinical and epizootic method, bioassay.
2. Clinical-epizootic, virological and serologic methods of examination of paired serum samples.
3. Clinical-epizootic and serologic methods.
4. Clinical-epizootic and microsocial methods

**22. What is the main route of infection in bovine viral diarrhea?**

1. transmissible, alimentary.
2. aerogenic.
3. Horizontal, vertical, airborne.
4. Intrauterine

**23. Which animals are susceptible to contagious ecthyma?**

1. horses, donkeys, mules.
2. Cattle.
3. sheep, goats, humans.
4. Pigs, camels.

**GPC-6ID-3** Possess the skills to carry out procedures for identification, selection and implementation of measures that can be used to reduce the level of risk

**24. What methods are used to diagnose contagious ecthyma?**

- 1 Epizootologic, clinical and laboratory methods.
2. epizootologic, clinical, and pathologic.
3. epizootologic, clinical, and allergic.
4. epizootologic, clinical and bioassay

**25. Who is the causative agent of visna maedi?**

1. Viruses.
2. Prions.
3. mycoplasmas.
4. Chlamydia

**26. Which biologics are used for specific prophylaxis of visna maedi?**

1. Vaccines.
2. Hyperimmune sera and globulins.
3. There are no specific means of prophylaxis.
4. Vaccines and hyperimmune sera

**27. Which vaccine is used against epididymitis of rams?**

1. REV-1 vaccine.
2. Vaccine from strain 82.
3. Vaccine from strain 19.
4. No vaccine

**28. Which animal species is the reservoir of the causative agent of leptospirosis?**

1. Wild animals and birds.
2. Animals vaccinated against leptospirosis.
3. Rodents and wild animals.
4. Pigeons



**29. When is a diagnosis of leptospirosis considered established?**

1. The urine of the animals is dark red in color, and increased bile pigments are found in the blood.
2. The appearance of aborted animals and retention of the afterbirth.
3. Positive PMA, the pathogen was isolated from the pathmaterial.
4. Positive result in bioassay

**30. What measures with regard to leptospirosis-infected animals are carried out in farms?**

1. Treatment of sick animals with globulin, streptomycin and tetracycline, vaccination of healthy animals.
2. Treatment of sick animals with polyvalent serum and streptomycin, tetracycline, vaccination of healthy animals.
3. Slaughter of all sick animals for meat, vaccination of healthy animals.
4. All sick and susceptible animals are sent to slaughter

**31. Which clinical signs are most characteristic of listeriosis?**

1. Diarrhea and emaciation.
2. encephalitis and abortion
3. Nervous manifestations, septicemia, fever, reproductive lesions.
4. Fever, diarrhea, hemorrhagic diathesis

**32. What does the form of clinical manifestation of listeriosis depend on?**

1. on the virulence of the pathogen, dose and route of infection.
2. on the fatness of animals.
3. The sex and age of the animals.
4. The state of resistance of the animal

**33. Which disinfectant is the most effective for routine disinfection for FMD?**

1. 4% sodium phenolate solution.
2. 3% caustic soda solution.
3. clarified bleach solution containing 2% active chlorine.
4. 10% clarified solution of bleach.

**34. What clinical signs are more common in bovine pasteurellosis?**

1. Rhinitis, bronchitis, tracheitis.
  2. Severe pneumonia, diarrhea
  3. Gastrointestinal tract involvement with diarrhea.
  4. Hemorrhagic skin diathesis
35. What means are used for etiotropic therapy of sick animals with listeriosis?
1. Serum against listeriosis, gammaglobulins.
  2. bacteriophages.
  3. Antibiotics.
  4. Vaccine therapy

**36. When is a diagnosis of leptospirosis considered established?**

1. The urine of the animals is dark red in color, the blood is found to have an increased content of bile pigments.
2. The appearance of aborted animals and retention of the afterbirth.
3. Positive PMA, the pathogen was isolated from the pathmaterial.
4. Positive result in bioassay

**37. How is a simultaneous test performed and with which allergens?**

1. Mammalian PPD tuberculin is injected on one side of the animal's neck and KAM or avian tuberculin allergen is injected on the other side.
2. KAM allergen is injected on one side of the animal's neck and avian tuberculin is injected on the other side.
3. KAM allergen is injected on one side of the animal's neck and medical tuberculin is injected on the other side.
4. One side of the animal's neck is injected with KAM allergen and the other side is injected with a double dose of Mammalian PPD tuberculin

**38. How is epizootologic control over the welfare of the farm for tuberculosis carried out?**

1. Based on serologic studies of animals.
2. By clinical examinations.
3. Based on allergic and pathomorphologic studies.
4. By serologic examination of blood serum

**39. How is manure from anthrax-infected animals treated?**

1. Incinerate.
2. Biothermally neutralized.
3. Subjected to chemical disinfection (technical sulfuric acid is used).
4. Subjected to self-purification and disposal in natural water bodies.

**40. What are the main methods used in the diagnosis of animal brucellosis?**

1. Clinical examinations.
2. Pathologoanatomical studies.
3. Serologic and allergic studies

**PC-11** Development of annual plan of anti-epizootic measures, plan of prevention of non-communicable animal diseases, plan of veterinary and sanitary measures

**PC-11 ID-1** Be able to collect and analyze information, including veterinary statistics data, necessary for planning preventive anti-epizootic measures, prevention of non-communicable animal diseases, veterinary and sanitary measures

**1. What is disinfection?**

1. All answers are correct
2. A complex system of measures aimed at preventing and eliminating infectious disease by destroying pathogenic pathogens on environmental objects and on the body of animals using various means.
3. Destruction of unpleasant odor (in refrigerators, meat processing plants and other food facilities).
4. Complex system of measures aimed at the prevention and elimination of infectious disease through the destruction of pathogenic and saprophytic pathogens on the objects of the external environment and on the body of animals by various means.

**2. What refers to the concept of specific prophylaxis?**

1. Carrying out special diagnostic studies and therapeutic and prophylactic measures
2. Carrying out diagnostic studies, therapeutic and preventive measures and immunoprophylaxis
3. Conducting therapeutic and prophylactic measures and immunoprophylaxis 3.
4. Diagnostic tests and immunoprophylaxis 3.

**3. Individual immunity is divided into:**

1. Passive and active
2. Passive and species
3. Passive, active and species-specific
4. active and species

**4. What is done with animals that did not respond to the first tuberculin injection or had a questionable response?**

1. Inject a higher dose of tuberculin
2. Consider the animal healthy and discontinue the tests
3. Inject tuberculin again in the same dose and in the same place.
4. No correct answer

**5. The length of the incubation period for anthrax is as follows**

1. 8-14 days
2. 1-3 days
3. 1.5 months
4. one day to one year

**6. Define the causative agent of anthrax**

1. Streptococcus
2. Bacillus
3. Diplococcus
4. Rickettsia

**7. What is characteristic and has peculiarities of the course of the infectious process in swine rye?**

1. Seasonality
2. Hypoallergenicity
3. unpredictability
4. No correct answer

**8. What is the main clinical sign in the benign course of swine rye?**

1. High fever
2. erythematous spots on the skin+
3. Enlargement of all superficial lymph nodes
4. Hyperemia of the auricles

**9. At what age do you start prophylactic vaccination of piglets against rye?**

1. 5 months
2. 4 months
3. 2 months
4. Piglets are not vaccinated

**10. What tests can be performed in the bacteriologic method of diagnosing an infectious disease?**

1. Microscopy of smear prints
2. study of phagocytic activity
3. Seeding in artificial nutrient media

4. Determination of antibody titer

**11. At what time blood samples are taken for research:**

1. In the morning before feeding;
2. At any time;
3. In the evening;
4. During the course of the planned anti-epizootic measures.

**12. What amount of blood should be taken from cows for serologic testing:**

1. 2-3 ml.
2. 5-7 ml.
3. 7-10 ml.
4. 15-20 ml.

**PC-11ID-2** Know the methods of collecting and analyzing information in veterinary planning, including the use of information databases

**13. Which method of preservation has a long shelf life for whey?**

1. 0.05-0.07 g of boric acid;
2. 1: 9 5% phenol solution;
3. 1-2 drops of heparin;
4. when dried on filter paper.

**15. What documents are drawn up when taking blood:**

1. act;
2. protocol;
3. lists of animals;
4. accompanying.

**16. What allergen is used for allergic diagnosis of sap?**

1. allergen;
2. anthraxin;
3. mallein;
4. tuberculin.

**17. Which allergy test is used to diagnose sap in one-horned animals?**

1. ocular;
2. percutaneous;
3. subcutaneous;
4. intradermal;

**18. The allergen used for allergic diagnosis of tuberculosis in pigs is?**

1. alt tuberculin;
2. tularin;
3. mallein and brucellin for mammals;
4. avian and bovine tuberculin;

**19. Which indicator is recorded in animals reacting to tuberculin during intradermal tuberculinization?**

1. sticking of the eyelids;
2. restlessness;
3. thickening of skin folds;
4. lacrimation, discharge and a "cord" of pus hanging from the inner corner of the eye;

**20. Which indicator is recorded in animals reacting to tuberculin during intradermal tuberculinization?**

1. gluing of eyelids;
2. restlessness;
3. thickening of skin folds;
4. lacrimation, discharge and a "cord" of pus hanging from the inner corner of the eye;

**21. Where is tuberculin injected during intradermal tuberculinization of cats?**

1. intrapalpebral to the upper eyelid;
2. in the jaw fold;
3. into the skin of the abdominal wall in the groin area;
4. in the area of the inner surface of the ear.
5. in the area of the outer surface of the ear;

**22. What is done with animals that did not react to the first injection of allergen during allergic diagnosis of brucellosis?**

1. inject the allergen into
2. the allergen is administered at a higher dose;
3. the animal is considered healthy and the study is terminated;
4. the allergen is reintroduced in the same dose and at the same site.

**23. What document is prepared at the completion of allergic diagnosis?**

1. research protocol;
2. report on the work done;
3. report;
4. list of reacting animals;

**24. Is ophthalmic test used for diagnosis of tuberculosis in cattle?**

1. it is the main method of diagnostics of tuberculosis in cattle;
2. as an auxiliary method of diagnosing tuberculosis in cattle.
3. no ophthalmic test is used
4. no correct answer

**25. In what infectious diseases is their allergic diagnosis by ophthalmic test developed?**

1. sap;
2. brucellosis;
3. tuberculosis;
4. foot-and-mouth disease;

**26. How is malleinization performed in cattle?**

1. by ophthalmic test only;
2. by subcutaneous injection of allergen;

3. internal skin injection of allergen;
4. not at all;

**27. What types of animals are subjected to mandatory annual tuberculinization in a TB-free farm?**

1. horses;
2. cattle;
3. pigs;
4. sheep;

**28. How long after tuberculinization is the reaction in pigs assessed?**

1. 72 hours
2. 48 hours;
3. 36 hours;
4. 24 hours.

**29. Name the recommended sites of intradermal cutaneous administration of tuberculin to production bulls.**

1. middle third of the neck;
2. inner surface of the thigh;
3. caudal fold;
4. lower eyelid;

**30. Not earlier than what time after the last vaccination is it recommended to perform tuberculinization in cattle?**

1. 1 week;
2. 2 weeks;
3. 3 weeks;
4. 1 month;

**31. When is allergy testing for equine tuberculosis performed?**

1. when tuberculosis is suspected in the horse population;
2. only at the age of 2 to 7 years;
3. in breeding farms;
4. tuberculinization in horses is not carried out at all.

**32. What is a simultaneous test for tuberculosis?**

1. when both vaccine and serum against tuberculosis are administered to an animal at the same time;
2. when tuberculin and CAM are administered sequentially to the animal at 9-12 hour intervals;
3. when tuberculin and CAM are administered simultaneously on both sides of the neck;
4. when an animal reacting to tuberculin is injected with CAM.

**33. How much thickening of the skin fold at the site of tuberculin injection in cows is considered a positive reaction.**

1. up to 0.1 cm;
2. 0.2 cm or more;
3. 0.3 cm or more;
4. 0.5 cm or more;

**34. Can the diagnosis of tuberculosis in a disease-free farm be considered established when reacting animals are detected during routine tuberculinization of cattle?**

1. can;
2. cannot;
3. it is possible if more than 25% of reacting animals are detected;
4. it is possible when the farm is located in a TB-affected area.

**35. In which animal species can avian tuberculin be used for allergic diagnosis of tuberculosis?**

1. rabbits;
2. sheep;
3. monkeys;
4. pigs;

**36. Avian alt tuberculin can be used for allergic diagnosis of which infectious disease?**

1. sap;
2. brucellosis;
3. tuberculosis;
4. no correct answer

**37. Which of the following materials may be sent to laboratories as pathologic material for virologic examination for infectious disease?**

1. milk;
2. blood serum;
3. vaccine;
4. tubular bone;

**38. Can feed be sent to the laboratory as pathologic material for diagnosis of an infectious disease?**

1. it is possible, if the disease is suspected to be virosis;
2. may be sent to the laboratory if the disease is suspected to be a mycosis;
3. it is possible if the disease is suspected to be mycotoxicosis;
4. cannot.

**39. At what time is it recommended to take pathologic material from animal carcasses for laboratory examination for infectious disease?**

1. as soon as possible after animal death;
2. 6-12 hours after animal death;
3. when postmortem changes in the body are already observed;
4. when the temperature of the cadaver tissue is nearly equilibrated with the temperature of the external environment.

**40. In what cases pathologic material is preserved when sending it to the laboratory for examination?**

1. when bacteriologic examination is necessary;

2. when it is necessary to conduct mycotoxicological examination;
3. when it is impossible to deliver the pathological material to the laboratory quickly;
4. when pieces of parenchymatous organs are sent to the laboratory.

**PC-13** Organization of measures to protect the organization from the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures:

**PC-13 ID-1** Know the types of measures to ensure veterinary and sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine;

**1. What is the recommended ratio between pathmaterial and preservative when sending preserved material?**

1. 1 : 1;
2. 1: 2;
3. 1 : 6;
4. 1 : 10;

**2. How can pathologic material sent to the laboratory for bacteriologic examination be preserved?**

1. in 30% aqueous solution and glycerin;
2. in 500 alcohol in 96° alcohol;
3. in 10% formaldehyde solution;
4. by freezing.

**3. An accompanying document is not written for pathologic material that is sent to the laboratory in which case?**

1. if there is a suspicion of infectious diseases common to animals and humans;
2. when pathologic material is delivered to the laboratory by hand;
3. when the pathologic material is delivered to the laboratory through the post office;
4. when pathologic material is delivered to the laboratory not later than 3 hours after its collection;

**4. Into what groups can be conditionally divided all pathologic material that is sent to the laboratory for examination?**

1. primary;
2. postmortem;
3. secondary;
4. lifetime.

**5. In which of the following diseases is autopsy of animal carcasses prohibited?**

1. rabies;
2. tuberculosis;
3. anthrax;
4. smallpox;

**6. In what cases is an epizootologic survey conducted?**

1. when an infectious disease occurs;
2. when an infectious disease is suspected;
3. in an infectious disease-free farm.
4. no correct answer

**7. How is an epizootologic survey formalized?**



1. by letter;
2. statement;
3. act;
4. leading.

**8. Give a definition of "disinfection"**

1. partial destruction of all living things in the environment;
2. destruction of pathogenic microorganisms and their toxins;
3. destruction of all living things in the environment;
4. a set of measures aimed at the destruction of pathogenic and opportunistic microorganisms in environmental objects.

**9. Give a definition of the concept of "disinfection".**

1. destruction of pathogenic microorganisms and products of their vital activity;
2. destruction of all living things in the environment;
3. destruction of pathogenic and opportunistic microorganisms.

**10. In what case is forced disinfection carried out?**

1. before quarantine is lifted;
2. before removal of restrictive measures;
3. before putting a livestock facility into operation;
4. when infectious diseases occur among animals.

**11. In what cases is current disinfection carried out in the livestock facility of the farm?**

1. when an infectious disease is detected among animals;
2. every time new infectious diseased animals are isolated;
3. every time a sick animal dies;
4. before putting livestock facilities into operation;

**12. In any case in the farm carry out final disinfection?**

1. after recovery of the farm (elimination of infectious disease);
2. before the next diagnostic test;
3. before quarantine or restrictive measures are lifted;
4. at the time of emergence of an infectious disease.

**13. In what case is prophylactic disinfection carried out?**

1. in unfavorable farms in the event of the emergence of an infectious disease?
2. before quarantine or restrictive measures are lifted;
3. in favorable farms in order to prevent infectious diseases;
4. in spring after the animals have been driven to summer camps;

**14. Name the environmental objects that can be objects of disinfection;**

1. vehicles for transportation of fodder, animals, manure, corpses;
2. premises for keeping animals and the theory around them.
3. manure, humus;
4. tools, overalls;

**15. What is the mechanism of disinfecting effect of alkali on a microbial cell?**

1. lysis of cytoplasm;
2. coagulation of proteins;

3. dehydration of the cell;
4. oxidation of proteins in the cell;

**16. What is the mechanism of the disinfecting effect of formaldehyde on a microbial cell?**

1. coagulation of proteins;
2. lysis of cytoplasm;
3. oxidation of proteins;
4. dehydration of the cell.

**17. What is the mechanism of disinfectant action of oxygen-containing compounds on a microbial cell?**

1. dehydration of the cell;
2. lysis of cytoplasm;
3. oxidation of proteins in the cell.
4. accumulation of water in the cell its swelling and rupture.

**18. In what cases can a biological method of disinfection be effective?**

1. when disinfecting manure;
2. when disinfecting livestock buildings;
3. when disinfecting wastewater;
4. disinfection of corpses in a biothermal pit;

**19. What factors determine the disinfecting effect of a disinfectant?**

1. the degree of resistance of microbes;
2. specificity of the selected substance;
3. concentration of the solution;
4. the temperature of the solution;
5. the pH of the medium;

**20. Name the three main methods of disinfection.**

1. biological;
2. technological;
3. chemical;
4. physical.

**21. What are the advantages of the physical method of disinfection?**

1. minimal environmental scale;
2. does not accumulate harmful residues in the environment;
3. acts only on pathogenic forms of microorganisms.

**22. Name the means of the physical method of disinfection.**

1. bleach;
2. ultraviolet rays;
3. ultrasound;
4. desiccation;

**23. Name the basic requirements for disinfectants.**

1. broad spectrum of antimicrobial action;
2. safety for humans and animals;
3. minimal corrosiveness;
4. easily soluble in water;

**24. How is formaldehyde used in disinfection?**

1. in the form of solutions
2. as aerosols
3. in a gaseous state
4. no correct answer

**24. What substances can be used in the form of an aerosol to disinfect rooms in the presence of animals and birds?**

1. hydrogen peroxide
2. lactic acid
3. sulfuric acid
4. formaldehyde

**25. What is the simplest and most effective method of disinfecting manure?**

1. chemical;
2. physical;
3. biothermal;
4. thermal.

**26. What is meant by the term "disinsection"?**

1. a system of prevention and control measures against ticks
2. destruction of insects in the environment
3. extermination of rodents
4. no correct answer

**27. What is meant by the term "decontamination"?**

1. extermination of rodents
2. a system of prevention and measures to control ticks
3. destruction of insects in the environment
4. no correct answer

**28. Test. What is meant by the term "deratization"?**

1. extermination of rodents in the environment;
2. destruction of insects in the environment;
3. a system of prevention and measures in the fight against ticks;
4. destruction of the environments of all living things.

**29. What methods of deratization do you know?**

1. combined
2. chemical
3. biological
4. mechanical

**30. What groups are divided into which pathogens of major infectious diseases by resistance to chemical disinfectants?**

1. resistant
2. low resistant
3. highly resistant
4. particularly resistant

**31. What is the purpose of disinfection?**

1. to increase the resistance of animals to an infectious disease
2. to destroy the source of infection
3. to break the epizootic chain at the "transmission mechanism" stage
4. no correct answer

**32. How often is prophylactic disinfection carried out in poultry farm conditions?**

1. 1. once a year;
2. 2. 2 times a year;
3. 3 times a year;
4. depending on the production cycle of the technological process.

**33. What are the varieties of preventive disinfection?**

1. pre-launch;
2. current;
3. final;
4. technological;

**34. When is current disinfection carried out in the farm?**

1. when there is a threat of infectious disease?
2. before putting the animals on winter stabling
3. when an infectious disease occurs
4. 1. once a quarter.

**35. What are the objectives of veterinary disinfection of livestock facilities?**

1. destruction of the number of opportunistic microorganisms
2. destruction of all microflora that is in the premises
3. destruction of pathogenic microorganisms and their toxins
4. destruction of only opportunistic microflora

**36. At what temperature in an autoclave are microorganisms destroyed?**

1. 70-90 deg. C
2. 100-110 deg C. C
3. 115-120 deg. C
4. 150-180 deg. C

**37. Which of the following are the three most used disinfectants in veterinary practice in Russia?**

1. caustic sodium
2. sulfa
3. calcium hypochlorite
4. formaldehyde

**38. Which drug solution can be used for aerosol disinfection of poultry houses in the presence of poultry?**

1. soda ash
2. sulfa
3. calcium hypochlorite
4. formaldehyde

**39. What groups of insecticides depending on the nature of action do you know?**

1. contact
2. fumigant
3. humoral
4. intestinal

**40. Which insecticides are called fumigant insecticides?**

1. insecticides that are destructive to insect larvae
2. insecticides that are harmful to sexually mature insects
3. insecticides that penetrate into the body of insects through the respiratory organs
4. preparations that repel insects.

**PC-14** Organization of prophylactic immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of measures to prevent animal diseases in order to improve them.

**PC-14ID-1** Be able to assess the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies.

**1. What insecticides are called repellents?**

1. insecticides that have a destructive effect on insect larvae;
2. insecticides that are harmful to sexually mature insects;
3. insecticides that penetrate insects through the respiratory system;
4. insecticides that repel insects;

**2. Which insecticides are called attractants?**

1. insecticides that have a detrimental effect on sexually mature insects
2. insecticides that penetrate into the insect body through the respiratory system
3. preparations that repel insects
4. insecticides that

**3. Which preparations are called acaricides?**

1. preparations that have a destructive effect on insect larvae
2. preparations that have a destructive effect on sexually mature insects
3. preparations that repel insects
4. preparations that have a destructive effect on mites

**4. Which drugs are called larvocides?**

1. preparations that are destructive to insect larvae;
2. preparations that are destructive to sexually mature insects;
3. preparations that penetrate into the body of insects through the respiratory organs;
4. preparations that repel insects;

**5. What drugs are called ovocides?**

1. preparations that have a destructive effect on insect larvae;
2. preparations that have a destructive effect on insect eggs;
3. preparations that penetrate into the body of insects through the respiratory system;
4. preparations that repel insects;
5. preparations that are destructive to mites.

**6. The use of what preparations can be considered a biological method of deratization?**

1. zoocoumarin
2. contracide

3. red sea onion
4. bactocoumarin.

**7. What groups of biologics do you know?**

1. therapeutic
2. diagnostic
3. astringents
4. oxidizing agents

**8. Which preparations can be classified as therapeutic biologics?**

1. hyperimmune blood serum
2. vitamins
3. anatoxins
4. immunoglobulins
5. apresini

**9. What indicators are used to control the quality of release of all types of biologics?**

1. sterility
2. biological activity
3. reactivity
4. harmlessness

**10. Which institution in Russia controls the release of biologics at biofactories?**

1. regional state laboratory of veterinary medicine
2. regional state laboratory of veterinary medicine
3. republican state laboratory of veterinary medicine
4. state research and control institute of veterinary drugs

**11. When sowing on artificial nutrient media, which biopreparation can be observed the growth of pure colonies of the vaccine strain of the pathogen?**

1. deposited vaccines
2. embryo-vaccines
3. live bacterial vaccines
4. anavaccines

**12. Name the possible routes of administration of live vaccines into animals.**

1. aerosol
2. enteral
3. parenteral
4. oral

**13. Which vaccines are called deprotected vaccines?**

1. a vaccine that contains formalin
2. a vaccine that contains ad'juvant
3. a vaccine that is used to make hyperimmune blood sera
4. a vaccine that has three or more components.

**PC-14ID-2** Know the procedure for clinical examination of animals when planning preventive measures.

**14. State the advantages of inactivated vaccines over live vaccines.**

1. possibility to make the preparation in lyophilized form
2. stability of properties
3. high safety
4. high immunogenic activity

**15. What are the disadvantages of inactivated vaccines?**

1. low dose of administration;
2. possibility of virulence reversion;
3. complicated manufacturing technology;
4. possibility of contamination by foreign viruses;

**16. How can anaphylactic shock be prevented when serum is administered to an animal?**

1. by administering 3-5 mL of serum a day before the entire dose of the drug is administered.
2. by administering 3-5 ml 3-4 days prior to the administration of the entire dose of the drug
3. by administering sedatives along with the serum
4. no correct answer

**17. What is the name of the animals used to produce hyperimmune sera?**

1. production animals
2. reconstitution animals
3. laboratory animals
4. all answers are correct

**18. For what purpose can biologics such as bacteriophages be used?**

1. as a highly specific diagnostic agent
2. for the treatment of animals in some bacterial infections
3. for the prevention of infectious diseases of viral nature
4. for quality control of vaccine strains of bacteria

**19. In what infectious diseases is interferon used?**

1. bacteremias;
2. viroses;
3. mycoses;
4. mycotoxicoses;

**20. What is specific prevention of infectious disease?**

1. a special system of measures aimed at preventing the emergence of a certain (specific) infectious disease;
2. implementation of general therapeutic and prophylactic measures;
3. prophylaxis by improving animal housing and feeding conditions;
4. carrying out diagnostic tests for the purpose of diagnosis.

**21. What is meant by veterinary biologics?**

1. drugs that are used to treat sick animals in the practice of veterinary medicine;
2. means that are used to diagnose animal diseases of contagious and noncontagious pathology;
3. means of biological origin, which are used for diagnosis, treatment and prevention of infectious diseases, as well as for increasing animal productivity;
4. preparations made from microorganisms, products of their vital activity, or from organs and tissues of animals.

**22. What preparations can be used for prophylactic purposes?**

1. vaccines
2. bacteriophages
3. anatoxins
4. sera

**23. What are vaccines?**

1. preparations that are used for diagnostic purposes;
2. specific antigenic preparations prepared from microorganisms, products of their vital activity, on the introduction of which the body forms immunity to the corresponding infectious disease;
3. pharmacological substances that activate the functions of the organism as a whole or its individual systems (used to increase the resistance of the animal organism and stimulate growth);
4. biopreparations used to identify infected animals in order to isolate them from the group as early as possible and prevent the spread of infectious disease;

**PC-14 ID-3** Know the types of anti-epizootic measures and requirements for their implementation in accordance with guidelines, instructions, manuals, rules of diagnostics, prevention and treatment of animals.

**24. For what purpose are bacteriophages used in veterinary medicine?**

1. for diagnostics of contagious and noncontagious animal diseases;
2. for treatment of infectious animals;
3. for the production of vaccines;
4. for the prevention of infectious animal diseases;
5. to diagnose infectious animal diseases.

**25. What can be referred to diagnostic preparations?**

1. immunoglobulin
2. diagnostic sera
3. interferon
4. allergens

**26. How long before vaccination should the animals be clinically examined?**

1. one day in advance;
2. 7 days in advance;
3. 5 hours in advance;
4. a clinical examination of the animal is performed prior to vaccination.

**27. Which groups of animals should be vaccinated when an infectious disease occurs?**

1. Clearly sick animals suspected of having animal disease
2. clinically healthy animals
3. only animals that are kept in stalls
4. animals suspected of being sick

**28. What should be done with vaccine residues in vials after vaccination is completed?**

1. decontaminate by freezing;
2. decontaminate by boiling or autoclaving;
3. add 1% NaOH and pour into the sewage system;
4. store at 4-6 degrees (under refrigerated conditions) for trace vaccination.

**29. What are simultaneous immunizations?**

1. administration of a vaccine into the animal's body;



2. administration of blood serum into the animal;
3. simultaneous administration of vaccine and blood serum into the animal;
4. administration of vaccine together with immunostimulants.

**30. Which of the following animal conditions may be a contraindication to vaccination?**

1. first half of pregnancy
2. debilitating disease
3. second half of pregnancy
4. first two weeks after birth

**31. In what cases are active safety vaccinations given?**

1. in farms unfavorable for infectious disease, but in the absence of sick animals;
2. when an infectious disease appears on the farm, only in clinically healthy animals;
3. in farms free of infectious disease in case of threat of introduction of the causative agent from neighboring unfavorable farms;
4. when infectious disease occurs on the farm only in animals that have had contact with sick animals but have normal body temperature.

**32. In what cases are active forced vaccinations carried out?**

1. in farms unfavorable for infectious disease, but in the absence of sick animals
2. when an infectious disease appears in the farm, only in clinically healthy animals
3. in farms free of infectious disease, when there is a threat of introduction of the causative agent of the disease from neighboring unfavorable farms
4. when infectious disease appears on the farm, only animals that have had contact with sick animals but have normal body temperature.

**34. In what cases passive therapeutic vaccination is performed?**

1. in farms unfavorable for infectious disease, but in the absence of sick animals;
2. when infectious disease is present on the farm, only in clinically healthy animals;
3. in farms free from infectious disease in case of threat of introduction of the causative agent from neighboring unfavorable farms;
4. in case of the emergence of an infectious disease in the farm, only animals that have clinical signs of the disease.

**35. What method is allowed to disinfect needles and syringes for vaccination:**

1. boiling;
2. with bleach containing 5% active chlorine;
3. 10% hot caustic chlorine solution
4. no correct answer

**36. Which animals are not vaccinated against anthrax and rye:**

1. with elevated body temperature;
2. weak and emaciated animals;
3. in the last period of pregnancy;
4. in the first days after birth;

**37. What documents are drawn up by a veterinary medicine doctor when performing vaccinations:**

1. act;
2. lists of animals;
3. protocol;

4. medical history.

**38. For what purpose are immunizations performed:**

1. to increase immunologic reactivity;
2. to increase natural resistance;
3. building immunity;
4. diagnosis of infectious diseases.

**39. What is the correct way to administer hyperimmune serum in a dose of 200-500 mL or more:**

1. heated;
2. cooled
3. do not conduct;
4. no value.

**PC-16** Organization of disinfection and disinsection of livestock premises to ensure veterinary and sanitary well-being in accordance with the plan of veterinary and sanitary measures, analysis of the effectiveness of preventive measures.

**PC-16 ID-1** Be able to assess the effectiveness of preventive measures and methods of their implementation, including through end-to-end digital technologies of animal diseases in order to improve them

**1. Specify the main tasks of a veterinary medicine specialist when working with infectious sick animals and infectious material.**

1. prevent human infection
2. prevent overinfection of animals
3. prevent the spread of infection
4. no correct answer

**2. Indicate for which sick animals, in addition to entries in the sick animal registry, a medical history is made.**

1. for all sick animals;
2. on infectious sick animals;
3. on parasitic sick animals;
4. sick with non-communicable diseases;
5. on especially valuable, pedigree or highly productive animals.

**3. For what purpose are isolation centers built at veterinary medicine hospitals and livestock complexes?**

1. for quarantine of newly imported animals;
2. for vaccination of animals;
3. for keeping and hospital treatment of infectious and sick animals;
4. for isolation of healthy animals from infectious ill animals;

**4. At what distance should the isolator be located from livestock buildings?**

1. not closer than 50 m;
2. not closer than 200 m;
3. no closer than 400 meters;
4. no further than 500 meters.

**5. Specify the methods of keeping animals in the isolation center.**

1. on deep, unchanged bedding;

2. tethered only;
3. in individual boxes;
4. in group looms.

**6. Which animals are kept in a quarantine facility?**

1. animals with unclear clinical signs of infectious disease;
2. infectious ill animals with a single diagnosis of disease;
3. animals to be sent for slaughter after tuberculinization;
4. animals newly introduced to the farm.

**7. Where does the chief veterinarian of the farm make a record of the occurrence of an infectious disease on the farm?**

1. in the journal of registration of anti-epizootic measures of the farm;
2. in the register of sick animals;
3. in the journal of epizootic state of the farm;
4. in the journal of epizootic condition of the district.

**8. Who owns the idea that all sciences carry the grist to the mill of epidemiology (epizootology)?**

1. K.I. Skryabin
2. Stalibrass
3. R.Koch
4. No one.

**9. General epizootology studies:**

1. Laws and general categories of epizootology
2. Epizootic process and morbidity
3. Basics of the development of epizootic and infectious processes
4. All answers are correct

**10. Private epizootology studies:**

1. infectious diseases of animals
2. epizootologic features of certain contagious diseases
3. non-infectious diseases
4. epizootic process

**11. Which of the following scientists made a major contribution to the development of epizootology?**

1. L.V. Gromashevsky, I.I. Elkin
2. S.N.Vyshelessky, M.S.Gannushkin
3. S.N.Soshevsky, I.E.Mozgov
4. All scientists

**12. Which of the historical concepts turned out to be correct?**

1. The miasmatic theory
2. contagium vivum theory
3. All theories are correct
4. None of the theories are correct

**13. Whose names symbolize the discovery of contagious diseases?**

1. L. Pasteur, R. Koch, I. I. Mechnikov.
2. Levenhuk, Paracelsus, E. Jenner.
3. Hippocrates and Fracastoro
4. All of the above

**14. Which discovery belongs to E. Jenner?**

1. Variolation
2. Vaccination
3. attenuation of microbes
4. All the discoveries belong to him

**15. The discovery of the role of microbes in fermentation processes and the refutation of the idea of the self-generation of life belongs to:**

1. R. Koch
2. J. Lister
3. P. Ehrlich
4. L. Pasteur

**16. The Henle-Koch triad defines:**

1. the etiologic role of the microbe
2. Whether a disease belongs to the category of contagious disease
3. Contagiousness of the disease
4. No correct answer

**17. Which microbe was first discovered as an infectious agent?**

1. Mycobacterium tuberculosis
2. Bacillus anthracis
3. Rabies virus
4. No correct answer

**18. Who laid the foundation for epidemiologic analysis?**

1. M. Pettenkofer
2. R. Koch
3. J. Snow
4. J. Lister

**19. What was the most important scientific discovery in microbiology made by L. Pasteur?**

1. The possibility of culturing bacteria
2. attenuation of pathogens
3. Vaccination
4. miasm theory

**20. Which of the following vaccines brought L. Pasteur the most fame? Pasteur?**

1. Anthrax
2. Against chicken cholera
3. Against rabies
4. None of the above

**PK-16 ID-2** Know the types of measures to ensure veterinary and sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine

**21. What achievements in microbiology belong to R. Koch?**

1. Creation of vaccines
2. Development of nutrient media and methods of staining bacteria
3. antiseptics
4. None of the following

**22. Who discovered viruses?**

- 1.L. Pasteur
- 2.D.I. Ivanovsky
3. I.I. Mechnikov
4. None of the above

**23. In what year was the discovery of the**

- 1.1898
- 2.1892
- 3.1872
4. Date of discovery not known

**24. What scientific discovery did I.I. Mechnikov make?**

1. therapeutic properties of sera
2. anatoxins
3. Phagocytosis
4. None of the following

**25. Who formulated the humoral theory of immunity?**

1. P. Ehrlich
2. L. Pasteur
3. I.I. Mechnikov
4. None of the above

**26. Who discovered the therapeutic properties of serums?**

1. P. Ehrlich
2. E. Behring, S. Kitazato
3. G. Ramon
4. None of the above

**27. To whom does the discovery of anatoxins belong?**

1. to L. Pasteur
2. P. Elich
3. G. Ramon
4. None of the above

**28. S.N.Vyshelessky developed measures to eliminate:**

1. Sapa
2. FMD
3. Newcastle disease
4. Soap

**29. In the first years of Soviet power in our country were eliminated:**

1. Foot and mouth disease and CSF

2. Plague and contagious pleuropneumonia of cattle
3. Aujeszky's disease
4. Newcastle disease

**30. Which infections became widespread in the post-war period?**

1. Aujeszky's and Newcastle diseases
2. tuberculosis and brucellosis
3. Leukosis and diarrhea in cattle
4. Plague and contagious pleuropneumonia of cattle

**31. What fundamentally new categories of infections have been promoted by the creation of large livestock complexes?**

1. chronic infections
2. acute epizootic infections
3. mass pneumoenteritis of young animals
4. All of the above

**32. What is health as defined by WHO (World Health Organization)?**

1. A state of complete physical, mental and social well-being
2. the absence of disease or physical defects
3. both are acceptable
4. Neither option is appropriate

**33. In the most general definition, a disease is:**

1. A pathological condition
2. A state of reduced vitality due to any cause
3. Disease
4. All options are correct

**34. The determinants of disease are:**

1. Primary and secondary internal and external factors of diverse nature
2. Factors that directly cause pathogenic action
3. Agents of contagious diseases
4. No correct answer

**35. Internal primary and secondary determinants of disease include:**

1. Infectious agents and parasites
2. Stressors, radiation, and allergens
3. Genetic constitution, metabolism, behavior
4. All answers are correct

**36. External primary determinants of disease include:**

1. Terrain, climate, stressors
2. Infectious agents and parasites
3. immune status
4. Functional status

**37. External secondary determinants of disease include:**

1. trauma, climate
2. Housing, feeding, exploitation
3. Chemicals (deficiencies, excesses)

4. Imbalances, allergens

**38. What is a nosologic form (unit)?**

1. a specific disease in nomenclature and classification
2. A contagious (infectious) disease
3. All answers are correct
4. No correct answer

**39. What is a microbiome?**

1. A collection of microorganisms in the environment
2. Specific microbiocenosis in animal populations
3. A population of a pathogen
4. No correct answer

**40. Opportunistic pathogens are:**

1. All opportunistic pathogenic microorganisms
2. Nonpathogenic microbes that cause disease when the body's resistance is reduced
3. The causative agents of all endogenous infections
4. Causes of all exogenous infections

**4.1.2. Approximate topics of course projects (works) on discipline "Epizootology and infectious diseases"**

**GPC - 1** Able to determine the biological status and normative clinical indicators of organs and systems of animal organism

**GPC-1 ID-1** Know the safety technique and rules of personal hygiene during the examination of animals, methods of their fixation; schemes of clinical examination of the animal and the order of examination of separate systems of the organism, including with the help of digital technologies; methodology of recognition of pathological process.

**GPC-1 ID-2** Be able to collect and analyze anamnestic data, conduct laboratory and functional studies with the help of digital computer technologies necessary to determine the biological status of animals.

**GPC-1 ID-3** Possess practical skills to independently conduct clinical examination of an animal using classical research methods and digital technologies.

**GPC-6** Be able to analyze, identify and carry out hazard assessment of the risk of disease emergence and spread:

**GPC-6 ID-1** Know existing programs for prevention and control of zoonoses, contagious diseases, emergent or re-emerging infections, application of animal identification, tracing and control systems by relevant veterinary services;

**GPC-6 ID-2** Know how to conduct, including through digital technologies, risk assessment of animal diseases, including importation of animals and animal products and other activities of veterinary services, control of prohibited substances in animals, animal products and feed;

**GPC-6 ID-3** Possess the skills to carry out procedures for identification, selection and implementation of measures that can be used to reduce the level of risk.

**PC-11** Develop an annual plan of anti-epizootic measures, a plan of prevention of non-communicable diseases of animals, a plan of veterinary and sanitary measures

**PC-11 ID-1** Know how to collect and analyze information, including veterinary statistics, necessary for planning preventive anti-epizootic measures, prevention of non-communicable animal diseases, veterinary and sanitary measures.

**PC-11 ID-2** Know the methods of collecting and analyzing information for veterinary planning, including the use of information databases.

**PC-13** Organization of measures to protect the organization from the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures:

**PC-13 ID-1** Know the types of measures to ensure veterinary and sanitary safety and requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine;

**PC-14** Organize prophylactic immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analyze the effectiveness of measures to prevent animal diseases in order to improve them:

**PC-14 ID-1** Know how to evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies;

**PC-14 ID-2** Know the procedure of clinical examination of animals when planning preventive measures;

**PC-14 ID-3** Know the types of anti-epizootic measures and requirements for their implementation in accordance with guidelines, instructions, instructions, rules of diagnostics, prevention and treatment of animals.

**PC-16** Organize disinfection and disinsection of livestock premises to ensure veterinary and sanitary well-being in accordance with the plan of veterinary and sanitary measures, analyze the effectiveness of measures to prevent animal diseases in order to improve them

**PC-16 ID-1** Be able to evaluate the effectiveness of preventive measures and methods of their implementation, including with the help of end-to-end digital technologies

**PC-16 ID-1** Know how to assess the effectiveness of preventive measures and methods of their implementation, including through the use of end-to-end digital technologies

**PC-16 ID-2** Know the types of measures to ensure veterinary and sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine.

#### **Full-time**

1. General and specific prophylaxis of tuberculosis of cattle on the farm
2. Recovery of fur farm in case of tuberculosis occurrence
3. General and specific prophylaxis of cattle leukosis in a farm.
4. Prevention of infectious diseases of piglets
5. Health improvement measures in case of colibacillosis of calves
6. Diagnosis of anaerobic enterotoxemia of sheep
7. Elimination measures for African swine fever
8. Prophylactic measures in horse sapa
9. Preventive measures in case of swine rye on private farms
10. Carrying out preventive anti-epizootic measures in a circus
11. Preventive measures against ASF at a closed pig farm
12. Prevention of brucellosis in a sheep breeding farm
13. Antiepzootic measures in case of detection of brucellosis on the farm
14. Prevention of acute viral respiratory diseases of cattle
15. General and specific prophylaxis of rabies in farm animals
16. System of elimination of natural foci of rabies in ..... district ..... region
17. Health and prophylactic measures in the elimination of rabies outbreak in a populated area
18. Complex diagnostics of canine adenovirolosis
19. organization of prophylaxis of infectious diseases of horses in the equestrian school
20. Specific prevention of foot-and-mouth disease in the border area
21. Anti-epizootic measures in the shop of breeding stock at the poultry farm.
22. Features of the clinical course of brucellosis in the breeding sheep farm, diagnostic studies
23. Preventive measures against urogenital mycoplasmosis of cattle



24. Recovery of fur farm in case of myxomatosis of rabbits
25. Preventive measures against leptospirosis of horses.
26. Specific prophylaxis of AHPS in the border area
27. Prophylaxis of infectious rhinotracheitis of cattle
28. System of elimination of natural foci of rabies in the Republic of Karelia.
29. General and specific prophylaxis of bovine leukosis in LPHs
30. Analysis of anti-epizootic measures in an enterprise (any form of ownership) that is free from major infectious diseases.
31. Recovery of a fish farm at the occurrence of carp pox
32. Antiepidemic measures in case of bird ornithosis
33. Features of disinfection measures at African swine fever
34. Health and preventive measures for infectious anemia of horses
35. Features of the clinical course of arthritic encephalitis of goats in a breeding goat farm, diagnostic studies
36. Epizootologic features and anti-epizootic measures in viral diarrhea of cattle
37. General and specific prophylaxis of parainfluenza-3 of cattle
38. Features of clinical course of bovine chlamydia, diagnostic studies
39. Prevention of respiratory mycoplasmosis of cattle
40. General and specific prophylaxis of actinobacillus pleuropneumonia of pigs
41. Features of the clinical course of infectious mastitis in the breeding livestock farm, diagnostic studies
42. System of therapeutic and prophylactic measures for escherichiosis of calves (piglets)
43. Epizootologic features, clinical manifestation and diagnosis of leptospirosis of cattle
44. Diagnostic features and restrictive measures in points unfavorable for tuberculosis of animals
45. Scheme of recovery of farms unfavorable for brucellosis of cattle, sheep (goats), pigs, fur-bearing animals.
46. Features of anti-epizootic measures for anthrax in reindeer. 47.
47. Schemes of restrictive, veterinary and sanitary, organizational and economic measures for leptospirosis, carried out in unfavorable breeding, user and fattening farms, breeding enterprises, kennels of service dog breeding.
48. General and specific measures for prevention of listeriosis in animals, scheme of recovery of uninfected farms
49. Clinical and epizootologic features of animal pasteurellosis manifestation depending on serotype affiliation of the pathogen
50. General and specific prophylaxis of necrobacteriosis of cattle (reindeer). 51.
51. Measures taken to eliminate reservoirs of pathogens and prevent infection of farm animals in areas of stationary epizootic tularemia foci
52. Methods and means of complex therapy and specific immunoprophylaxis of salmonellosis
53. Measures of general and specific prophylaxis of salmonellosis in animals and humans
54. Methods of treatment and measures of prophylaxis of emcarus
55. Epizootologic features and diagnostic studies in paratuberculosis of cattle.

### List of questions for credit Section "General epizootology"

**GPC - 1** Able to determine the biological status and normative clinical indicators of organs and systems of animal organism

**GPC-1 ID-1** Know the safety technique and rules of personal hygiene when examining animals, methods of their fixation; schemes of clinical examination of the animal and the order of

examination of separate systems of the organism, including with the help of digital technologies; methodology of recognition of pathological process.

1. Specific prophylaxis and its role in the elimination of infectious diseases. Methods and organization of mass vaccination (aerosol, oral, needle-free), their advantage and application.

2. The mechanism of action of various disinfectants on the causative agents of infectious diseases. New preparations for disinfection.

3. Alkaline disinfectants, preparation of working solutions and rules of their use.

**GPC-1 ID-2** Be able to collect and analyze anamnestic data, conduct laboratory and functional studies using digital computer technology necessary to determine the biological status of animals.

4. Types and methods of disinfection. Characterize them.

5. Reservoir of the infectious agent. The source of the infectious agent. Ways of isolation and introduction of the infectious agent.

6. epizootic process - definition. The intensity of the epizootic process and how it is determined.

**GPC-1 ID-3** Possess practical skills to independently conduct clinical examination of the animal using classical methods of research and digital technologies.

7. Storage of biopreparations, their transportation, quality determination. Documentation of inoculations, rules of destruction of remaining biopreparation.

8. Disinsection. Chemical method of disinsection. Characteristics of insecticidal drugs and the mechanism of their action. The system of measures in disinfestation and protection of animals from the attack of insects - carriers of infectious agents.

9. Define the infectious process and infection. How are infectious processes divided by course and origin?

**GPC-6** Be able to analyze, identify and assess the danger of the risk of the emergence and spread of diseases:

**GPC-6 ID-1** Know existing programs for prevention and control of zoonotic diseases, contagious diseases, emergent or re-emerging infections, application of animal identification, traceability and control systems by appropriate veterinary services;

10. What are the general prophylactic and specific measures and what are their differences? Their importance in the prevention of contagious diseases.

11. What is natural immunity and how is it created? Artificial immunity. Types of artificial immunity and its role in the system of measures.

12. List the methods of epizootology and give their content.

**GPC-6 ID-2** Be able to carry out, including with the help of digital technologies, risk assessment of animal diseases, including the import of animals and animal products and other activities of veterinary services, to control prohibited substances in the body of animals, animal products and feed;

13. Formaldehyde as a disinfectant. Forms of its use, indications, contraindications.

14. What is the basis of bactericidal action of bleach? Rules for working with bleach, forms of its use, preparation of working solutions.

15. What is the essence of restrictive measures and how they differ from quarantine. Quarantine and quarantine.

16. Diagnosis of infectious diseases - list the basic rules and methods of diagnosis.

**GPC-6 ID-3** Possess practical skills to independently conduct clinical examination of the animal using classical methods of research and digital technologies.

17. Define types of infection according to the method of infection. Characterize the infectious process.

18. Organization of mass vaccinations. Indications and contraindications, general measures when conducting vaccinations. Documentation.

19. Mechanism of transmission and ways of spread of the infectious agent. How do the pathways of transmission of the pathogen on the intensity of the epizootic process.

20. Quality control of disinfection, importance in the system of measures.
21. What defines the concept of disinfection? Its importance in the system of preventive and health measures in infectious diseases.
22. What are simple and mixed infection and varieties of the latter?
23. List the types of immunity and define what is species immunity to disease.
24. Characterize the diagnostic allergy test and its importance in diagnosing and determining the epizootic situation
25. Allergens, staging and record keeping of allergy tests.
26. Chlorine-containing preparations and oxidizing agents used for disinfection.
27. Epizootic process, how is it defined, what does it consist of? Characterize the links of the epizootic chain.
28. The role and modern methods of disinfection in the system of anti-epizootic measures in industrial type farms.
29. Peculiarities of animal treatment in infectious diseases.
- PC-11** Development of an annual plan of anti-epizootic measures, a plan of prevention of non-communicable diseases of animals, a plan of veterinary and sanitary measures
- PC-11 ID-1** Be able to collect and analyze information, including veterinary statistics data, necessary for planning preventive anti-epizootic measures, prevention of non-communicable animal diseases, veterinary and sanitary measures.
30. Etiotropic, pathogenetic and symptomatic treatment.
31. What does the concept of deratization include? The importance of deratization in the fight against infectious diseases.
32. Chemical method of extermination of rodents. Characteristics of the main raticidal preparations. Methods of their application. Safety precautions.
- PC-11 ID-2** Know the methods of collecting and analyzing information in veterinary planning, including the use of information databases.
33. Features of prevention of infectious diseases in animal breeding complexes.
34. Classification of vaccines used. The role of vaccination in the system of preventive and anti-epizootic measures.
35. Characterize immune sera and other biological preparations.
- PC-13** Organization of measures to protect the organization from the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures:
- PC-13 ID-1** Know the types of measures to ensure veterinary and sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine;
36. Protection of the farm from the introduction of the infectious agent from outside. Preventive quarantine.
37. Foci of infections. Types of epizootic foci (epizootic, stationary, natural, anthropurgic), their importance in the occurrence of epizootics.
38. Ways of expressing the intensity of the epizootic process (morbidity, mortality, lethality, lesions). Methods of determination and evaluation.
- PC-14** Organization of prophylactic immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of measures to prevent animal diseases in order to improve them:
- PC-14 ID-1** Be able to assess the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies;
39. Objectives of epizootologic examination (welfare survey, diagnosis, development of preventive measures plan, etc.). Procedure and rules of epizootologic examination.
40. Dynamics of the epizootic process, characterization of its stages.
2. Alkalies and acids used for disinfection 2.

**PC-14 ID-2** Know the procedure of clinical examination of animals when planning preventive measures;

3. Infection and disease. On what depends the development, acuteness and severity of the course of infectious disease.

4. Rules of selection and preservation of samples for serological, bacteriological, virological, toxicological studies. Documentation.

5. The importance of laboratory research in the diagnosis of infectious diseases depending on the type of pathogen. Stages.

**PC-14 ID-3** Know the types of anti-epizootic measures and requirements for their implementation in accordance with guidelines, instructions, manuals, rules of diagnosis, prevention and treatment of animals.

6. Sanitary cleaning of the area. Its role in the system of preventive and forced measures.

7. Isolator, its structure and provision. Rules of work with sick animals.

8. List serologic reactions used for the diagnosis of infectious diseases. What these reactions are based on.

**PC-16** Organization of disinfection and disinsection of livestock premises to ensure veterinary and sanitary well-being in accordance with the plan of veterinary and sanitary measures, analysis of the effectiveness of measures to prevent animal diseases in order to improve them

9. The purpose and importance of mass serologic studies in epizootology.

Complex method of treatment of infectious ill animals with the use of specific

**PC-16 ID-1** Be able to assess the effectiveness of preventive measures and methods of their implementation, including through the use of end-to-end digital technologies

10. Determination of disinfection quality. Bacteriological method. Method of indicator tubes.

11. Peculiarities of methods of diagnostics of infectious diseases of animals.

12. Serological reactions and organization of mass serological studies. Registration of documents for sending blood samples to the laboratory.

13. Veterinary and sanitary processing of vehicles.

Allergic diagnostic tests and organization of mass allergic studies.

**PC-16 ID-2** Know the types of measures to ensure veterinary and sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine

14. Aims and tasks of epizootologic survey of the farm.

15. Biological preparations, their classification, rules of transportation and assessment of suitability for use.

16. General and special prophylactic measures in farms free from infectious diseases of animals.

17. Individual and group methods of immunization of animals.

18. Quarantine and restrictive measures in farms unfavorable for infectious diseases of animals. Activities in the threatened zone. Registration of documents

19. Mechanisms and apparatuses used for disinfection.

### **Section "Private epizootology and infectious diseases" 8 semester - full-time form**

**GPC - 1** Able to determine the biological status and normative clinical indicators of organs and systems of the animal organism.

**GPC-1 ID-1** Know the safety technique and rules of personal hygiene in the examination of animals, methods of their fixation; schemes of clinical examination of the animal and the procedure for the study of individual systems of the body, including with the help of digital technologies; methodology of recognizing the pathological process.

1. Measures in the epizootic focus of anthrax.

2. Treatment prevention and elimination of anthrax.

3. System of preventive measures in brucellosis-free farms and settlements.

4. Prevention and elimination of tuberculosis.

**GPC-1 ID-2** Be able to collect and analyze anamnestic data, conduct laboratory and functional studies using digital computer technologies necessary to determine the biological status of animals.

5. Diagnosis, prevention and elimination of swine rye.

6. Methods of diagnosis of foot and mouth disease.

7. Measures in stationary unfavorable points and threatened areas for anthrax.

**GPC-1 ID-3** Possess practical skills to independently conduct clinical examination of the animal using classical methods of research and digital technologies.

8. Recovery measures in brucellosis-unfavorable farms.

9. Diagnosis, prevention and elimination of classical swine fever.

10. Anaerobic enterotoxemia of lambs: clinical signs, diagnosis, prevention and elimination.

**GPC-6** Able to analyze, identify and carry out hazard assessment of the risk of disease emergence and spread:

**GPC-6 ID-1** Know existing programs for prevention and control of zoonoses, contagious diseases, emergent or re-emerging infections, application of animal identification, tracing and control systems by appropriate veterinary services;

11. Procedures for establishing and removing restrictions in tuberculosis-affected sheep farms.

12. Procedure for establishing and removing restrictions in brucellosis-unfavorable livestock farms.

13. Complex laboratory methods of rabies diagnostics.

**GPC-6 ID-2** Be able to carry out, including with the help of digital technologies, risk assessment of animal diseases, including import of animals and animal products and other activities of veterinary services, to control prohibited substances in the body of animals, products of animal origin and feed;

14. The procedure for establishing and removing restrictions in TB-unfavorable LPHs.

15. Procedure for establishing and removing restrictions in sheep breeding farms unfavorable for brucellosis.

16. Laboratory diagnostics for anthrax. Timing of examination (microscopic, bacteriologic, bioassay).

**GPC-6 ID-3** Be proficient in identification procedures, selection and implementation of measures that can be used to reduce the level of risk.

17. Allergic diagnostic test in mass vaginal examinations for tuberculosis.

18. Health measures for tuberculosis in a disadvantaged farm (livestock, swine, sheep, fur farm, poultry).

19. The procedure for establishing and removing restrictions in TB-unfavorable pig farms.

**PC-11** Development of an annual plan of anti-epizootic measures, a plan of prevention of non-communicable diseases of animals, a plan of veterinary and sanitary measures

20. Preventive and recovery measures for rabies regulated by the current Regulations.

21. Procedure for establishing and removing restrictions in fur farms unfavorable for tuberculosis.

22. Diagnosis of tuberculosis by bioassay.

**PC-11 ID-1** Be able to collect and analyze information, including data of veterinary statistics, necessary for planning preventive anti-epizootic measures, prevention of non-communicable animal diseases, veterinary and sanitary activities

23. Differential diagnosis of ASF, CSF and swine rust.

24. Etiology, diagnostics and measures of FMD control in modern conditions.

25. Laboratory and epizootologic diagnostics of brucellosis.

**PC-11 ID-2** Know the methods of collecting and analyzing information in veterinary planning, including the use of information databases

26. Control measures and specific prophylaxis of brucellosis.

27. Recovery measures for foot-and-mouth disease.

28. Epizootologic control over the welfare of the farm for tuberculosis.

**PC-13** Organization of measures to protect the organization from the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures:

**PC-13 ID-1** Know the types of measures to ensure veterinary and sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine;

29. Rules of transportation and sampling in bacterial diseases.

30. Rules of transportation and sampling in viral diseases.

31. Application of the simultaneous test in the diagnosis of tuberculosis in different species of animals.

**PC-14** Organization of prophylactic immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of measures to prevent animal diseases in order to improve them:

**PC-14 ID-1** Be able to assess the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies;

32. Epizootologic features of brucellosis in different types of animals.

33. Control measures and specific prophylaxis of CSF.

34. Antiepidemic measures in the epizootic focus of ASF.

**PC-14 ID-2** Know the procedure of clinical examination of animals when planning prophylactic measures;

35. Antiepidemic measures in the first threatened zone at ASF.

36. Antiepidemic measures in the second threatened zone in case of ASF. 37.

37. Clinical signs of ASF, CSF, swine rust.

38. Currents of ASF, CSF, swine rust.

**PC-14 ID-3** Know the types of anti-epizootic measures and requirements for their implementation in accordance with guidelines, instructions, instructions, rules of diagnosis, prevention and treatment of animals.

39. Properties of pathogens of ASF, CSF, swine rust.

40. General and specific prophylaxis for anthrax.

41. The role of CSF in ensuring the welfare of Russian territories from anthrax

42. Epizootologic and epidemiologic projection of brucellosis.

**PC-16** Organization of disinfection and disinsection of livestock premises to ensure veterinary and sanitary well-being in accordance with the plan of veterinary and sanitary measures, analysis of the effectiveness of measures to prevent animal diseases in order to improve them

**PC-16 ID-1** Be able to assess the effectiveness of preventive measures and methods of their implementation, including through the use of end-to-end digital technologies

43. Modern methods of rabies control.

44. Prevention of rabies in wild fauna is a guarantee of epizootic well-being.

**PC-16 ID-2** Know the types of measures to ensure veterinary and sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine

45. Etiology and diagnosis of clastridiosis.

46. Classification of clastridioses.

47. The importance of vaccine prophylaxis in the system of anti-epizootic measures and ensuring persistent epizootic well-being.

**Exam questions**  
**9 semester - full-time**

**GPC - 1** Able to determine the biological status and normative clinical indicators of organs and systems of animal organism

**GPC-1 ID-1** Know the safety technique and rules of personal hygiene in the examination of animals, methods of their fixation; schemes of clinical examination of the animal and the order of research of separate systems of the organism, including with the help of digital technologies; methodology of recognition of pathological process.

1. Give the definition of epizootology as a science, list its components.
2. Distinguish between contagious diseases and noncontagious diseases.
3. Human protection from infection when working with infectious and sick animals.
4. Epizootologic method of diagnostics.
5. Define infectious process and infectious disease.
6. What are immunizing subinfection, inapparent and latent infection?
7. Infection and disease. On what depends the development, acuteness and severity of the course of infectious disease.
8. Forms of course of infectious disease
9. What are simple and mixed infections? Varieties of mixed infections.
10. Give the definition of epizootic process.
11. List the links of the epizootic chain and characterize them.
12. The source of the infectious agent. Ways of excretion of the pathogen from the body of the infected animal. Reservoir of the infectious agent.
13. Ways to influence the source of the pathogen to stop the epizootic process.
14. What is the mechanism of transmission? What does it consist of?
15. How do pathways of pathogen transmission affect the intensity of the epizootic process?
16. Methods of influencing the mechanism of transmission to stop the epizootic process.
17. Susceptible animal - characterize the third link in the epizootic chain.
18. Possible ways to influence the susceptible animal to control the epizootic process.
19. Intensity of the epizootic process. How it is expressed and what it depends on.
20. Morbidity, mortality, lethality. Method of determination.
21. Extensive indicators of the epizootic process.
22. Dynamics of the epizootic process, characterization of its stages.
23. Driving forces of the epizootic process.

**GPC-1 ID-2** Be able to collect and analyze anamnestic data, conduct laboratory and functional studies using digital computer technologies necessary to determine the biological status of animals.

24. Epizootic foci - their types (natural, anthropurgic, synanthropic) and their role in the occurrence of epizootics.
25. Epizootic foci - their types (fresh, fading, stationary)
26. Diagnosis of infectious diseases: name the features and list the methods of diagnosis.
27. Serologic reactions used for diagnostics of infectious diseases. What are these reactions based on?
28. The purpose of mass serologic studies.
29. Blood sampling from animals of different species, obtaining and preserving serum.
30. Allergic diagnostic test. Its importance in the diagnosis and determination of the epizootic situation.
31. Allergens used for diagnostics of infectious diseases. What is included in their composition?

32. Intradermal allergic diagnostic test (for the diagnosis of which diseases is used, allergen injection, reaction record).
33. Eye allergy diagnostic test (for the diagnosis of which diseases it is used, allergen injection, reaction record).
34. Intravenous allergic diagnostic test (allergen administration, reaction record).
35. Non-specific allergic reactions (anergy, paraallergy, pseudoallergy), their differentiation from specific allergy.
36. Rules of selection and preservation of samples of pathmaterial. Sampling during life and after death of an animal.

**GPC-1 ID-2** Be able to collect and analyze anamnestic data, conduct laboratory and functional studies using digital computer technologies necessary to determine the biological status of animals.

37. Aims and objectives of epizootologic examination in a farm free from infectious diseases. Procedure and rules of conducting it.
38. Aims and objectives of epizootologic examination in a farm unfavorable for infectious diseases. Procedure and rules of conducting.
39. Composition of the commission when conducting epizootologic examination, writing the act of examination.
40. Characterize the epizootic focus, unfavorable point, threatened zone. What does the size of the threatened zone depend on?
41. What is the essence of restrictive measures, how do they differ from quarantine measures?
42. Quarantine and quarantine, give a definition.
43. Measures to protect farms from the introduction of the pathogen from outside.
44. List the types of immunity. What is species immunity?
45. What is natural immunity and how is it created?
46. Artificial immunity, its types and its role in the system of anti-epizootic measures.
47. Mechanism and types of active immunity.
48. Mechanism and types of passive immunity.
49. Classification of vaccines in use. The role of vaccination in the system of anti-epizootic measures.
50. Advantages and disadvantages of vaccine prophylaxis. Its role in the prevention and elimination of infectious diseases.
51. Organization of mass vaccinations.
52. Advantages and disadvantages of different methods of vaccine administration.
53. Indications and contraindications for vaccination. How to protect animals not subject to vaccination in conditions of compulsory measures? Vaccine therapy. Vaccine prophylaxis in wildlife settings.
54. Characterize immune sera and other biologicals used for treatment and passive immunization.
55. Storage and transportation of biologics, quality control. Documentation of inoculations, rules for destruction of residues of biologics.
56. Types of vaccines depending on the state of the antigen included in their composition.
57. Features of treatment of animals with infectious diseases. Directions of treatment.
58. Biological preparations used for etiotropic treatment of animals with infectious diseases.
59. Disinfection - its importance in the system of anti-epizootic measures. Quality control.
60. Meaning, principles and methods of quality control of disinfection.

**GPC-1 ID-3** Possess practical skills to independently conduct clinical examination of an animal using classical research methods and digital technologies.

61. What is the difference between disinfection and sterilization, decontamination, deodorization, disinfestation.



62. Modern methods of disinfection and their role in the system of anti-epizootic measures in industrial type farms.
  63. Types and methods of disinfection. Characterize them.
  64. Requirements for disinfectants.
  65. The essence of the aerosol method of disinfection. Examples of the use of chemicals in the form of aerosols.
  66. Determination of ADV in disinfectants and the methods of determination used.
  67. What disinfectants belong to the group of reducing agents?
  68. Formaldehyde as a disinfectant. Forms of its application, modes of disinfection (concentration, temperature, flow rate).
  69. Disinfectants from the group of alkalis. Preparation of working solutions and rules of their use.
  70. Disinfectants from the group of oxidizers. Rules for working with bleach, disinfection modes (concentration, temperature, flow rate).
  71. Means and procedure for disinfection and disinsection in the presence of animals.
  72. Disinsection. Chemical method of disinsection. Characteristics of insecticidal preparations, their use and mechanism of action.
  73. Disinsection. Organization of mass treatment of animals against insects - vectors of infectious diseases.
  74. Objects of disinsection and deratization, Significance of disinsection and deratization in the fight against infectious diseases
  75. Chemical method of extermination of rodents. Characteristics of the main raticidal preparations preparation of baits. Organization and carrying out of measures.
- GPC-6** Able to analyze, identify and carry out hazard assessment of the risk of disease emergence and spread:
- GPC-6 ID-1** Know existing programs for prevention and control of zoonoses, contagious diseases, emergent or re-emerging infections, application of animal identification, tracing and control systems by appropriate veterinary services;
76. Methods of utilization of animal carcasses fallen from infectious diseases, methods of incineration of carcasses, manure, biowaste.
  77. Cremators, utilizers, Beccari pits, their device and application.
  78. Methods of disinfection of manure from infectious diseased animals.
  79. The importance of disinfection, disinsection and deratization in the complex of anti-epizootic measures.
  80. What refers to general prophylactic measures. Their importance in the prevention of contagious diseases.
  81. Specific prevention of infectious diseases? Its importance in the prevention of contagious diseases and differences from general prophylactic measures.
  82. What is the difference between general and specific prophylaxis of infectious diseases?
  83. Anthrax: etiology, pathogenesis, diagnostic methods.
  84. Anthrax: recovery measures.
  85. Anthrax: general and specific preventive measures.
  86. Foot-and-mouth disease: etiology, pathogenesis, diagnostic methods.
- GPC-6 ID-2** Be able to carry out, including with the help of digital technologies, risk assessment of animal diseases, including import of animals and animal products and other activities of veterinary services, to control prohibited substances in the body of animals, animal products and feed;
87. Foot and mouth disease: recovery measures on the farm.
  88. Foot and mouth disease: general and specific preventive measures.
  89. System of measures to combat foot-and-mouth disease in Russia. General and specific measures in the epizootic focus, unfavorable point, threatened zone.
  - 90.

90. Foot-and-mouth disease: peculiarities of its manifestation in different animal species and diagnostic methods.
  91. Tuberculosis: etiology, pathogenesis, diagnostic methods.
  92. Tuberculosis: scheme of diagnosis in a previously prosperous farm.
  93. Tuberculosis: methods and system of health improvement measures for tuberculosis in different types of animals.
  94. Tuberculosis: system of preventive measures.
  95. Brucellosis: etiology, pathogenesis, methods of diagnostics.
  96. Methods of diagnostics of brucellosis of animals and their comparative evaluation. Criteria by which the diagnosis is considered established.
  97. Brucellosis: general and specific prophylaxis. The importance of vaccination in the system of measures.
  98. Brucellosis: possible ways of recovery, systems of measures for different types of animals.
  99. Dermatomycoses: etiology, pathogenesis, diagnostic methods, differential diagnostics.
- GPC-6 ID-3** Possess the skills of identification procedures, selection and implementation of measures that can be used to reduce the level of risk.
100. Dermatomycoses: health improvement measures. Vaccine therapy in animals of different species.
  101. Dermatomycoses: preventive measures.
  102. Rabies: etiology, pathogenesis, diagnostic methods.
  103. Rabies: selection of pathmaterial, methods of laboratory diagnostics and their characterization.
  104. Rabies: health measures in case of occurrence in the farm.
  105. Rabies: profilact
  106. Aujeszky's disease: etiology, pathogenesis, diagnostic methods.
  107. Aujeszky's disease: recovery measures. General and specific preventive measures.
  108. Classical swine fever: etiology, pathogenesis, methods of diagnosis.
  109. Classical swine fever: recovery measures in case of occurrence in the farm. General and specific preventive measures.
- PC-11** Development of annual plan of anti-epizootic measures, plan of prevention of non-communicable animal diseases, plan of veterinary and sanitary measures.
- PC-11 ID-1** Be able to collect and analyze information, including veterinary statistics data, necessary for planning preventive anti-epizootic measures, prevention of non-communicable animal diseases, veterinary and sanitary activities
110. African swine fever: etiology, pathogenesis, diagnostic methods, differential diagnosis in ASF CSF and swine rye.
  111. African swine fever: recovery measures in case of occurrence in the farm. Measures in the first and second threatened zones.
  112. African swine fever: preventive measures.
  113. Swine rye: etiology, pathogenesis, diagnostic methods.
  114. Swinepox: health measures in case of occurrence in the farm. General and specific preventive measures.
  115. Leptospirosis: etiology, pathogenesis, diagnostic methods. General and specific preventive measures.
- PC-11 ID-2** Know the methods of collecting and analyzing information in veterinary planning, including the use of information databases.
116. Leptospirosis: diagnosis and preventive measures in case of occurrence in the farm.
  117. Clastridiosis: etiology, pathogenesis, diagnostic methods, health improvement and preventive measures.
  - 118.

118. Protection of the borders of the Russian Federation from the introduction of infectious diseases.
  119. Distinguishing contagious diseases from noncontagious diseases.
  120. List the methods of diagnosis of infectious diseases and characterize them.
  121. Epizootologic method of diagnosis.
  122. How are infectious processes divided by course and origin? h
  123. Define the types of infection by means of infection. Characterize the periods of development of infectious disease.
  124. Forms of the course of infectious disease. What do they depend on?
- PC-13** Organization of measures to protect the organization from the introduction of infectious and invasive diseases in accordance with the plan of anti-epizootic measures:
- PC-13 ID-1** Know the types of measures to ensure veterinary and sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine;
125. What are simple and mixed infections? Varieties of mixed infections.
  126. List the links of the epizootic chain and characterize them.
  127. Source of the infectious agent. Ways of excretion of the pathogen from the body of an infected animal.
  128. Ways to influence the source of the pathogen to stop the epizootic process.
  129. The device and purpose of the isolator in the conditions of modern animal husbandry.
  130. Reservoir of the infectious agent.
  131. What is the mechanism of transmission? What does it consist of?
  132. How do pathways of transmission of the pathogen affect the intensity of the epizootic process?
  133. Methods of influencing the mechanism of transmission to stop the epizootic process.
  134. Susceptible animal - characterize the third link of the epizootic chain.
- PC-14** Organization of prophylactic immunizations (vaccinations), therapeutic and preventive treatments of animals in accordance with the plan of anti-epizootic measures, analysis of the effectiveness of measures to prevent animal diseases in order to improve them:
- PC-14 ID-1** Be able to assess the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies;
135. Possible ways to influence a susceptible animal in the epizootic process.
  136. Indicators of intensity of the epizootic process. How do pathways of pathogen transmission affect the intensity of the epizootic process?
  137. Morbidity, mortality, lethality. Method of determination.
  138. Extensive indicators of the epizootic process.
  139. Dynamics of the epizootic process, characterization of its stages.
  140. Driving forces of the epizootic process.
  141. Characterize the epizootic focus, unfavorable point, threatened zone. What does the size of the threatened zone depend on?
  142. The purpose of mass serologic research.
  143. The composition of the commission when conducting an epizootologic survey. Commission for epizootologic examination.
- PC-14 ID-2** Know the procedure for clinical examination of animals when planning preventive measures;
144. What is the essence of restrictive measures, how do they differ from quarantine measures? .
  145. Characterize immune sera and other biological preparations used for treatment and passive immunization.
  146. Physical methods and means of disinfection and their practical applications.
  147. Requirements for

147. Requirements for disinfectants.
148. The essence of the aerosol method of disinfection. Examples of the use of chemicals in the form of aerosols.
149. Formaldehyde as a disinfectant. Forms of its application, modes of disinfection (concentration, temperature, flow rate).
- PC-14 ID-3** Know the types of anti-epizootic measures and requirements for their implementation in accordance with guidelines, instructions, manuals, rules of diagnostics, prevention and treatment of animals.
150. What is the bactericidal effect of bleach based on? Rules for working with bleach, disinfection modes (concentration, temperature, flow rate).
151. Leukosis of cattle. Epizootology, diagnostics, prophylaxis, control measures.
152. Pasteurellosis.- Epizootology, diagnostics, prophylaxis, control measures. 153.
153. Plague of cattle.- Epizootology, diagnostics, prophylaxis, control measures. 154.
154. Malignant catarrhal fever.- Epizootology, diagnostics, prophylaxis, measures of struggle.
155. Infectious rhinotracheitis.- Epizootology, diagnostics, prophylaxis, control measures.
156. Parainfluenza-3.- Epizootology, diagnosis, prophylaxis, control measures.
157. Viral diarrhea of cattle.- Epizootology, diagnostics, prophylaxis, control measures.
- PC-16** Organization of disinfection and disinsection of livestock premises to ensure veterinary and sanitary well-being in accordance with the plan of veterinary and sanitary measures, analysis of the effectiveness of measures to prevent animal diseases in order to improve them
- PC-16 ID-1** Be able to assess the effectiveness of preventive measures and methods of their implementation, including with the help of end-to-end digital technologies.
158. Paratuberculosis.- Epizootology, diagnostics, prophylaxis, control measures. 159.
159. Spongiform encephalopathy of cattle.- Epizootology, diagnostics, prophylaxis, control measures. 160.
160. Slow infections (prion infections).- Epizootology, diagnosis, prophylaxis, control measures.
161. Myt.- Epizootology, diagnosis, prophylaxis, control measures.
162. Infectious anemia of horses.- Epizootology, diagnostics, prophylaxis, control measures.
- PK-16 ID-2** Know the types of measures to ensure veterinary and sanitary safety and the requirements for their implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine.
163. Sap.- Epizootology, diagnostics, prophylaxis, control measures.
164. Epizootic lymphangitis.- Epizootology, diagnosis, prophylaxis, control measures.
165. Contagious ecthyma.- Epizootology, diagnostics, prophylaxis, control measures.
166. Infectious mastitis.- Epizootology, diagnostics, prophylaxis, control measures.

## 5.      **METHODICAL MATERIALS DETERMINING THE PROCEDURES OF ASSESSMENT OF KNOWLEDGE, SKILLS AND EXPERIENCE OF ACTIVITY CHARACTERIZING THE STAGES OF COMPETENCE FORMATION**

Criteria for assessing the knowledge of students during testing:

The result of testing is evaluated on a percentage rating scale. Each student is offered a set of test tasks of 25 questions:

- **Mark "excellent"** - 25-22 correct answers.
- **The mark "good"** - 21-18 correct answers.
- **The mark "satisfactory"** - 17-13 correct answers.
- **Unsatisfactory" mark** - less than 13 correct answers.

Criteria for assessing the knowledge of students in the course work:

- **Mark "excellent"** - the problem is identified and its relevance is justified; analysis of different points of view on the problem under consideration is made and own position is logically stated; conclusions are formulated, the topic is fully disclosed, the volume is maintained; requirements for external design are met, the basic requirements for the abstract are fulfilled
- **Mark "good"** - there are defects. In particular, there are inaccuracies in the presentation of the material; there is no logical consistency in the judgments; the volume of the abstract is not maintained; there are omissions in the design, there are significant deviations from the requirements for abstracting.
- **The mark "satisfactory"** - the topic is covered only partially; there are factual errors in the content of the abstract; there are no conclusions, the topic of the abstract is not disclosed.
- **The mark "unsatisfactory"** - there is a significant lack of understanding of the problem or the abstract is not presented at all.

Knowledge criteria for the credit:

- **A grade of "pass"** must meet the parameters of any of the positive grades ("excellent", "good", "satisfactory").
- **A grade of "pass"** should correspond to the parameters of the "unsatisfactory" grade.
- **The mark "excellent"** - all types of academic work provided by the curriculum. The student demonstrates the compliance of knowledge, skills, abilities, skills given in the tables of indicators, operates the acquired knowledge, skills, abilities, skills, applies them in situations of increased complexity. At the same time, there may be inaccuracies, difficulties in analytical operations, transfer of knowledge and skills to new, non-standard situations.
- **The mark "good"** - all types of academic work provided by the curriculum. The student demonstrates the compliance of knowledge, skills, abilities, skills given in the tables of indicators, operates the acquired knowledge, skills, abilities, skills, applies them in standard situations. There may be minor errors, inaccuracies, difficulties in analytical operations, transfer of knowledge and skills to new, non-standard situations.
- **The mark "satisfactory"** - one or more types of academic work provided by the curriculum are not fulfilled. The student demonstrates incomplete compliance of knowledge, skills, skills given in the tables of indicators, significant errors are made, there is a partial lack of knowledge, skills, skills for a number of indicators, the student has significant difficulties in operating knowledge and skills in their transfer to new situations. -
- **Mark "unsatisfactory"** - not fulfilled types of academic work provided by the curriculum. demonstrates incomplete compliance of knowledge, skills, skills given in the tables of indicators, there are significant errors, shows the lack of knowledge, skills, skills in a number of indicators, the student has significant difficulty in operating knowledge and skills in their transfer to new situations.

Criteria of knowledge in the examination:

- **Mark "excellent"** - all types of academic work provided for in the curriculum. The student demonstrates the conformity of knowledge, skills, abilities, skills given in the tables of indicators, operates the acquired knowledge, skills, abilities, skills, applies them in situations of increased complexity. At the same time, there may be inaccuracies, difficulties in analytical operations, transfer of knowledge and skills to new, non-standard situations. -
- **Mark "good"** - all types of academic work envisaged by the curriculum have been completed. The student demonstrates the compliance of knowledge, skills, abilities, skills given in the tables of indicators, operates the acquired knowledge, skills, abilities, skills, applies them in standard

situations. There may be minor errors, inaccuracies, difficulties in analytical operations, transfer of knowledge and skills to new, non-standard situations.

- **The mark "satisfactory"** - one or more types of academic work provided by the curriculum are not fulfilled. The student demonstrates incomplete compliance of knowledge, skills, skills given in the tables of indicators, significant errors are made, there is a partial lack of knowledge, skills, skills for a number of indicators, the student has significant difficulties in operating knowledge and skills in their transfer to new situations. -

- **Mark "unsatisfactory"** - not fulfilled types of academic work provided by the curriculum. demonstrates incomplete compliance of knowledge, skills, skills given in the tables of indicators, significant errors are made, shows the lack of knowledge, skills, skills in a number of indicators, the student has significant difficulty in operating knowledge and skills in their transfer to new situations.

## **6. ACCESSIBILITY AND QUALITY OF EDUCATION FOR PERSONS WITH DISABILITIES**

If necessary, disabled people and persons with disabilities are given additional time to prepare an answer at the test.

When conducting the procedure for assessing the learning outcomes of persons with disabilities and persons with disabilities may use their own technical means.

The procedure for assessing the learning outcomes of persons with disabilities and persons with disabilities in the discipline provides information in forms adapted to the limitations of their health and perception of information:

For persons with visual impairments: - in printed form in enlarged font, - in the form of an electronic document.

For persons with hearing impairments: - in printed form, - in the form of an electronic document.

For persons with musculoskeletal disorders: - in printed form, - in the form of an electronic document:

- in the form of an electronic document.

When carrying out the procedure for assessing the results of training of persons with disabilities and persons with disabilities in the discipline provides the following additional requirements depending on the individual characteristics, students:

a) instruction on the procedure of evaluation procedure is provided in an accessible form (orally, in writing);

b) an accessible form of providing tasks of assessment means (in printed form, in printed form in enlarged font, in the form of an electronic document, tasks are read out by the teacher);

c) an accessible form of providing answers to the tasks (written on paper, a set of answers on a computer, orally).

If necessary, for students with disabilities and persons with disabilities the procedure of assessment of learning outcomes in the discipline can be conducted in several stages. The procedure of assessment of learning outcomes for disabled students and persons with disabilities is allowed using distance learning technologies.

