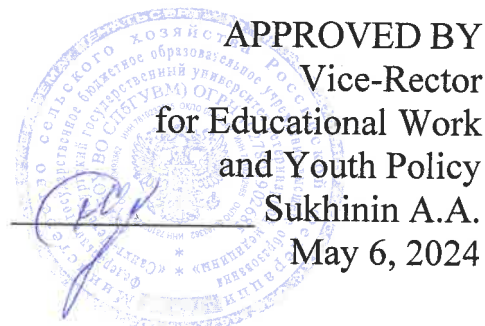


Документ подписан простой электронной подписью
Информация о владельце:
ФИО: Сухинин Александр Александрович
Должность: Проректор по учебно-воспитательной работе
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Ministry of Agriculture of the Russian Federation
Federal State Budgetary Educational Institution
Of Higher Education
"St. Petersburg State University veterinary medicine"



Department of Parasitology named after V.L. Yakimov

EDUCATIONAL WORK PROGRAM

for the discipline

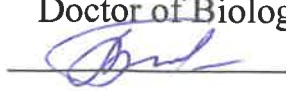
"PARASITOLOGY AND INVASIVE DISEASES OF ANIMALS"

**The level of higher education
SPECIALIST COURSE**

**Specialty 36.05.01 Veterinary Medicine
Full-time education**

Education starts in 2024

Reviewed and adopted
at the meeting of the department
on May 2, 2024.
Protocol No. 9

Head Department of Parasitology named after V.L. Yakimov,
Doctor of Biological Sciences
 L.M. Belova

Saint Petersburg

2024

1. AIMS AND OBJECTIVES OF THE DISCIPLINE

The main goal of the discipline is to give students theoretical and practical knowledge on issues related to parasitic diseases of animals, to instill clinical and practical work skills, and to contribute to the formation of a comprehensively trained agricultural specialist.

To achieve this goal, it is necessary to solve the following tasks:

a) The general educational task is to in-depth familiarize students with the structure of the animal body and provide fundamental biological education in accordance with the requirements for higher educational institutions of biological profile.

b) The applied task covers issues related to the morphology, biology, epizootology of pathogens of parasitic diseases and the development of the principles of development of treatment and preventive measures for parasitic diseases.

c) The special task is to familiarize students with modern methods for diagnosing parasitic animal diseases. As well as existing achievements in this area.

2. THE LIST OF PLANNED TRAINING RESULTS ACCORDING TO THE DISCIPLINE (MODULE), CORRELATED WITH THE PLANNED RESULTS OF MASTERING THE EDUCATIONAL PROGRAM

As a result of mastering the discipline, the student prepares for the following types of activities, in accordance with the educational standard of the FSE on 36.05.01 "Veterinary Medicine".

The field of professional activity:

13 Agriculture

2.1. The student's competencies formed (acquired) as a result of mastering the discipline

The education of the discipline should form the following competencies:

A) General professional competencies (GPC):

GPC-6.

Is able to analyze, identify and assess the risk danger of the occurrence and spread of the disease

GPC-6ID-1

To know: existing programs for the prevention and control of zoonosis, contagious diseases, emergent or newly emerging infections, the use of animal identification systems, trace and control by the relevant veterinary services

GPC-6ID-2

To be able to: assess the risk of animal diseases, including the import of animals and animal products and other measures of veterinary services, the control of prohibited substances in the body of animals, animal products and feed;

GPC-6ID-3

To possess skills to: conduct identification procedures, select and implement measures that can be used to reduce the risk level

B) Professional competencies:

Type of tasks prof. activity: medical

PC-5

To carry out plan of animal treatment, based on the stated diagnosis and animals individual characteristics, signature of necessary remedies of chemical and biological nature for the treatment, taking into account combination of its pharmacological effect on the animal body.

PC-5ID-1

To be able to use specialized information databases at a choice of animal treatment methods.

PC-5ID-2

To be able to calculate the amount of remedies for the treatment of animals and the prevention of diseases with the receipts signature for a certain period.

PC-5ID-3

To be able to calculate the amount of remedies for the treatment of animals and for the prevention of diseases with the receipts signature for a certain period, using digital technologies as well;

PC-5ID-4

To be able to administer drugs to the animals body in various techniques;

PC-5ID-5

To know the methods of pharmacological treatment of sick animals and indications for its administration, in accordance with the guidelines, instructions, manuals, rules of diagnosis, prevention and treatment.

PC-5ID-8

To know the ways of drug injections, used both for animals enteral (oral, sublingual and rectal administration) and parenteral (injections, inhalations and skin applications) methods.

GPC-6.

Is able to analyze, identify and assess the risk danger of the occurrence and spread of the disease

GPC-6ID-1

To know: existing programs for the prevention and control of zoonosis, contagious diseases, emergent or newly emerging infections, the use of animal identification systems, trace and control by the relevant veterinary services

GPC-6ID-2

To be able to: assess the risk of animal diseases, including the import of animals and animal products and other measures of veterinary services, the control of prohibited substances in the body of animals, animal products and feed;

GPC-6ID-3

To possess skills to: conduct identification procedures, select and implement measures that can be used to reduce the risk level.

PC-5

To carry out plan of animal treatment, based on the stated diagnosis and animals individual characteristics, signature of necessary remedies of chemical and biological nature for the treatment, taking into account combination of its pharmacological effect on the animal body.

PC-5ID-1

To be able to use specialized information databases at a choice of animal treatment methods.

PC-5ID-2

To be able to calculate the amount of remedies for the treatment of animals and the prevention of diseases with the receipts signature for a certain period.

PC-5ID-3

To be able to calculate the amount of remedies for the treatment of animals and for the prevention of diseases with the receipts signature for a certain period, using digital technologies as well;

PC-5ID-4

To be able to administer drugs to the animals body in various techniques;

PC-5ID-5

To know the methods of pharmacological treatment of sick animals and indications for its administration, in accordance with the guidelines, instructions, manuals, rules of diagnosis, prevention and treatment.

PC-5ID-8

To know the ways of drug injections, used both for animals enteral (oral, sublingual and rectal administration) and parenteral (injections, inhalations and skin applications) methods.

PC-11

Design of an annual plan of antiepidemiological measures, a plan for the prevention of non-contagious animal diseases, a plan of veterinary and sanitary measures

PC-11ID-1

To be able to collect and analyze information, including veterinary statistics data, necessary for planning preventive antiepidemiological measures, prevention of non-contagious animal diseases, veterinary and sanitary measures

PC-11ID-2

To know the methods of collecting and analyzing information for veterinary planning, using information databases as well.

PC-13

Development of the enterprise protection measures from the introduction of infectious and invasive diseases in accordance with the plan of antiepidemiological measures:

PC-13ID-1

To know the types of measures to ensure veterinary and sanitary safety and the requirements for its implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine

PC-14

Development of preventive immunization (vaccination), therapeutic and preventive treatments of animals in accordance with the plan of antiepidemiological measures, analysis of the effectiveness of the measures for the prevention of animal diseases and its improvement:

PC-14ID-1 To be able to evaluate the effectiveness of preventive measures and ways to implement them, using digital technologies as well;

PC-14ID-2

To know the procedure for conducting a clinical study of animals when planning preventive measures

PC-14ID-3 To know the types of antiepidemiological measures and the requirements for their implementation in accordance with the guidelines, instructions, manuals, rules of diagnosis, prevention and treatment of animals.

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

The discipline B1.O.34 "Parasitology and invasive animal diseases" is a discipline in Block 1 of the mandatory part of the federal state educational standard of higher education in specialty 36.05.01 "Veterinary Medicine" (specialty level).

Mastered in 7-8-9 semesters (full-time).

When teaching the discipline "Parasitology and invasive diseases of animals", the knowledge and skills acquired by students in mastering the disciplines - Biology with basic ecology, Animal Anatomy, Latin language, Cytology, histology and embryology, Pathological physiology, Veterinary pharmacology, are used. Clinical diagnostics, the discipline "Parasitology and invasive diseases" is the basic one on which most subsequent disciplines are built, such as:

1. Pathological anatomy
2. Epidemiology and infectious diseases
3. Internal non-communicable diseases
4. Veterinary and sanitary examination
5. Organization of veterinary affairs

4. THE SCOPE OF THE DISCIPLINE AND TYPES OF ACADEMIC WORK

"PARASITOLOGY AND INVASIVE ANIMAL DISEASES"

4.1. The scope of the discipline for full-time education

Type of educational work	Hours	Semesters		
		7	8	9
Classroom classes (total)	148	32	48	68
Including:	-		-	-
Lectures, including interactive forms	66	16	16	34
Practical (PP), including interactive forms, among which are:	82	16	32	34
practical training (PT)	18	4	6	8
Self-study	176	40	60	76
Course project (work)	+			+
Type of intermediate and final certification (credit, exam)	Credit, exam	Credit	Credit	Exam
Total labor intensity hours/credits	324/9	72/2	108/3	144/4

5. CONTENT OF THE DISCIPLINE "PARASITOLOGY AND INVASIVE DISEASES OF ANIMALS"

5.1. Content of the discipline "Parasitology and Invasive Diseases of Animals" for full-time education

№	Nomination	Formed competencies	Semester	Types of academic work, including independent work of students and labor intensity (in hours)			
				L	PP	PT	SS
1.	Biodiversity of parasites and the spread of parasitism in the animal world. Methods and ways of parasite penetration into the host organism. Safety precautions and personal hygiene rules.	GPC-6 Able to analyze, identify and assess the danger of the risk of occurrence and spread of diseases GPC-6ID-1 Know existing programs for the prevention and control of zoonoses, contagious diseases, emerging or re-emerging infections, the use of animal identification systems, tracing and control by the relevant veterinary services PC-14 Organization of preventive immunizations (vaccinations), therapeutic and prophylactic 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-3 Know the types of anti-epizootic measures and the requirements for their implementation in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals	7	2	1	-	-

2.	General principles of diagnostics of piroplasmosis.	GPC-6 Able to analyze, identify and assess the risk of occurrence and spread of diseases GPC-6ID-2 Be able to conduct, including with the help of digital technologies, an assessment of the risk of occurrence of animal diseases, including the import of animals and animal products and other veterinary services activities, monitor prohibited substances in the body of animals, animal products and feed. PC-11 Developing an annual plan of anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-2 Know the methods of collecting and analyzing information in veterinary planning, including using information databases PC-14 Organization of preventive immunizations (vaccinations), therapeutic and prophylactic 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-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	7	1	2	1	5
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3.	Babesiosis	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan of anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-1 Be able 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-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-13ID-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 veterinary science PC-14 Organization of preventive immunizations (vaccinations), therapeutic and prophylactic 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-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	7	1	1	5
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4.	Theileriosis	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan of anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-1 Be able 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-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-13ID-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 veterinary science PC-14 Organization of preventive immunizations (vaccinations), therapeutic and prophylactic 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-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	7	2	1	5
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5.	General characteristics of coccidia. Eimeriosis.	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan of anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-1 Be able 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-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-13ID-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 veterinary science PC-14 Organization of preventive immunizations (vaccinations), therapeutic and prophylactic 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-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	7	2	2	1	5
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6.	Isosporosis. Toxoplasmosis	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan of anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-1 Be able 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-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-13ID-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 veterinary science PC-14 Organization of preventive immunizations (vaccinations), therapeutic and prophylactic 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-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	7	2	1	5
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7.	Sarcocystosis, beznoitiosis, cryptosporidiosis	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan of anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-1 Be able 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-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-13ID-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 veterinary science PC-14 Organization of preventive immunizations (vaccinations), therapeutic and prophylactic 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-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	7	2	2	1	5
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8.	Trypanosomiasis, leishmaniasis .	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan of anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-1 Be able 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-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-13ID-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 PC-14 Organization preventive immunizations (vaccinations), therapeutic and preventive treatment 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-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	7	2	1	5
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9.	Trichomonosis, histomonosis, and lantidiosis, amoebiasis.	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan of anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-1 Be able 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-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-13ID-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 veterinary science PC-14 Organization of preventive immunizations (vaccinations), therapeutic and prophylactic 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-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	7	2	1	1	5
TOTAL FOR SEMESTER 7			16	4	40		

10.	General characteristics of ticks. Parasitiform ticks.	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan for anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-2 Know the methods of collecting and analyzing information in 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 for anti-epizootic measures PC-13ID-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 PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatment 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 evaluate the effectiveness of preventive measures taken and methods for their implementation, including using digital technologies PC-14ID-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	8	2	2	1	10
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11.	Acariform mites.	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan for anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-2 Know the methods of collecting and analyzing information in 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 for anti-epizootic measures PC-13ID-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 PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatment 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 evaluate the effectiveness of preventive measures taken and methods for their implementation, including using digital technologies PC-14ID-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	8	2	2	1	10
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12.	Diagnostics of psoroptosis, chorioptosis in animals, otodectosis and cheyletirosis in carnivores.	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan for anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-2 Know the methods of collecting and analyzing information in 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 for anti-epizootic measures PC-13ID-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 PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatment 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 evaluate the effectiveness of preventive measures taken and methods for their implementation, including using digital technologies PC-14ID-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	8	-	4	1	5
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13.	Trombidiform mites. Acarids are pests of food.	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan for anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-2 Know the methods of collecting and analyzing information in 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 for anti-epizootic measures PC-13ID-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 PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatment 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 evaluate the effectiveness of preventive measures taken and methods for their implementation, including using digital technologies PC-14ID-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	8	2	2	5
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14.	General characteristics of insects. Gadfly diseases.	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan for anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-2 Know the methods of collecting and analyzing information in 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 for anti-epizootic measures PC-13ID-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 PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatment 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 evaluate the effectiveness of preventive measures taken and methods for their implementation, including using digital technologies PC-14ID-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	8	2	2	6
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15.	Horseflies, flies, bloodsuckers PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan for anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-2 Know the methods of collecting and analyzing information in 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 for anti-epizootic measures PC-13ID-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 PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatment 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 evaluate the effectiveness of preventive measures taken and methods for their implementation, including using digital technologies PC-14ID-2 Know the procedure for conducting a clinical study of animals when planning preventive measures					8	2	2	1	6
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16.	Mosquitoes, midges, biting midges, mosquitoes	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan for anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-2 Know the methods of collecting and analyzing information in 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 for anti-epizootic measures PC-13ID-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 PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatment 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 evaluate the effectiveness of preventive measures taken and methods for their implementation, including using digital technologies PC-14ID-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	8	2	4	1	6
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17.	Lice eaters, lice eaters, feather eaters, lice, fleas, bedbugs.	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan for anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-2 Know the methods of collecting and analyzing information in 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 for anti-epizootic measures PC-13ID-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 PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatment 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 evaluate the effectiveness of preventive measures taken and methods for their implementation, including using digital technologies PC-14ID-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	8	2	4	1	6
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18	Measures to combat arachnoentomoses	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan for anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-2 Know the methods of collecting and analyzing information in 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 for anti-epizootic measures PC-13ID-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 PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatment 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 evaluate the effectiveness of preventive measures taken and methods for their implementation, including using digital technologies PC-14ID-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	8	2	4				6

19.	General characteristics of trematodes. Fascioliasis, paramphistomosis, dicrocoeliosis and eurytrematosis	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan for anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-2 Know the methods of collecting and analyzing information in 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 for anti-epizootic measures PC-13ID-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 PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatment 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 evaluate the effectiveness of preventive measures taken and methods for their implementation, including using digital technologies PC-14ID-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	9	4	2	1	8
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20.	Opisthorchiasis, prostogonimosis and echinostomatosis.	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan for anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-2 Know the methods of collecting and analyzing information in 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 for anti-epizootic measures PC-13ID-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 PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatment 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 evaluate the effectiveness of preventive measures taken and methods for their implementation, including using digital technologies PC-14ID-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	9	2	2	8
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21.	General characteristics of cestodes. Diphyllorhynchiasis and dipylidiosis. Anoplocephalidosis and avitellinosis.	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan for anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-2 Know the methods of collecting and analyzing information in 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 for anti-epizootic measures PC-13ID-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 PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatment 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 evaluate the effectiveness of preventive measures taken and methods for their implementation, including using digital technologies PC-14ID-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	9	4	2	1	8
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22.	General characteristics of taenia. Cysticercosis	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan for anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-2 Know the methods of collecting and analyzing information in 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 for anti-epizootic measures PC-13ID-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 PC-14 Organization of preventive immunizations (vaccinations), therapeutic and prophylactic 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 evaluate the effectiveness of preventive measures taken and methods for their implementation, including using digital technologies PC-14ID-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	9	4	3	1	8
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23.	Echinococcosis, alveococcosis, coenurosis	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan for anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-2 Know the methods of collecting and analyzing information in 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 for anti-epizootic measures PC-13ID-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 PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatment 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 evaluate the effectiveness of preventive measures taken and methods for their implementation, including using digital technologies PC-14ID-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	9	4	2	1	8
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24. General characteristics of nematodes. Oxyuratoses	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan for anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-2 Know the methods of collecting and analyzing information in 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 for anti-epizootic measures PC-13ID-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 PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatment 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 evaluate the effectiveness of preventive measures taken and methods for their implementation, including using digital technologies PC-14ID-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	9	2	2	1	8
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25.	Ascaridosis of animals and birds	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan for anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-2 Know the methods of collecting and analyzing information in 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 for anti-epizootic measures PC-13ID-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 PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatment 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 evaluate the effectiveness of preventive measures taken and methods for their implementation, including using digital technologies PC-14ID-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	9	2	2	1	8
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26.	Strongylosis of the digestive tract	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan for anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-2 Know the methods of collecting and analyzing information in 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 for anti-epizootic measures PC-13ID-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 PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatment 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 evaluate the effectiveness of preventive measures taken and methods for their implementation, including using digital technologies PC-14ID-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	9	4	3	1	6
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27.	Strongylosis of the respiratory system	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan for anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-2 Know the methods of collecting and analyzing information in 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 for anti-epizootic measures PC-13ID-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 PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatment 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 evaluate the effectiveness of preventive measures taken and methods for their implementation, including using digital technologies PC-14ID-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	9	4	3	1	6
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29.	Trichocephalosis, rhabdiatosis and spiruratos. General characteristics of acanthocephales. Macrocanthorhynchosis and polymorphosis	PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals PC-11 Development of an annual plan for anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-2 Know the methods of collecting and analyzing information in 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 for anti-epizootic measures PC-13ID-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 PC-14 Organization of preventive immunizations (vaccinations), therapeutic and preventive treatment 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 evaluate the effectiveness of preventive measures taken and methods for their implementation, including using digital technologies PC-14ID-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	9	2	3	8
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30.	Methods of laboratory diagnostics of helminthic diseases.	PC-11 Development of an annual plan of anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures PC-11ID-2 Know the methods of collecting and analyzing information in 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-13ID-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 PC-14 Organization of preventive immunizations (vaccinations), therapeutic and prophylactic 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-2 Know the procedure for conducting a clinical study of animals when planning preventive measures	9	-	2		
		TOTAL FOR SEMESTER 9	34	26	8		76

6. List of educational and methodological support for independent work of students

6.1. Methodological instructions for independent work

1. Belova L.M. Textbook for independent study of the discipline "Parasitology and invasive diseases of animals" for students studying in accordance with the educational standard of the Federal State Educational Standard of Higher Education 36.05.01 "Veterinary Science" with the graduation qualification of "specialist" / L.M.Belova, N.A. Gavrilova, A.N.Tokarev, V.A. Shiryayeva, Yu.E.Kuznetsov, M.S.Petrova // St. Petersburg: SPbGAVM, 2016. - 46 p. URL: Textbook for independent study of the discipline for students. - (accessed: 04/27/2024). - Access mode: for registered users.
2. Intravital diagnostics of animal helminthiases / M. V. Shustrova, L. M. Belova, V. I. Loskot [et al.]; SPbGAVM. - St. Petersburg: SPbGAVM, 2010. - 57 p.
3. Postmortem diagnostics of animal helminthiases / M. V. Shustrova, L. M. Belova, V. I. Loskot [et al.]; SPbGAVM. - St. Petersburg: SPbGAVM, 2010. - 76 p.
4. Methodical recommendations for students of the veterinary faculty on the implementation and design of coursework on parasitology / compiled by: L. M. Belova, N. A. Gavrilova; SPbGAVM. - St. Petersburg: SPbGAVM, 2016. - 13 p.

6.2. Literature for independent work

1. Vodyanov, A.A. Morphology, biology and laboratory diagnostics of causative agents of invasive animal diseases: a teaching aid in 3 parts. Part 1: Veterinary helminthology. [Electronic resource]: Textbooks / A.A. Vodyanov, S.N. Lutsuk, V.P. Tolokonnikov. - Electronic data. - Stavropol: StGAU, 2009. - 84 p. - Access mode: <http://e.lanbook.com/book/> (accessed: 04/27/2024)
2. Vodyanov, A.A. Morphology, biology and laboratory diagnostics of causative agents of invasive animal diseases: a teaching aid in 3 parts. Part 2: Veterinary arachnoentomology. [Electronic resource]: Textbooks / A.A. Vodyanov, S.N. Lutsuk, V.P. Tolokonnikov. - Electronic data - Stavropol: StGAU, 2009. - 84 p. - Access mode: <http://e.lanbook.com/book/5737> (accessed: 04/27/2024)
3. Vodyanov, A.A. Morphology, biology and laboratory diagnostics of causative agents of invasive diseases of animals: a teaching aid in 3 parts. Part 3: Veterinary arachnoentomology. [Electronic resource]: Textbooks / A.A. Vodyanov, S.N. Lutsuk, V.P. Tolokonnikov. - Electronic data - Stavropol: StGAU, 2009. - 60 p. - Access mode: <http://e.lanbook.com/book/5738> (accessed: 04/27/2024)
4. Vodyanov, A. A. Morphology, biology and laboratory diagnostics of causative agents of protozoan diseases of animals: training and methodological manual. [Electronic resource]: Textbooks / A. A. Vodyanov, S. N. Lutsuk, V. P. Tolokonnikov, Yu. V. Dyachenko. - Electronic data. - Stavropol: StGAU, 2009. - 60 p. - Access mode: <http://e.lanbook.com/book/5739> (accessed: 04/27/2024).
5. Reznichenko, L. V. Invasive diseases transmitted to humans through meat and fish, veterinary and sanitary assessment of slaughter products. [Electronic resource]: Textbooks / L. V. Reznichenko, S.N. Vodyanitskaya, S.B. Noskov, N.A. Denisova. - Electronic data. - St. Petersburg: Lan, 2016. - 80 p. - Access mode: <http://e.lanbook.com/book/87588> (accessed: 04/27/2024)

7. LIST OF BASIC AND ADDITIONAL LITERATURE REQUIRED FOR MASTERING THE DISCIPLINE

A) basic literature:

1. Akbaev, M. Sh. Parasitology and invasive diseases of animals / M. Sh. Akbaev, F. I. Vasilevich, R. M. Akbaev. - 3rd ed., revised and enlarged. - Moscow: KolosS, 2013. - 776 p. (Textbooks and teaching aids for students of higher educational institutions) - ISBN 978-5-9532-0441-5. - Text: electronic. - URL: Parasitology 2000g_1 (accessed: 04/27/2024). - Access mode: for registered users.
2. Akbaev, M. Sh. Workshop on diagnostics of invasive diseases of animals / M. Sh. Akbaev et al.; Ed. M. Sh. Akbaev. - Moscow: KolosS, 2013. - 536 p. (Textbooks and teaching aids

for students of higher educational institutions) - ISBN 5-9532-0309-8. - Text: electronic. - URL: Practical training in diagnostics of invasive diseases of animals 2006 (accessed: 04/27/2024). - Access mode: for registered users.

3. Tretyakov, A.M. Parasitology and invasive diseases. Workbook: textbook / A.M. Tretyakov, P.I. Evdokimov. - St. Petersburg: Lan, 2019. - 96 p. - ISBN 978-5-8114-3466-4. - Text: electronic // Electronic library system "Lan": [site]. — URL: <https://e.lanbook.com/book/113393> (accessed: 04/27/2024)

b) Further reading:

1. 1. Timofeev, B. A. Trypanosomiasis of animals / Timofeev B. A., Menshikov V. G., Vasilevich F. I. - Moscow: Zoomedlit, 2013. - 118 p. (Textbooks and teaching aids for students of higher educational institutions) - ISBN 978-5-91233-005-9. - Text: electronic // URL: Timofeev B. F. Trypanosomiasis of animals 2009 (accessed: 04/27/2024)

2. Kuznetsov, A. F. Pigs: maintenance, feeding and diseases. [Electronic resource]: Textbooks - Electronic data. - St. Petersburg: Lan, 2007. - 544 p. - Access mode: <http://e.lanbook.com/book/218> (accessed: 04/27/2024)

3. Kuznetsov, A.F. Cattle: maintenance, feeding, diseases: diagnostics and treatment. [Electronic resource]: Textbooks / A.F. Kuznetsov, A.A. Stekolnikov, I.D. Alemaikin, A.Ya. Batrakov. - Electronic data - St. Petersburg: Lan, 2016. - 752 p. - Access mode: <http://e.lanbook.com/book/71715> (accessed: 04/27/2024).

4. Stekolnikov, A.A. Maintenance, feeding and diseases of horses. [Electronic resource]: Educational and methodological manuals – Electronic data – St. Petersburg: Lan, 2007. – 624 p. – Access mode: <http://e.lanbook.com/book/383> (accessed: 04/27/2024)

5. Methods of diagnostics of diseases of farm animals: a teaching aid for universities / A. P. Kurdeko, S. P. Kovalev, V. N. Aleshkevich [et al.]; Edited by A. P. Kurdeko and S. P. Kovalev. - 3rd ed., Stereotype. - St. Petersburg: Lan, 2021. - 208 p. - ISBN 978-5-8114-8317-4. - Text: electronic // Lan: electronic library system. - URL: <https://e.lanbook.com/book/174996> (accessed: 04/27/2024)

8. LIST OF RESOURCES OF THE INFORMATION AND TELECOMMUNICATION NETWORK "INTERNET" NECESSARY FOR MASTERING THE DISCIPLINE

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

<http://www.infectology.ru/> Bulletin of Parasitology

<http://www.zin.ru/projects/kronaros/index.html> Blood-sucking insects of Russia

<http://www.parasitology.ru/> Parasitology

<https://ru.wikipedia.org/wiki/Паразитология> Parasitology

Electronic library systems:

1. EBS "SPbGUVN"

2. EBS "Publishing house "Lan"

3. EBS "Student consultant"

4. Reference and legal system "ConsultantPlus"

5. University information system "RUSSIA"

6. Full-text database POLPRED.COM

7. Scientific electronic library ELIBRARY.RU

8. Russian scientific network

9. Electronic library system IQlib

10. Database of international scientific citation indices Web of Science

11. Full-text interdisciplinary database on agricultural and environmental sciences ProQuest AGRICULTURAL AND ENVIRONMENTAL SCIENCE DATABASE

12. Electronic books of the publishing house "Prospekt Nauki"

<http://prospektnauki.ru/ebooks/>

13. Collection "Agriculture. Veterinary Science" of the publishing house "Quadro"
<http://www.iprbookshop.ru/586.html>

14. Belova L.M., Khokhlova L.A. Lectures on parasitic diseases of animals (section: "Protozoan diseases of animals") teaching aid". State registration number of the mandatory copy of the electronic publication 0321400080 dated 10.06.2014

15. Guide and atlas of infectious and parasitic diseases of humans. Compact disc. Edited by Yu. V. Lobzin and S. S. Kozlov, 2008-2013.

9. METHODOLOGICAL INSTRUCTIONS FOR STUDENTS ON MASTERING THE DISCIPLINE

Methodological recommendations for students are a set of recommendations and explanations that allow the student to optimally organize the process of studying a given discipline.

The content of methodological recommendations, as a rule, may include:

- Tips on planning and organizing the time required to study the discipline. Description of the sequence of student actions, or "scenario for studying the discipline."

Morning time is the most productive for academic work (from 8-14 hours), then afternoon time (from 16-19 hours) and evening time (from 20-24 hours). The most difficult material is recommended for study 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 the university, 4 hours at home).

- Recommendations for working on lecture material

When preparing for a lecture, a student is recommended to:

- 1) review the notes of the previous lecture and recall the previously studied material;
- 2) it is useful to review the upcoming material of the future lecture;
- 3) if independent study of individual fragments of the topic of the previous lecture is assigned, then it must be completed without delay;
- 4) psychologically prepare for the lecture.

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

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

The methodology for taking notes on oral presentations differs significantly from the methodology for taking notes on written sources.

When taking notes from written sources, a student has the opportunity to read the necessary passage of text several times, reflect on it, highlight the author's main ideas, formulate them briefly, and then write them down. If necessary, he can also note his attitude to this point of view. When listening to a lecture, a student must put off most of the above-mentioned work for another time, trying to use every minute to write down the lecture, and not to comprehend it - there is no time left for this. Therefore, when taking notes from a lecture, it is recommended to separate fields on each page for subsequent notes in addition to the notes.

Having recorded a lecture or compiled its notes, one should not leave work on the lecture material until the beginning of preparation for the test. It is necessary to do as early as possible the work that accompanies the note-taking of written sources and that could not be done during the recording of the lecture - read your notes, deciphering individual abbreviations, analyze the text, establish logical connections between its elements, in some cases show them graphically, highlight the main ideas, note questions that require additional processing, in particular, consultation with the teacher.

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

For each lecture, practical lesson and laboratory work, the number, topic, list of issues to be considered, volume in hours and links to recommended literature are provided. For classes conducted in interactive forms, their organizational form must be indicated: computer simulation, business or role-playing game, analysis of a specific situation, etc. • Recommendations for preparation for practical classes

Practical (seminar) classes are an important part of the professional training of students. The main goal of practical (seminar) classes is to develop students' analytical and creative thinking by acquiring practical skills. Practical classes are also held to deepen and consolidate the knowledge gained in lectures and in the process of independent work on regulatory documents, educational and scientific literature. In preparation for a practical class, students must study or review the theoretical material on a given topic.

When preparing for a practical lesson, the student is recommended to adhere to the following algorithm;

- 1) familiarize themselves with the plan of the upcoming lesson;
- 2) study the literary sources that were recommended and familiarize themselves with the introductory notes to the relevant sections.

Methodological instructions for practical (seminar) classes on a discipline, along with the work program and schedule of the educational process, refer to methodological documents that determine the level of organization and quality of the educational process.

The content of practical (seminar) classes is recorded in the working curricula of disciplines in the sections "List of topics for 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, abilities, which determines the content of students' activities - problem solving, laboratory work, clarification of categories and concepts of science, which are a prerequisite for correct thinking and speech.

Practical (seminar) classes perform the following tasks:

- stimulate regular study of the recommended literature, as well as attentive attitude to the lecture course;
- consolidate knowledge obtained in the process of lecture training and independent work on literature;
- expand the volume of professionally significant knowledge, abilities, and skills;
- allow you to check the correctness of previously acquired knowledge;
- instill the skills of independent thinking, oral presentation;
- promote free handling of terminology;
- provide the teacher with the opportunity to systematically monitor the level of independent work of students.

Methodological instructions for practical (seminar) classes on the discipline should be oriented towards modern business conditions, current regulatory documents, advanced technologies, the latest achievements of science, technology and practice, modern ideas about certain phenomena, the reality being studied.

- Recommendations for working with literature.

Working with literature is an important stage of a student's independent work on mastering a subject, which not only helps to consolidate knowledge, but also to broaden one's horizons, mental abilities, memory, ability to think, express and confirm one's hypotheses and ideas. In addition, the skills of scientific research work necessary for further professional activity are developed.

When starting to study literature on a topic, it is necessary to make summaries, extracts, notes. It is mandatory to take notes on the works of theorists, which allow one to comprehend the theoretical basis of the research. Otherwise, one can limit oneself to extracts from the studied

sources. All extracts and quotations must have an exact "return address" (author, title of work, year of publication, page, etc.). It is advisable to write an abbreviated title of the question to which the extract or quotation relates. In addition, it is necessary to learn how to immediately compile a card index of specialized literature and publications of sources, both suggested by the teacher and independently identified, and also to refer to bibliographic reference books, annals of journal articles, book annals, and abstract journals. In this case, publications of sources (articles, book titles, etc.) should be written on separate cards, which must be filled in according to the rules of bibliographic description (last name, initials of the author, title of the work. Place of publication, publisher, 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 author's thought or a fact from this book on only one specific issue. If the work, even in the same paragraph or phrase, contains other judgments or facts on another issue, they should be written out on a separate card. The presentation 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, sources it was written on, etc.

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

Testing allows you to determine whether the actual behavior of a program corresponds to the expected behavior by completing a specially selected set of tests. A test is the fulfillment of certain conditions and actions necessary to check the operation of the function being tested or part of it. Each question on the subject must be answered correctly by choosing one option.

- Recommendations for completing a test (if it is included in the curriculum), determining students' knowledge of the material covered through independent work, including theoretical assignments and several practical assignments.
- Recommendations for completing coursework (if it is included in the curriculum), defining their thematic focus, goals and objectives of completion, requirements for content, volume, design and organization of management of their preparation by departments and teachers.

According to the methodological instructions presented in the list of methodological instructions.

10. EDUCATIONAL WORK

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

11. LIST OF INFORMATION TECHNOLOGIES USED IN THE IMPLEMENTATION OF THE EDUCATIONAL PROCESS

11.1. The educational process for the discipline provides for the use of information technologies:

- ☐ lecturing and conducting practical classes using multimedia;
- ☐ interactive technologies (conducting lectures, dialogues, collective discussion of various 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 SPbGUVm:

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

11.2. Software

List of licensed and freely distributed software, including domestic production

№	Name of technical and computer training aids	License
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	recommended for sections and topics of the program	
1	MS PowerPoint	67580828
2	LibreOffice	free software
3	ОС АЛТ Образование 8	ААО.0022.00
4	АБИС "МАРК-SQL"	02102014155
5	MS Windows 10	67580828
6	ConsultantPlus System	503/KJI
7	Android ОС	free software

12. MATERIAL AND TECHNICAL BASE NECESSARY FOR THE IMPLEMENTATION OF THE EDUCATIONAL PROCESS IN THE DISCIPLINE

Name of the discipline (module), practice in accordance with the curriculum	Name of special rooms and rooms for independent work	Equipment of special rooms and rooms for independent work
Parasitology and invasive diseases of animals	301 (196084, St. Petersburg, Chernigovskaya St., Building 5) Classroom for lectures, seminar-type classes, group and individual consultations, ongoing monitoring and midterm assessment	Specialized furniture: cabinets for preparations, desks, chairs, stools, a blackboard, lamps for microscopy, Technical teaching aids: a multimedia projector, a screen, a laptop, biological microscopes and magnifying glasses for practical classes Visual aids and teaching materials: macro- and micropreparations of the parasites being studied, posters and presentations on sections of the discipline being studied, training kits for conducting diagnostic tests for blood parasite diseases and helminthological studies, samples of anthelmintics, insectoacaricides, coccidiostatics.
	302 (196084, St. Petersburg, Chernigovskaya St., Building 5) Museum and classroom for lectures, seminar-type classes, group and individual consultations, ongoing monitoring and midterm assessment	Specialized furniture: cabinets for preparations, display cases for macro-preparations and museum exhibits, desks, chairs, a blackboard, lamps Technical teaching aids: an interactive whiteboard with an Internet connection, a multimedia projector, a laptop, biological microscopes and magnifying glasses for practical classes Visual aids and teaching materials: macro- and micropreparations of the parasites being studied, posters and presentations on sections of the discipline being studied, training kits for

		conducting diagnostic tests for blood parasite diseases and helminthological studies, samples of anthelmintics, insectoacaricides, coccidiostatics
	310 (196084, St. Petersburg, Chernigovskaya St., Building 5) Classroom for conducting seminar-type classes, group and individual consultations, ongoing monitoring and midterm assessment	Specialized furniture: cabinets for laboratory glassware, desks, chairs, stools, a blackboard. Technical teaching aids: multimedia projector, laptop, biological microscopes and magnifying glasses for practical classes Visual aids and teaching materials: macro- and micropreparations of the parasites being studied, posters and presentations on sections of the discipline being studied, training kits for conducting diagnostic tests for blood parasite diseases and helminthological studies, samples of anthelmintics, insectoacaricides, coccidiostatics
	312 (196084, St. Petersburg, Chernigovskaya St., Building 5) Classroom for conducting seminar-type classes, group and individual consultations, ongoing monitoring and midterm assessment	Specialized furniture: desks, chairs, lamps Technical teaching aids: interactive whiteboard with Internet connection, biological microscopes and magnifying glasses for practical classes. Visual aids and teaching materials: macro- and micropreparations of the parasites being studied, posters and presentations on sections of the discipline being studied, training kits for conducting diagnostic tests for blood parasite diseases and helminthological studies, samples of anthelmintics, insectoacaricides, coccidiostatics.
	309 (196084, г. Санкт-Петербург, ул. Черниговская, дом 5) Учебная лаборатория кафедры	Specialized furniture: a table for parasitological research, a stainless steel sink, cabinets with laboratory glassware and auxiliary materials for practical classes in the discipline Technical training aids: a centrifuge, a light microscope, laboratory glassware (slides and cover glasses, Petri dishes, flotation liquid solutions) Visual aids and teaching materials: native micropreparations for practical

		classes
	206 Large reading room (196084, St. Petersburg, Chernigovskaya str., 5) Room for self-work	Specialized furniture: tables, chairs Technical teaching aids: computers with Internet connection and access to the electronic information and educational environment
	214 Small reading room (196084, St. Petersburg, Chernigovskaya str., 5) Room for self-work	Specialized furniture: tables, chairs Technical teaching aids: computers with Internet connection and access to the electronic information and educational environment
	324 Information Technology Department (196084, St. Petersburg, Chernigovskaya str., 5) Room for storage and preventive maintenance of educational equipment	Specialized furniture: tables, chairs, special equipment, materials and spare parts for preventive maintenance of technical teaching aids
	Box No. 3 Carpentry workshop (196084, St. Petersburg, Chernigovskaya str., 5) Room for storage and preventive maintenance of educational equipment	Specialized furniture: tables, chairs, special equipment, materials for preventive maintenance of specialized furniture

Developer:

Head of the Department of Parasitology
Doctor of Biological Sciences

L.M. Belova

Ministry of Agriculture of the Russian Federation
Federal State Budgetary Educational Institution of Higher Education
“Saint Petersburg State University of Veterinary Medicine”

Department of Parasitology named after V.L. Yakimov

FUND OF ASSESMENT TOOLS
for the discipline
“PARASITOLOGY AND INVASIVE DISEASES OF ANIMAL”
Level of higher education
SPECIALIST COURSE

Specialty 36.05.01 Veterinary medicine
Full-time education.

Education starts in 2024

Saint Petersburg
2024

1. PASSPORT OF THE FUND OF ASSESSMENT TOOLS

Table 1

№	Acquired competence	Assessed modules of a discipline	Assesment tool
1.	GPC-6. Is able to analyze, identify and assess the risk danger of the occurrence and spread of the disease GPC-6ID-1 To know: existing programs for the prevention and control of zoonosis, contagious diseases, emergent or newly emerging infections, the use of animal identification systems, trace and control by the relevant veterinary services GPC-6ID-2	Section 1. Parasitology and invasive diseases of animals (5th year, correspondence course)	Control work, Seminar, tests, course project (work)
		Section 2. Protozooses	Seminar, tests, course project (work)
3.	To be able to: assess the risk of animal diseases, including the import of animals and animal products and other measures of veterinary services, the control of prohibited substances in the body of animals, animal products and feed; GPC-6ID-3	Section 3. Arachnolozes	Seminar, tests, course project (work)
4.	To possess skills to: conduct identification procedures, select and implement measures that can be used to reduce the risk level. PC-5	Section 4. Entomoses	Seminar, tests, course project (work)
5.	To carry out plan of animal treatment, based on the stated diagnosis and animals individual characteristics, signature of necessary remedies of chemical and biological nature for the treatment, taking into account combination of its pharmacological effect on the animal body. PC-5ID-1	Section 5. Trematodoses	Seminar, tests, course project (work)
6.		Section 6. Cestodoses	Seminar, tests, course project (work)
7.	To be able to use specialized information databases at a choice of animal treatment methods. PC-5ID-2 To be able to calculate the amount of remedies for the treatment of animals and the prevention of diseases with the receipts signature for a certain period. PC-5ID-3	Section 5. Ascaridosis	Seminar, tests, course project (work)
8.	To be able to calculate the amount of remedies for the treatment of animals and for the prevention of diseases with the receipts signature for a certain period, using digital technologies as well; PC-5ID-4	Section 6. Oxyuratoses	Seminar, tests, course project (work)
9.	To be able to administer drugs to the animals body in various techniques; PC-5ID-5	Section 7. Strongylatoses	Seminar, tests, course project (work)
8.	To know the methods of pharmacological treatment of sick animals and indications for its administration, in accordance with the guidelines, instructions, manuals, rules of diagnosis, prevention and treatment. PC-5ID-8	Section 8. Trichuridosis	Seminar, tests, course project (work)
9.		Section 9. Spirotoses	Seminar, tests, course project (work)

10.	To know the ways of drug injections, used both for animals enteral (oral, sublingual and rectal administration) and parenteral (injections, inhalations and skin applications) methods.	Section 10. Filariasis	Seminar, tests, course project (work)
11.	PC-11 Design of an annual plan of antiepidemiological measures, a plan for the prevention of non-contagious animal diseases, a plan of veterinary and sanitary measures PC-PC-11ID-1	Section 11. Dioctophymosis	Seminar, tests, course project (work)
12.	To be able to collect and analyze information, including veterinary statistics data, necessary for planning preventive antiepidemiological measures, prevention of non-contagious animal diseases, veterinary and sanitary measures PC-11ID-2 To know the methods of collecting and analyzing information for veterinary planning, using information databases as well. PC-13 Development of the enterprise protection measures from the introduction of infectious and invasive diseases in accordance with the plan of antiepidemiological measures: PC-13ID-1 To know the types of measures to ensure veterinary and sanitary safety and the requirements for its implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine PC-14 Development of preventive immunization (vaccination), therapeutic and preventive treatments of animals in accordance with the plan of antiepidemiological measures, analysis of the effectiveness of the measures for the prevention of animal diseases and its improvement: PC-14ID-1 To be able to evaluate the effectiveness of preventive measures and ways to implement them, using digital technologies as well; PC-14ID-2 To know the procedure for conducting a clinical study of animals when planning preventive measures PC-14ID-3 To know the types of antiepidemiological measures and the requirements for their implementation in accordance with the guidelines, instructions, manuals, rules of diagnosis, prevention and treatment of animals	Section 12. Acanthocephaloses	Seminar, tests, course project (work)

List of assessment tools

Table 2

№	Name of the evaluation tool	Brief description of the assessment tool	Presentation of the valuation tool in the fund
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1.	Seminar	A means of monitoring the assimilation of educational material of a topic, section or sections of a discipline, organized as a training session in the form of an interview between a teacher and students	Questions on topics/sections of the discipline
2.	Test	A system of standardized tasks that allows for the automation of the procedure for measuring the level of knowledge and skills of a student	Test task fund
3.	Control work	A means of testing the ability to apply acquired knowledge to solve problems of a certain type on a topic or section	Set of control tasks by options
4	Course project (work)	A means of testing the ability to apply acquired knowledge to solve problems of a certain type on a topic or section	Set of topics for sections of the discipline

**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	Excellent	
GPC – 6 – to be able to analyze, identify and assess the risk danger of the occurrence and spread of the disease					
GPC - 6 ID -1 To know existing programs for the prevention and control of zoonosis, contagious diseases, emergent or newly emerging infections, the use of animal identification systems, trace and control 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, Report, Control work
GPC - 6 ID -2 To be able to assess the risk of animal diseases, including the import of animals and animal products and other measures of veterinary services, the control of prohibited substances in the body of 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, Report, Control work

GPC-6 ID-3 To possess skills to conduct identification procedures, select and implement measures that can be used to reduce the risk level.	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, Report, Control work
PC-5 To carry out plan of animal treatment, based on the stated diagnosis and animals individual characteristics, signature of necessary remedies of chemical and biological nature for the treatment, taking into account combination of its pharmacological effect on the animal body.					
PC-5ID-1 To be able to use specialized information databases at a choice of animal treatment methods.	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, Report, Control work
PC-5ID-2 To be able to calculate the amount of remedies for the treatment of animals and the prevention of diseases with the receipts signature for a certain period.	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, Report, Control work

PC-5ID-3 To be able to calculate the amount of remedies for the treatment of animals and for the prevention of diseases with the receipts signature for a certain period, using digital technologies as well;	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, Report, Control work
PC-5ID-4 To be able to administer drugs to the animals body in various techniques;	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, Report, Control work
PC-5ID-5 To know the methods of pharmacological treatment of sick animals and indications for its administration, in accordance with the guidelines, instructions, manuals, rules of diagnosis, pre-vention and treatment.	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, Report, Control work
PC-5ID-8 To know the ways of drug injections, used both for animals enteral (oral, sublingual and rectal administration) and parenteral (injections, inhalations and skin applications) methods.	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, Report, Control work

PC-11 Design of an annual plan of antiepidemiological measures, a plan for the prevention of non-contagious animal diseases, a plan of veterinary and sanitary measures					
PC-11ID-1 To be able to collect and analyze information, including veterinary statistics data, necessary for planning preventive epidemiological measures, prevention of non-contagious 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, Report, Control work
PC-11ID-2 To know the methods of collecting and analyzing information for veterinary planning, using information databases as well.	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, Report, Control work
PC-13 Development of the enterprise protection measures from the introduction of infectious and invasive diseases in accordance with the plan of antiepidemiological measures:					
PC-13ID-1 To know the types of measures to ensure veterinary and sanitary safety and the requirements for its implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine	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, Report, Control work
PC-14 Development of preventive immunization (vaccination), therapeutic and preventive treatments of animals in accordance with the plan of antiepidemiological measures, analysis of the effectiveness of the measures for the prevention of animal diseases and its improvement:					

PC-14ID-1 To be able to evaluate the effectiveness of preventive measures and ways to implement them, using digital technologies as well;	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, Report, Control work
PC-14ID-2 To know the procedure for conducting a clinical study of animals when planning preventive measures	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, Report, Control work
PC-14ID-3 To know the types of antiepidemiologic measures and the requirements for their implementation in accordance with the guidelines, instructions, manuals, rules of diagnosis, prevention and treatment of animals	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, Report, Control work

3.LIST OF TEST TASKS AND OTHER MATERIALS REQUIRED FOR ASSESSING KNOWLEDGE, ABILITIES, SKILLS AND EXPERIENCE

3.1. Typical tasks for the current control of academic progress

3.1.1 Questions for knowledge survey (writing variant)

Questions for assessing competence

GPC-6

Able to analyze, identify and assess the risk of occurrence and spread of diseases:

GPC -6ID-1

Know existing programs for the prevention and control of zoonoses, contagious diseases, emerging or re-emerging infections, the use of animal identification systems, tracing and control by the relevant veterinary services;

1. *Types of unicellular organisms and features of their morphology.*
2. *Nutrition, reproduction of unicellular organisms.*
3. *Zoonoses are diseases caused by protozoa.*
4. *Permanent insect ectoparasites*

GPC-6ID-2

Be able to conduct, including with the help of digital technologies, an assessment of the risk of occurrence of animal diseases, including the import of animals and animal products and other measures of veterinary services, monitor prohibited substances in the body of animals, animal products and feed;

5. *Types of immunity in animals with protozoan diseases.*
6. *Types of circulation of pathogens of piroplasmosis in ticks.*
7. *Characteristics of sections of trypanosomatids.*
8. *Localization of skin beetles, skin beetles and itch mites in animals*
9. *Features of the structure and localization of Knemidocoptes ticks in birds*
10. *Insects with complete and incomplete metamorphosis*
11. *Blood-sucking and non-blood-sucking flies*
12. *Features of the development cycles of representatives of midges*
13. *Immagineal cestodiasis of cattle and small ruminants*

GPC-6ID-3

Have the skills to carry out identification procedures, select and implement measures that can be used to reduce the risk level

14. *Pathogenesis of piroplasmosis.*
15. *Diagnostics of tritrichomoniasis in cattle.*
16. *Diagnostics of animal piroplasmosis*
17. *Diagnostics of afanipterosis and trichodectosis in dogs*

- 18. Methods of diagnostics of intestinal and pulmonary nematodoses*
- 19. Diagnostics of animal ascariasis*
- 20. Features of laboratory diagnostics of equine oxyurosis*
- 21. Etiological factors of animal parafilaria*
- 22. Intermediate hosts of animal filariasis pathogens*

Questions for assessing competence

PC-5

Developing a treatment plan for animals based on the established diagnosis and individual characteristics of the animals, selecting the necessary chemical and biological drugs for treating animals, taking into account their combined pharmacological effects on the body:

PC-5ID-1

Be able to use specialized information databases when choosing methods for treating animals;

23. Control and prevention measures against flies, mosquitoes, midges, biting midges, mosquitoes and horseflies

PC-5ID-2

Be able to calculate the amount of medications for treating animals and preventing diseases with the preparation of prescriptions for a certain period;

24. Treatment and prevention of anaplasmosis in cattle

25. Treatment of cattle with babesiosis

26. Treatment of cows with demodicosis.

27. Treatment of horses with sarcoptoidosis.

28. Treatment of pigs with sarcoptosis.

29. Treatment of dogs with canine cheyletiellosis.

PC-5ID-3

Be able to calculate the amount of medications for the treatment of animals and disease prevention with the preparation of prescriptions for a certain period, including using digital technologies;

30. Acaricidal drugs used for sarcoptosis and notoedrosis of carnivores

31. Acaricidal drugs used for psoroptosis of rabbits

Anthelmintic drugs for imaginal cestodiasis of ruminants

PC-5ID-4

Be able to administer drugs to the body of animals in various ways;

32. Early and late chemotherapy for hypodermatosis

33. Insecticidal drugs and methods of treating animals

34. Effective anthelmintics for fascioliasis

35. Anthelmintic drugs for the treatment of birds with ascariasis and methods of administration

PC-5ID-5

Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnostics, prevention and treatment of animals;

36. Insecticidal preparations used to treat carnivores.

37. Insecticidal preparations used to treat carnivores.

38. Insecticidal preparations used for mallophagosis of birds.

PC-5ID-8

Know the technique of administering drugs into the animal's body by enteral (oral, sublingual and rectal administration) and parenteral (injections, inhalations and skin applications).

39. Principles of pathogenetic therapy for protozoal diseases

40. Treatment of cattle with babesiosis and theileriosis

41. Early and late chemotherapy for hypodermatosis.

42. Control and prevention measures against flies, mosquitoes, midges, biting midges, mosquitoes and horseflies.

43. Acaricidal preparations and methods of application for arachnoses in animals

44. Effective anthelmintics for pulmonary and intestinal nematodosis

Questions for assessing competence

PC-11

Developing an annual plan for anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures

PC-11ID-1

Be able 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

45. Characteristics of epizootological foci of piroplasmosis in animals.

46. Pathogenesis and clinical signs of sarcoptosis

47. Features of the development of argasid and parasitiform ticks

48. Sarcoptoidosis of horses

49. Preventive measures taken for acarosis in pigs

50. Features of the morphology and biology of horseflies

51. Features of the morphology and biology of gadflies parasitizing small and large cattle

52. Features of the morphology and biology of gadflies parasitizing single-hoofed animals

53. *Features of the morphology and biology of permanent ectoparasites of carnivores*
54. *Morphology of trematodes*
55. *Localization of fascioles depending on the stages of development*
56. *Features of the morphology of the larval and mature stages of pork tapeworm*
57. *Features of the prevention of cysticercosis in ruminants*
58. *Features of the morphology and biology of pressures*
59. *Features of the morphology moniezii*
60. *Morphology and localization of strongylates of the gastrointestinal tract of ruminants*
61. *Features of the morphology and biology of the causative agent of strongyloidiasis in ruminants*
62. *Morphology and biology of trichuros (trichocephalans)*
63. *Features of the structure and life cycle of the giant acanthocephalan*

PC-11ID-2

Know the methods of collecting and analyzing information in veterinary planning, including the use of information databases.

64. *Intravital diagnostics of protozoan diseases.*
65. *Diagnostics of animal piroplasmoses.*
66. *Diagnostics of bovine besnoitiosis.*
67. *Localization of demodex in dogs and cats*
68. *Localization of skin mites in rabbits*
69. *Localization of itch mites and skin beetles in horses*
70. *Morphological features of acarimorphic and parasitiform mites*
71. *Difference between the larva of a parasitiform mite and the imago*
72. *List ectoparasites - intermediate hosts of pathogens of helminthiasis in carnivores*
73. *Types of larval stages of cestodes*
74. *Localization of onchocercs and settaria in the body of animals*

Questions for assessing competence

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-13ID-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;

75. *Transmissible protozoan diseases.*
76. *Ways of infection of animals with the causative agent of toxoplasmosis.*
77. *Routes of infection of animals with sarcocystosis.*

- 78. *Laboratory diagnostics of ruminant trematodes*
- 79. *Routes of infection of carnivores with toxocariasis*
- 80. *Differential diagnostics of toxocariasis and toxascariosis*
- 81. *Routes of infection with bunostomosis of ruminants*
- 82. *Control and prevention measures for trichinellosis in animals*

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 measures to prevent animal diseases in order to improve them:

PC-14ID-1

Be able to evaluate the effectiveness of preventive measures taken and methods for their implementation, including using digital technologies;

- 83. *Complications in animals with parasitism of the skin-eating mite*
- 84. *Diagnostics of cestodiasis in the early and late stages of helminth development*
- 85. *Features of the fight against and prevention of ancylostomiasis*
- 86. *Features of laboratory diagnostics of intestinal and pulmonary strongylates*
- 87. *Diagnostics of thelaziasis in animals*

PC-14ID-2

Know the procedure for conducting a clinical study of animals when planning preventive measures;

- 88. *Characteristic clinical signs of psoroptosis in sheep*
- 89. *Characteristic clinical signs of chorioptosis in horses*
- 90. *Pathogenesis and clinical signs of sarcoptosis*
- 91. *Clinical signs of otodectosis in carnivores*
- 92. *Clinical signs of sarcoptosis in pigs*
- 93. *Localization of mites in pigs*
- 94. *Pathogenesis and clinical signs of tenuicol cysticercosis*
- 95. *Features of the clinical manifestation of acute and chronic paramphistomatosis*
- 96. *Pathogenesis and clinical signs of tenuicol cysticercosis*
- 97. *Pathogenesis and clinical signs of prostogonimosis in birds*
- 98. *Clinical signs of coenurosis*
- 99. *Clinical signs and pathoanatomical changes in hymenolepidiosis*
- 100. *Clinical signs of coenurosis*
- 101. *Clinical signs and pathological changes in hymenolepidiosis*
- 102. *Epizootology, pathogenesis and clinical signs in amidostomosis of birds*
- 103. *Pathogenesis and clinical signs in crenosomiasis*
- 104. *Clinical signs and pathological changes in dirofilariasis*
- 105. *Epizootology, morphology and clinical signs in polymorphosis of ducks*

PC-14ID-3

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

106. *Babesia* development cycle.
107. *Theileria* development cycle.
108. *Toxoplasma* development cycle.
109. *Cryptosporidium* development cycle.
110. *Eimeria* development cycle.
111. Routes of animal infection with sarcocystosis.
112. Development cycle of the causative agents of aphanipteroses (siphonapterosis) of carnivores
113. Development cycle of pig hematopinus
114. Development cycle of fascioliasis agents
115. Development cycle of the causative agent of dicrocoeliosis
116. Development cycle of the causative agent of opisthorchiasis
117. Development cycle of the causative agents of echinostomatosis
118. Epizootological data for thysanieziosis and avetellinosis
119. Development cycle of the causative agent of bovis cysticercosis
120. Development cycle of the causative agent of echinococcosis
121. Development cycle of the causative agent of coenurosis of small ruminants
122. Development cycle of the causative agent of echinococcosis
123. Development cycle of the causative agent of coenurosis of small ruminants cattle
124. Development cycle of the causative agent of rayetinisosis of chickens
125. Epizootological data for thysanieziosis and avetellinosis
126. Development cycle of the pig roundworm
127. Development cycle of the causative agent of heterakiasis
128. Development cycle of the causative agent of passalurosis of rabbits
129. Development cycles of the causative agent of strongylosis of horses
130. Development cycle of the causative agent of delafondiosis of horses
131. Development cycle of the causative agent of chabertia
132. Development cycle of the nematode *Ancylostoma caninum*
133. Development cycle of dictyocaula parasitizing small and large cattle
134. Development cycle of protostrongyloidids
135. Development cycle of the causative agent of metastrongylosis
136. Development cycle of the causative agent of syngamosis of birds
137. Development cycle of the causative agent of trichinellosis
138. Characteristics of the causative agent of dioctophymosis and the development cycle

3.1.2 Topics of test papers

Topics of test papers for assessing competencies Topics of course projects (papers) for assessing competencies:

GPC-6.

Is able to analyze, identify and assess the risk danger of the occurrence and spread of the disease

GPC-6ID-1

To know: existing programs for the prevention and control of zoonosis, contagious diseases, emergent or newly emerging infections, the use of animal identification systems, trace and control by the relevant veterinary services

GPC-6ID-2

To be able to: assess the risk of animal diseases, including the import of animals and animal products and other measures of veterinary services, the control of prohibited substances in the body of animals, animal products and feed;

GPC-6ID-3

To possess skills to: conduct identification procedures, select and implement measures that can be used to reduce the risk level.

PC-5

To carry out plan of animal treatment, based on the stated diagnosis and animals individual characteristics, signature of necessary remedies of chemical and biological nature for the treatment, taking into account combination of its pharmacological effect on the animal body.

PC-5ID-1

To be able to use specialized information databases at a choice of animal treatment methods.

PC-5ID-2

To be able to calculate the amount of remedies for the treatment of animals and the prevention of diseases with the receipts signature for a certain period.

PC-5ID-3

To be able to calculate the amount of remedies for the treatment of animals and for the prevention of diseases with the receipts signature for a certain period, using digital technologies as well;

PC-5ID-4

To be able to administer drugs to the animals body in various techniques;

PC-5ID-5

To know the methods of pharmacological treatment of sick animals and indications for its administration, in accordance with the guidelines, instructions, manuals, rules of diagnosis, prevention and treatment.

PC-5ID-8

To know the ways of drug injections, used both for animals enteral (oral, sublingual and rectal administration) and parenteral (injections, inhalations and skin applications) methods.

PC-11

Design of an annual plan of antiepidemiological measures, a plan for the prevention of non-contagious animal diseases, a plan of veterinary and sanitary measures PC-11ID-1

To be able to collect and analyze information, including veterinary statistics data, necessary for planning preventive antiepidemiological measures, prevention of non-contagious animal diseases, veterinary and sanitary measures

PC-11ID-2

To know the methods of collecting and analyzing information for veterinary planning, using information databases as well.

PC-13

Development of the enterprise protection measures from the introduction of infectious and invasive diseases in accordance with the plan of antiepidemiological measures:

PC-13ID-1

To know the types of measures to ensure veterinary and sanitary safety and the requirements for its implementation in accordance with the legislation of the Russian Federation in the field of veterinary medicine

PC-14

Development of preventive immunization (vaccination), therapeutic and preventive treatments of animals in accordance with the plan of antiepidemiological measures, analysis of the effectiveness of the measures for the prevention of animal diseases and its improvement:

PC-14ID-1 To be able to evaluate the effectiveness of preventive measures and ways to implement them, using digital technologies as well;

PC-14ID-2

To know the procedure for conducting a clinical study of animals when planning preventive measures

PC-14ID-3 To know the types of antiepidemiological measures and the requirements for their implementation in accordance with the guidelines, instructions, manuals, rules of diagnosis, prevention and treatment of animals

Option I

1. Bovine babesiosis
2. Bovine fascioliasis
3. Pasture ticks and measures to combat them

Option 2

1. Bovine piroplasmiasis
2. Opisthorchiasis of carnivores
3. Argasid ticks and measures to combat them

Option 3

1. Canine piroplasmiasis
2. Bovine paramphistomatidosis
3. Bird ectoparasites and measures to combat them

Option 4

1. Bovine theileriosis
2. Swine cysticercosis
3. Scabies of carnivores

Option 5

1. Bovine anaplasmosis
2. Bovine cysticercosis
3. Otodectosis of carnivores

Option 6

1. Chicken eimeriosis
2. Swine trichinosis
3. Demodicosis dogs

dogs

Option 7

1. Eimeriosis of rabbits
2. Dictyocaulosis of small cattle
3. Hypodermatosis of cattle

Option 8

1. Toxoplasmosis
2. Ascariasis of pigs
3. Gastrophilosis of horses

Option 9

1. Trichomoniasis of cattle
2. Monieziosis of small cattle
3. Midges and measures to combat them

Option 10

1. Balantidiosis of pigs
2. Coenurosis of sheep
3. Wingless ectoparasites and measures to combat them

In the 6th year, a correspondence student must pass a test on the topic "Organization of therapeutic and preventive measures for parasitic diseases (name of place of work, farm, etc.)".

3.1.3 Test-questions

Tests to assess the competence of GPC-6 - *Is able to analyze, identify and assess the danger of the risk of the occurrence and spread of diseases*

GPC-6 ID-1 – To know existing programs for the prevention and control of zoonoses, contagious diseases, emergent or re-emerging infections, application of animal identification, trace and control systems by relevant veterinary services.

1. How is the intermediate host infected with toxoplasmosis?
 1. airborne
 2. percutaneously

- 3. transmissible
- 4. nutritional

2. Where does the process of *Toxoplasma* sporogony take place?

- 1. in the human body
- 2. in the external environment
- 3. in the dog's body
- 4. in the cat's body

3. For which disease is the mosquito an intermediate host?

- 1. tritrichomoniasis
- 2. trypanosomiasis
- 3. visceral leishmaniasis
- 4. Lyme disease

4. Which protozoa do not form cysts in the external environment?

- 1. dysenteric amoeba
- 2. toxoplasma
- 3. giardia (giardia)
- 4. balantidia

5. What diseases are transmitted by ixodid ticks?

- 1. scabies
- 2. wolfarthiosis
- 3. Lyme disease
- 4. hematopinosis

6. For which disease is a person the definitive host?

- 1. echinococcosis
- 2. alveococcosis
- 3. fascioliasis
- 4. teniorhynchosis

7. What stages of *Opisthorchis felinus* develop in fish of the Carp family?

- 1. adolescary
- 2. metacercaria
- 3. cercariae
- 4. coracidium

8. Who is the definitive host for cysticercosis in pigs?

- 1. pig
- 2. dog
- 3. person
- 4. cow

9. Where are the larvae of *Trichinella spiralis* localized?

1. in the stomach
2. in the small intestine
3. in striated muscles
4. heart

10. Which of the following are the intermediate hosts of taeniids?

1. shellfish
2. arthropods
3. mammals
4. insects

11. What is the name of the invasive tapeworm larva?

1. cysticercoid
2. plerocercoid
3. Echinococcus
4. strobilocercus

12. Which cestode of the family Taeniidae has an unarmed scolex?

1. *Taeniarrhynchus saginatus*
2. *Taenia solium*
3. *Taenia pisiformis*
4. *Echinococcus granulosus*

13. Who is the definitive host for echinococcosis?

1. rabbit
2. person
3. Priotary dogs
4. cats

GPC-6 ID-2 - To be able to assess the risk of animal diseases, including the import of animals and animal products and other measures of veterinary services, the control of prohibited substances in the body of animals, animal products and feed.

14. How do chickens become infected with eimeriosis?

1. through blood-sucking insects
2. with feed and water
3. through intact skin
4. transovarially

15. What is done with an animal if a positive result is obtained in the RCT for mating disease?

1. prescribe specific treatment
2. euthanize
3. repeat the RCT test

4. observe the animal and do nothing

16. What parasites are localized in the sebaceous glands?

1. scabies mite
2. demodex
3. bug
4. lice

17. Which of the following insects cause myiasis?

1. malaria mosquito
2. bug
3. scabies mite
4. gadfly

18. Where do midges of the Simuliidae family lay their eggs?

1. swampy forests
2. stagnant waters
3. fast-flowing rivers and streams
4. animal feces

19. What is the typical route of infection for scabies?

1. contact,
2. transmissible
3. alimentary
4. percutaneous

20. How do pigs become infected with metastrongylosis?

1. by eating shellfish
2. by eating rodents
3. percutaneously
4. by eating earthworms

21. Which larvae perform hepatopulmonary migration?

1. Ascaris suum
2. Oxyuris equi
3. Toxascaris leonina
4. Ascaridia galli

22. Which disease is typical for calves?

1. protostrongylosis
2. syngamosis
3. dictyocaulosis
4. mulleriosis

23. Who are the carriers of pathogens of blood-parasitic transmissible diseases?

1. dogs
2. gadflies
3. fleas
4. ticks

GPC-6 ID-3 – To possess skills for identifying procedures in selecting and implementing measures that can be used to reduce risk.

24. Where are the stages of endogenous development of *Eimeria stiedai* localized?

1. liver
2. kidneys
3. small intestine
4. large intestine

25. At what stage of development do the causative agents of eimeriosis enter the environment?

1. oocysts
2. merozoites
3. meronta
3. cysts

26. Which vectors of vector-borne diseases are mechanical?

1. horseflies
2. cat
3. mosquito
4. tsetse fly

27. What disease of horses is characterized by paresis and paralysis?

1. venereal disease
2. eimeriosis
3. nuttalliosis
4. babesiosis

28. What is one of the first clinical signs of theileriosis?

1. hemorrhage
2. enlarged superficial lymph nodes
3. anemia
4. fever

29. Which of the following do parasitiform mites have at the nymph stage?

1. four pairs of limbs
2. three pairs of limbs
3. genital opening
4. no correct answer

30. Which arthropods are temporary ectoparasites?

1. lice
2. feather eaters
3. fleas
4. scabies mite

31. Which mites parasitize hair follicles?

1. Sarcoptes
2. Demodex
3. Psoroptes
4. Otodectes

32. What helmintho-ovoscopic methods are used to confirm the diagnosis of "fascioliasis"?

1. sequential swabs
2. native smear
3. Fulleborn
4. Darling

33. Where are *Ascaris suum* larvae localized?

1. large intestine
2. small intestine
3. liver and lungs
4. external environment

34. What method is used to diagnose equine oxyurosis?

1. fecal examination by sequential swabs
2. fecal examination by Berman's method
3. fecal examination by Fulleborn's method
4. using a scotch test

35. Where is the nematode *Thelazia rhodesi* localized in cattle?

1. subcutaneous tissue
2. lungs
3. small intestine
4. conjunctival sac

36. Where are ticks of the genus *Choriotptes* localized in cattle?

1. head
 2. forelimbs
 3. root of the tail and ischial tuberosities
 4. along the spinal column
37. What animals suffer from moniezia?
1. ruminants

2. omnivores
3. carnivores
4. rodents

38. What clinical sign is recorded in parafilaria of horses?

1. appearance of tubercles on the skin
2. diarrhea
3. bleeding from the nasal cavities
4. alopecia

39. What are the structural features of the cestode egg?

1. presence of a lid
2. presence of Leuckart's eyes
3. formation of a miracidium
4. presence of an oncosphere

40. What kind of uterus does a mature segment of Echinococcus contain?

1. tree-like uterus
2. saccular uterus with diverticula
3. spherical uterus
4. loop-shaped uterus

Tests for assessment of competence ***PC-5 Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body:***

PC-5ID-1 Be able to use specialized information databases when choosing methods for treating animals;

1. For what disease is babesan used to treat animals?

1. coccidiosis
2. babesiosis
3. balantidiosis
4. cryptosporidiosis

2. What anthelmintics are used for moniezirosis?

1. mebendazole, albendazole
2. monizel
3. Polytrex, fascoverm
4. Piperazine, pyrantel

3. What anthelmintics are used for dictyocaulosis in calves?

1. Ivermectin

2. Praziquantel
3. Chlorophos, Trichlormetaphos
4. Politrem, Bithinol

4. What anthelmintics are used to treat animals with toxocariasis?

1. Praziquantel
2. Babesan
3. Hexihol
4. Melbimax

5. Which drug is not a macrocyclic lactone?

1. Aversect
2. Fiprist
3. Ivomek
4. Milbemax

6. What anthelmintic is used for opisthorchiasis?

1. Ivermectin
2. Praziquantel
3. Piperazine adipate
4. Albendazole

7. What is the mechanism of action of Praziquantel?

1. dissolve the parasite's strobila
2. affect the activity of enzymes
3. act on the receptors of gamma-aminobutyric acid
4. increase the permeability of helminth cell membranes

8. What is the mechanism of action of macrocyclic lactones?

1. block the receptors of gamma-glutamic acid in neuromuscular synapses
2. inhibit the apparatus of protein biosynthesis and its central part - the ribosome
3. disrupt the synthesis of nucleic acids
4. inhibit the activity of fumarate reductase, disrupt the permeability of cell membranes

9. What drugs are used to treat and prevent eimeriosis in animals?

1. baycox
2. tetracycline
3. berenil
4. trichopol

10. What drug is not used for treatment of metastrongylosis in pigs?

1. levamisole
2. pyrantel
3. eimetherm

4. ivermectin

11. What is the anthelmintic effect of Albendazole due to?

1. inhibits the activity of fumarate reductase and ATP synthesis of the parasite
2. blocks neuromuscular conduction in helminths
3. disrupts the transmission of nerve impulses, which leads to paralysis and death of the parasite
4. dissolves the tegument of the helminth

12. How often is it necessary to deworm dogs in flocks?

1. once every three months
2. once a month
3. once a year
4. twice a year

13. What is the waiting period after treating pigs with Iversan?

1. slaughter of pigs for meat no earlier than after 21 days
2. none
3. slaughter of pigs for meat no earlier than after 14 days
4. slaughter of pigs for meat no earlier than after 31 days

14. Which drugs are pyrethroids?

1. moxidectin
2. deltamethrin
3. fipronil
4. diazinon

15. For which animals is Permethrin dangerous?

1. dogs
2. horses
3. cats
4. rodents

16. Which drug is intended for the treatment of animals with scabies?

1. permethrin
2. ivermectin
3. fipronil
4. deltamethrin

17. Which anthelmintics do not contain Praziquantel?

1. Azinox
2. Drontal
3. Febtal
4. Milbemax

PC-5ID-2 Be able to calculate the amount of medications for the treatment of animals and disease prevention with the preparation of prescriptions for a certain period

18. How much of the drug "Albendazole" (7.5 mg / kg of body weight orally with feed) is required per year, taking into account the need for preventive treatment of 580 cows (the average weight of one cow is 500 kg) at least 2 times?

1. 1350000 mg = 1.35 kg by active ingredient
2. 4350000 mg = 4.35 kg by active ingredient
3. 500000 mg = 0.5 kg by active ingredient
4. 10050000 mg = 10.05 kg by active ingredient

PC-5ID-3 Be able to calculate the amount of medications for the treatment of animals and disease prevention with the preparation of prescriptions for a certain period, including with the help of digital technologies;

19. How to treat and prevent canine dipylidiosis, taking into account the biological cycle of the cestode?

1. Drontal plus (1 tablet per 10 kg of body weight) and treatment of dogs and premises from fleas and lice
2. Drontal (1 tablet per 4 kg of body weight) and treatment of dogs from ectoparasites
3. Drontal plus (1 tablet per 15 kg of body weight)
4. Drontal plus (1 tablet per 10 kg of body weight) and treatment of premises from ectoparasites

PC-5ID-4 Be able to administer drugs into the body of animals in various ways;

20. What treatment methods are most effective in the summer for psoroptosis in sheep?

1. bathing sheep in acaricide baths
2. spraying them with acaricides
3. dust therapy
4. oral administration of acaricides

21. What form of anthelmintic drug is preferable for treating horses?

1. injections
2. pastes
3. boluses
4. tablets

22. What forms of treatment of small domestic animals against ectoparasites are used in the cold season?

1. drops on the withers
2. bathing
3. aerosol
4. wiping

23. What doses of Praziquantel are used for canine taeniasis?

1. at a dose of 5 mg/kg orally once in the form of powder, paste, suspension, tablets without keeping the animals on a starvation diet
2. at a dose of 50 mg/kg orally once in the form of powder, paste, suspension, tablets with keeping the animals on a 12-hour starvation diet
3. at a dose of 100 mg/kg orally once in the form of powder, paste, suspension, tablets
4. at a dose of 5 mg/kg orally twice in the form of powder, paste, suspension, tablets

PC-5ID-5 Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals;

24. What drugs are used in animals with theileriosis at the onset of the disease?

1. Bigumal, Quinocid, Plazmocid
2. Ivomek, Vermectin
3. Albendazole, Fenbendazole
4. Praziquantel, Piperazine

25. What drugs are used to treat cattle with anaplasmosis?

1. Tetracycline antibiotics
2. Penicillin antibiotics
3. Anti-inflammatory
4. Antihistamines

26. What drug is used to treat sheep with myiasis?

1. Fenbendazole
2. Wolfartozole
3. Albendazole
4. Imidazole

27. How is the drug Equalan Duo administered to single-hoofed animals with helminthiasis?

1. orally
2. by inhalation
3. by injection
4. rectally

28. How often do service dog kennels and arctic fox farms carry out prophylaxis against toxocariasis and toxascaris?

1. deworm at 22...25 and 70...80 days of age, respectively
2. deworm at 70...80 days of age
3. deworm when helminth eggs are detected in feces
4. deworm once a quarter

29. How is Praziquantel used for canine opisthorchiasis?

1. at a dose of 100 mg/kg once with a small amount of minced meat or fish after a 12-hour fast
2. at a dose of 100 mg/kg once with a small amount of minced meat or fish without a preliminary 12-hour fast
3. at a dose of 200 mg/kg once with a small amount of minced meat or fish after a 12-hour fast
4. no correct answer

30. What solution is used to wash the eyes in thelaziasis?

1. physiological solution
2. 1% chlorophos solution
3. 0.9% sodium chloride solution
4. isotonic solution

31. How many days after using fenbendazole can pigs be slaughtered for meat?

1. 28 days
2. 3 days
3. 7 days
4. 14 days

32. What medications can be used for lactating cows?

1. ricazol
2. iversan
3. aversekt
4. helmitsid

33. What medications should be used with caution when treating collie, sheltie, bobtail and other dog breeds?

1. ivermectin
2. fenbendazole
3. phenasal
4. praziquantel

34. For which types of babesia is Babesin (DV imidocarb) not effective?

1. Babesia bovis
2. Babesia canis
3. Babesia gibsoni

4. Babesia bigemina

PC-5ID-8 Know the technique of administering drugs into an animal's body by enteral (oral, sublingual and rectal administration) and parenteral (injections, inhalations and cutaneous applications) methods.

35. How is Nitox-200 administered in the treatment of cattle for anaplasmosis?

1. rectally
2. subcutaneously
3. deep intramuscular
4. orally

36. What is the name of the method of applying the drug along the spine?

1. pur on
2. spot on
3. transdermal
4. transbuccal

37. What does sublingual administration of drugs mean?

1. taking a certain medicine by placing it under the tongue
2. taking a certain medicine by placing it in the buccal space
3. introducing a certain medicine into the rectum
4. taking a certain medicine by mouth

38. For what parasitic diseases are skin applications used?

1. benzoicosis
2. chorioptosis
3. onchocerciasis
4. haemonchosis

39. How is an aqueous solution of iodine used for calves according to the prescription: crystalline iodine 1 g, potassium iodide 1.5 g, boiled or distilled water 1000 ml?

1. orally
2. intratracheally
3. rectally
4. do not use

40. What number of sheep should be used for the group method of deworming?

1. 300 heads
2. 100...150 heads
3. no more than 50
4. no more than 10

Tests for assessment of competence *PC-11 Development of an annual plan of anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures*

PC-11ID-1 Be able 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

1. How are babesiids transmitted to the next generation of ticks?
 1. inoculative
 2. contaminative
 3. transovarial
 4. transphasic
2. What feature of the life cycle is characteristic of ticks of the Argasidae family?
 1. the female lays eggs on the animal's body,
 2. one nymphal stage
 3. females lay eggs once,
 4. females lay eggs repeatedly
3. How is lifetime diagnostics of eimeriiasis carried out?
 1. flotation methods
 2. biochemical methods
 3. serological methods
 4. bacteriological methods
4. Which stage of Balantidia development is invasive?
 1. cysts formed in the intestine
 2. cysts formed in the external environment
 3. oocysts
 4. 1st generation meronts
5. Which morphological features do not match Balantidia?
 1. presence of macro and micronucleus
 2. presence of cilia
 3. presence of cytostome
 4. presence of undulating membrane
6. Which ticks transmit bovine babesiosis?
 1. Dermanyssus
 2. Sarcoptes
 3. Boophilus
 4. Psoroptes

7. Which route of infection is not typical for Toxoplasma?

1. alimentary
2. percutaneous
3. transplacental
4. sexual

8. What is not characteristic of the sarcocyst oocyst?

1. released sporulated
2. contains 2 sporocysts with 4 sporozoites
3. released unsporulated
4. has a dumbbell-shaped form

9. Which of the insects is the intermediate host of the cucumber tapeworm?

1. field fly
2. mosquito
3. flea
4. autumn stingray

10. Which of the following parasitic worms develop with the participation of two hosts?

1. pintail
2. liver fluke
3. trichinella
4. whipworm

11. Which of the following insects are parasites at all stages of metamorphosis?

1. Ixodid tick
2. Wohlfahrt fly
3. mosquito
4. gadfly

12. Which insect is the intermediate host of the cucumber tapeworm?

1. field fly
2. mosquito
3. flea
4. autumn stinger

13. Which of the following insects parasitize at all stages of metamorphosis?

1. Ixodid tick
2. Wohlfahrt fly
3. mosquito
4. gadfly

14. What is the structural feature of the trematode egg?

1. transverse striation

2. four-layer membrane
3. bumpy protein membrane
4. presence of a lid

15. What are the structural features of the reproductive system of fasciola?

1. dioecious
2. absent
3. many testes
4. branched

16. Where are the testes located in opisthorchis?

1. immediately after the bifurcation of the esophagus
2. in the middle part of the trematode after the abdominal sucker
3. in the back of the trematode between the curved excretory tube
- 4 on the sides in the middle part

17. What are the characteristics of fasciola eggs?

1. round with transverse striations
2. large, oval, yellow with a lid
3. the presence of a formed miracidium in the egg
4. small, dark brown, asymmetrical with a lid

18. In what place of the tegument do the genital openings of trematodes open?

1. between the oral and ventral suckers
2. at the back of the body
3. at the oral sucker
4. in the center of the body

19. Where is the mature stage of *Dioctophyme renale* most often localized?

1. in the renal pelvis
2. in the intestine
3. in the lungs
4. in the abdominal cavity

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

20. Where do pre-erythrocytic stages of theileria develop?

1. liver
2. lymph nodes
3. thymus
4. intestine

21. What is the typical form of *Nuttallia equi*?

1. "spectacle frame"

2. "rider"
3. paired-pear-shaped at an acute angle
4. "Maltese cross"

22. What is not taken into account when identifying piroplasms?

1. size
2. shape
3. location in the erythrocyte
4. color

23. What is affected in visceral leishmaniasis?

1. skin
2. nervous system
3. organs of the RES system
4. gastrointestinal tract

24. Which of the simplest has a suction (adhesive) disk?

1. *Entamoeba histolytica*
2. *Balantidium suis*
3. *Giardia intestinalis*
4. *Tritrichomonas foetus*

25. What disease is the kissing bug a carrier of?

1. anaplasmosis
2. Chagas disease (American trypanosomiasis)
3. babesiosis
4. mating disease

26. What are the features of specialization for feeding on blood in ticks?

1. piercing-sucking mouth apparatus and salivary anticoagulants
2. lack of division of the body into sections
3. gonotrophic cycle
4. blind outgrowths of the midgut

27. What are the features of specialization in blood-sucking insects?

1. piercing-sucking mouthparts
2. gnawing mouthparts
3. loss of wings
4. presence of specific salivary enzymes

28. Which arthropods exhibit incomplete metamorphosis?

1. fleas
2. mosquitoes
3. lice
4. midges

29. What kind of host is a blood-sucking tick in piroplasmoses?

1. intermediate
2. definitive
3. additional
4. reservoir

30. On what parts of the horse's body does the female gadfly lay eggs?

1. on various parts of the body
2. on the hairs of the lips
3. in the intermaxillary space
4. on the hairs of the mane and tail

31. Where are the 2nd stage larvae of *Oestrus ovis* localized?

1. in the pharynx
2. in the frontal sinuses
3. in the esophagus
4. in the stomach

32. In what period of time does the development of horseflies complete?

- a) 1-2 months
- b) 6-7 months
- c) 1-2 years
- d) 3-5 years

33. Which of the listed wingless insects have broad species specificity?

1. lice
2. lice
3. feather eaters
4. flea

34. What type of structure of the oral apparatus of *Stomoxys calcitrans*?

1. licking
2. piercing-sucking
3. gnawing
4. the oral apparatus is rudimentary

35. Who is the definitive host in sheep cysticercosis?

1. human
2. dog
3. cat
4. no correct answer

36. Where is the giant acanthocephalan localized in pigs?

1. stomach
2. liver
3. small intestine
4. large intestine

38. What are the structural features of the uterus and morphology of tapeworm eggs?

1. closed sac-shaped uterus and eggs with a lid
2. presence of an open uterus and eggs with lids
3. uterus with lateral branches and an egg with an oncosphere
4. presence of an open uterus and eggs with an oncosphere

39. How does the intermediate host of *Dipylidium caninum* become infected?

1. fleas eat dipylidium eggs
2. flea larvae eat dipylidium eggs
3. dipylidium larvae penetrate the body of the intermediate host themselves
4. dipylidium development occurs without the participation of the intermediate host

40. Where are mature individuals of *Trichinella spiralis* localized?

1. in the stomach
2. in the small intestine
3. in the striated muscles
4. in the large intestine

Tests for assessment of competence ***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-13ID-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. For which protozoan disease of horses is treatment prohibited?

1. mating disease
2. su-auu
3. babesiosis
4. nuttalliosis

2. What is the name of the organism in which the mature form of the causative agent of a parasitic disease is located?

1. facultative host
2. intermediate host

3. definitive host
4. reservoir host

3. What is the most typical route of infection of animals with helminthic diseases?

1. percutaneous
2. transmissible
3. alimentary
4. contact

4. For which protozoan disease of cattle is early abortion characteristic?

1. theileriosis
2. tritrichomoniasis
3. eimeriosis
4. babesiosis

5. What zoonotic diseases should be excluded on the farm when cows are barren?

1. babesiosis
2. tritrichomoniasis
3. toxoplasmosis
4. fascioliasis

6. What conditions are necessary for animals to become infected with piroplasmosis?

1. the presence of a tick in the area
2. the presence of a sick animal
3. the presence of a susceptible animal
4. the presence of three links in the epizootic chain

7. How to confirm the diagnosis of sarcocystosis in farm animals?

1. serologically
2. culturally
3. coprocystoscopy
4. examination of the contents of micro- and macrocysts

8. What do sarcocyst cysts contain?

1. Trophozoites
2. Sporozoites
3. Sporocysts
4. Oocysts

9. Who are the carriers of pathogens of blood-parasitic transmissible diseases?

1. dogs
2. gadflies
3. itch
4. tick

10. In which invasion is the smallest oocyst released?

1. eimeriosis
2. toxoplasmosis
3. sarcocystosis
4. cystoisosporiasis

11. Where does merogony occur in cryptosporidiosis?

1. in the intestinal epithelial cell
2. in the external environment
3. in the intestinal lumen
4. on the intestinal crypt epithelial cell

12. What is not characteristic of pathogenic trichomonads?

1. the presence of 1 flagellum
2. the presence of 4 flagella
3. the axostyle protrudes beyond the body
4. the presence of digestive vacuoles

13. Which ectoparasites in chickens are stationary?

1. lice, feather eaters
2. lice
3. bloodsuckers
4. lice

14. Which arthropods do not parasitize pigs?

1. lice
2. lice
3. Sarcoptes mites
4. Demodex mites

15. What eggs are formed in the uterus of the broad tapeworm?

1. trematode type
2. cestode type
3. strongylidene type
4. with a pyriform apparatus

16. How many times are animals dewormed in farms affected by fascioliasis?

1. twice a year
2. once a year
3. once every two years
4. no correct answer

17. How does a person become infected with fascioliasis?

1. by eating untreated fascioliasis organs

2. by swallowing adolesearia with food or water
3. by eating poorly cooked meat from sick animals
4. by eating shellfish

18. In what disease are enlarged bile ducts observed in the liver at autopsy?

1. paramphistomatosis
2. dicrocoeliosis
3. fascioliasis
4. prostogonimosis

19. Which helminths cause villous atrophy of the rumen?

1. Fasciola hepatica
2. Paramphistomum cervi
3. Euritrema pancreaticum
4. Clonorchis sinensis

20. What can be found in a compression study of sections from the lateral and dorsal muscles of fish with opisthorchiasis?

1. maritu
2. adolesearia
3. metacercaria
4. cercaria

21. Who is involved in the development cycle of Diphyllobotrium latum?

1. pig, mollusk, fish
2. carnivores, ant, fish
3. carnivores, mollusk, fish
4. carnivores, copepod, fish

22. Which of the following is not suitable for disinfecting eggs from tapeworm larvae?

1. storage at -12 for at least 6 days
2. warm salting (15-16° degrees) with a salt content of 12% of the caviar weight for 30 minutes
3. storage at -18 for at least 24 hours
4. storage at -18 for at least 48 hours

23. What measures are aimed at preventing dogs from becoming infected with echinococcosis?

1. the internal organs and meat of animals that are forced to be killed are fed to shed dogs
2. animal carcasses and internal organs rejected during a veterinary inspection are disposed of by burning
3. slaughter of animals on the owner's territory (backyard or farm)
4. free range (keeping without a leash) of dogs on the territory

24. What disease in sheep is called "whirly"?

1. monieziasis
2. coenurosis
3. cysticercosis
4. avitellinosis

25. Which larva has a thick opaque shell?

1. alveococcus
2. echinococcus
3. coenur
4. cysticercus

26. Who is the intermediate host of the broad tapeworm *D. latum*? 1. mollusks

2. fish
3. copepods
4. amphibians

27. When infected with which cestode can a person be an intermediate host?

1. this cannot be
2. bovine tapeworm
3. pork tapeworm
4. broad tapeworm

28. What is the structure of the invasive larva that causes cysticercosis in cattle?

1. a bladder containing a clear liquid
2. a bladder through whose clear membrane the protoscolex of the future parasite tape is visible
3. a bladder through whose clear membrane many protoscolices are visible
4. a bladder with an opaque membrane

29. Which cestode has 18-32 lateral branches in a mature segment from the central trunk of the uterus?

1. *T. ovis*
2. *T. pisiformis*
3. *T. saginata*
4. *T. solium*

30. Where are the carcasses of cattle and pigs, rendered harmless by freezing or salting, sent?

1. for industrial processing
2. for disposal
3. for the production of minced sausages and minced canned goods
4. used without restrictions

31. Who takes part in the biological cycle of *Cysticercus bovis* - *Taeniarhynchus saginatus*?

1. cow and human
2. cow, dog and human
3. sheep, dogs and human
4. cow and dog

32. When eating the meat of which animal can a person become infected with taeniasis?

1. horses
2. sheep
3. pigs
4. birds

33. What types of cestode larvae are localized in striated muscles

1. coenurus
2. alveococcus
3. cysticercus
4. echinococcus

34. Where is the invasive larva of *C. cerebralis* localized?

1. in subcutaneous tissue
2. in brain tissue
3. in skeletal muscles
4. in the liver

35. Which of the methods of intravital diagnostics can be used in animals with echinococcosis to identify the pathogen?

1. helmintholaryoscopy
2. helminthoscopy
3. allergic method
4. examination of parenchymatous organs

36. What number of sections during trichinelloscopy should be examined in a safe area?

1. 48
2. 24
3. 96
4. 10

37. In which muscle do trichinella not parasitize?

1. chewing
2. diaphragm
3. cardiac
4. gastrocnemius

38. Which of the diagnostic methods is used for trichinellosis in animals?

1. compressor method
2. helminthological dissection of parenchymatous organs
3. helminthoscopy
4. serological diagnostics

39. What should be done if a trichinella larva is found in a pig's muscle?

1. subject to destruction
2. utilized for meat and bone meal
3. used for cooked sausages
4. frozen

40. What measures are taken on a farm with a high incidence of trichinellosis?

1. allow feeding pigs with carcasses of animals killed during hunting
2. prohibit selling pigs for breeding purposes
3. lift restrictions for six months
4. allow selling home-made meat products (sausages, hams, kebabs)

Tests for assessment of competence ***PC-14 Organization of preventive immunizations (vaccinations), therapeutic and prophylactic 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:***

PK-14ID-1 Be able to evaluate the effectiveness of preventive measures taken and methods for their implementation, including using digital technologies.

1. Where is the causative agent of eimeriosis localized in chickens?

1. bile ducts of the liver
2. small intestine
3. renal pelvis
4. upper respiratory tract

2. What color are cryptosporidia oocysts stained by the Ziehl-Neelsen method?

1. green
2. red
3. not stained
4. blue

3. Which condition is not suitable for culturing trichomonads?

1. aerobic environment
2. anaerobic environment
3. the presence of antibiotics in the nutrient medium
4. the presence of liver broth in the nutrient medium

4. Where is the larval stage of the Hypoderma gadfly localized?

1. hair
2. subcutaneous tissue
3. blood vessels
4. striated muscles

5. In which cestode disease is the oncosphere enclosed in a pear-shaped apparatus in the egg?

1. avitellinosis
2. thysanieziosis
3. monieziosis
4. dipylidiosis

6. In which helminthic disease are sheep vaccinated?

1. monieziosis
2. coenurosis
3. echinococcosis
4. fascioliasis

7. How do pigs become infected with metastrongylosis?

1. by eating mollusks
2. by eating oligochaetes
3. by eating rodents
4. percutaneously

8. In which trematodes is the invasive larva adolescaria?

1. Eurytrema pancreaticum
2. Dicrocoelium lanceatum
3. Paramphistomum cervi
4. Prostogonimus ovatus

9. What is the characteristic morphological feature of trichuricephalus?

1. the head end is long and filiform; the tail end is short and thickened
2. the head end is thickened; the tail end is thinned
3. there are two ear-shaped formations at the head end
4. there is an oral capsule at the head end

10. What is characteristic of the strongylid type of development?

1. hepatopulmonary migration
2. 2-fold molting of larvae in the external environment
3. intrauterine infection
4. development only in the host

11. What is the characteristic feature of the morphology of the D. capillaris larva?

1. 0.7 - 0.8 mm in length
2. has a button at the front end

3. granular inside
4. transparent

12. What do freshly released whipworm eggs look like?

1. released mature
2. round
3. gray
4. have 2 mucus plugs

PC-14ID-2 Know the procedure for conducting a clinical study of animals when planning preventive measures;

13. What clinical manifestations of babesiosis are not typical?

1. Yellowness of the mucous membranes
2. Hemoglobinuria on the 3-5th day
3. Anemia
4. Remitting fever

14. What is the first symptom of theileriosis?

1. Fever
2. Hemorrhage
3. Anemia
4. Enlargement of the superficial lymph nodes

15. In which protozoan disease are ulcers observed on the abomasal mucosa?

1. Babesiosis
2. Theileriosis
3. Fransiellois
4. Piroplasmosis

16. In which disease is hemoglobinuria not observed?

1. babesiosis
2. piroplasmosis
3. francaiellois
4. anaplasmosis

17. Which clinical sign is not characteristic of besnoitiosis in cattle?

1. lacrimation
2. thickening of the skin
3. edema of the mucous membranes
4. itching

18. In which age groups of pigs does *Balantidium suis* most often cause clinical symptoms of the disease?

1. sows

2. suckling piglets
3. boars
4. weaned piglets

19. Where do giardia (lamblia) parasitize in the host body?

1. bile ducts of the liver
2. duodenum
3. cecum
4. jejunum

20. What disease is characterized by the formation of small nodules on the mucous membrane of the genitals?

1. venereal disease
2. su-aura
3. toxoplasmosis
4. tritrichomoniasis

21. In which disease does the life cycle of the pathogen occur in the epidermal layer of the skin?

1. sarcoptosis
2. chorioptosis
3. demodicosis
4. otodectosis

22. Which mite causes the following clinical signs: severe itching in the neck, back, formation of small scales on the skin resembling dandruff, dermatitis?

1. Cheyletiella jasguri
2. Demodex canis
3. Otodectes cynotis
4. Dermacentor pictus

23. In which disease is egg casting a clinical sign?

1. echinostomatidosis
2. ascariasis
3. heterokiasis
4. prostogonimosis

24. How is the diagnosis of ascariasis in pigs confirmed?

1. examination of feces by the method of successive washings
2. examination of feces by the flotation method
3. examination of bronchoalveolar lavage
4. blood test

25. What is the pathognomonic sign of ascariasis?

1. hemorrhages in the lungs

2. alveolar emphysema
3. white spotting of the liver
4. bronchopneumonia

26. What clinical signs are characteristic of oxyurosis in horses?

1. frequent colic and fever
2. itching and scratching at the base of the tail
3. profuse diarrhea
4. presence of blood in the feces

27. In what disease are thromboembolic colics observed?

1. alfortiosis
2. delafondiosis
3. chabertiosis
4. strongylosis

28. How can animals become infected with hookworm?

1. through an intermediate host
2. percutaneously
3. inhalation
4. sexually

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

29. What is the name of the measure aimed at destroying the causative agents of helminthiasis in animals?

1. deworming
2. disinfection.
3. devastation
4. deratization

30. What is the name of the measure aimed at destroying the causative agents of animal diseases at all stages of its development?

1. deworming
2. disinfection
3. devastation
4. deratization

31. Which of the most common diagnostic methods is used to diagnose helminthic diseases in animals?

1. molecular biological methods
2. coprological methods
3. allergic methods
4. serological methods

32. What is studied to detect *Trypanosoma equiperdum*?

1. smears from capillaries of the mucous membrane of the genitals
2. smears from venous blood
3. smears from peripheral vessels of the skin
4. punctate from the lymph node

33. What is the most effective laboratory method for diagnosing fascioliasis in animals?

1. helminthoscopy
2. helminthoscopy
3. method of sequential washings
4. helmintharvoscopy

34. For which disease, when conducting a laboratory study, scrapings are taken from the affected skin before drops of blood appear?

1. demodicosis
2. otodectosis
3. sarcoptosis
4. chorioptosis

35. Who is the intermediate host in the life cycle of trematode pathogens?

1. fish
2. ant
3. mollusk
4. cyclops

36. What disease should coenurosis of sheep be differentiated from?

1. salmonellosis
2. estrosis
3. rabies
4. echinococcosis

37. What is used in laboratory diagnostics for pulmonary strongylosis to exclude the causative agent of intestinal strongylata?

1. 3% boric acid solution
2. 1% brilliant green solution
3. 1% methylene blue solution
4. aniline dye

38. How do animals become infected with protostrongylosis?

1. by swallowing larvae
2. by swallowing eggs
3. by eating worms
4. by swallowing mollusks

39. What material is examined to confirm strongylosis of the respiratory system?

1. fecal matter directly from the rectum
2. fecal matter collected from the pasture
3. no correct answer
4. fecal matter collected from the floor of a livestock farm

40. How do sole-hoofed animals become infected with parafilariasis?

1. alimentary
2. when attacked by mosquitoes
3. when attacked by stinging flies
4. when attacked by midges

3.1.4 APPROXIMATE TOPICS OF COURSE PROJECTS (WORKS)

Topics of course projects (works) for assessing competencies:

GPC -6

Student is able to analyze, identify and assess the danger of the risk of the occurrence and spread of diseases

GPC-6 ID-1

Student knows the existing programs for the prevention and control of zoonoses, contagious diseases, emergent or newly emerging infections, use of animal identification systems, trace and control by the relevant veterinary services.

GPC-6 ID-2

Student is able to assess the risk of animal diseases, including the import of animals and animal products and other measures of veterinary services, the control of prohibited substances in the body of animals, animal products and feed..

GPC-6 ID-3

Student has the skills to carry out identification procedures, select and implement measures that can be used to reduce the level of risk

PC-5

Developing a treatment plan for animals based on the established diagnosis and individual characteristics of the animals, selecting the necessary chemical and biological drugs for treating animals, taking into account their combined pharmacological effect on the body:

PC-5ID-1

Be able to use specialized information databases when choosing methods for treating animals;

PC-5ID-2

Be able to calculate the amount of medications for treating animals and preventing diseases by drawing up prescriptions for a certain period;

PC-5ID-3

Be able to calculate the amount of medications for treating animals and preventing diseases by drawing up prescriptions for a certain period, including using digital technologies;

PC-5ID-4

Be able to administer drugs into the body of animals in various ways;

PC-5ID-5

Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosing, preventing and treating animals;

PC-5ID-8

Know the technique of administering medicinal substances into the animal's body by enteral (oral, sublingual and rectal administration) and parenteral (injections, inhalations and cutaneous applications) methods.

PC-11

Developing an annual plan of anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures

PC-11ID-1

Be able 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-11ID-2

Know the methods of collecting and analyzing information in 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-13ID-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; PC-14 Organization of preventive immunizations (vaccinations), therapeutic and prophylactic 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 evaluate the effectiveness of preventive measures and methods for their implementation, including using digital technologies;

PC-14ID-2

Know the procedure for conducting a clinical study of animals when planning preventive measures;

PC-14ID-3

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

1. Diagnostics and organization of treatment and preventive measures for dicrocoeliosis of small cattle.
2. Diagnostics and organization of treatment and preventive measures for opisthorchiasis and clonorchiasis of carnivores.
3. Prosthogonimosis of birds (diagnosis, control measures).
4. Echinostomatosis of birds (diagnosis, control measures).
5. Diagnostics and treatment and preventive measures for diphyllbothriasis of carnivores.
6. Diagnostics and treatment and preventive measures for dipylidiosis of carnivores.
7. Sparganosis of animals (diagnosis, control measures).
8. Diagnostics and control measures for anoplocephalidoses of monoungulates.
9. Diagnostics and organization of treatment and preventive measures for imaginal cestodiasis of ruminants.
10. Diagnostics and organization of preventive measures for cysticercosis tenuiculus.
11. Diagnostics and treatment and preventive measures for echinococcosis in animals.
12. Diagnostics and treatment and preventive measures for alveococcosis in animals.
13. Diagnostics and treatment and preventive measures for avitellinosis in small cattle.
14. Cestodoses of waterfowl (diagnosis, control measures).
15. Strobilocercosis of rodents (diagnosis, control measures).
16. Diagnostics and organization of treatment and preventive measures for oxyuriasis of solitary-ungulates.
17. Trichonematoses of solitary-ungulates (diagnosis, control measures).
18. Chabertiosis of ruminants.
19. Oesophagostomiasis of pigs: diagnostics, organization of treatment and preventive measures.
20. Ancylostomiasis and uncinariosis of carnivores (diagnosis, control measures).
21. Diagnosis and organization of treatment and preventive measures for amidostomosis of geese.
22. Diagnosis and organization of treatment and preventive measures for metastrongylosis of pigs.
23. Mulleriosis of small cattle (diagnosis, control and prevention measures).
24. Trichuriasis of pigs (diagnosis, control and prevention measures).
25. Diagnosis and control measures for thelaziosis of cattle.
26. Dirofilariasis of carnivores (diagnosis, control and prevention measures).
27. Diagnosis and organization of treatment and preventive measures for macrocanthorhynchosis of pigs.
28. Diagnosis and organization of treatment and preventive measures for babesiosis of carnivores.
29. Diagnostics and organization of treatment and preventive measures for babesiosis in cattle.

30. Diagnostics and organization of treatment and preventive measures for babesiosis in solitary animals.
31. Diagnostics and organization of treatment and preventive measures for anaplasmosis in cattle.
32. Diagnostics and organization of treatment and preventive measures for theileriosis in cattle.
33. Diagnostics and organization of treatment and preventive measures for cryptosporidiosis in calves.
34. Diagnostics and organization of treatment and preventive measures for sarcocystosis in pigs.
35. Diagnostics and organization of treatment and preventive measures for sarcocystosis in small cattle.
36. Diagnostics and organization of treatment and preventive measures for eimeriosis in cattle.
37. Toxoplasmosis in animals (diagnosis and organization of treatment and preventive measures).
38. Neosporosis in animals (diagnosis and organization of treatment and preventive measures).
39. Equine leishmaniasis (diagnosis and organization of treatment and preventive measures).
40. Leishmaniasis in animals (diagnosis and organization of treatment and preventive measures).
41. Amebiasis in animals (diagnosis and organization of treatment and preventive measures).
42. Spirochetosis (borreliosis) in birds (diagnosis and organization of treatment and preventive measures).
43. Tick-borne borreliosis (Lyme disease) in carnivores: diagnosis, organization of treatment and preventive measures.
44. Diagnosis and organization of treatment and preventive measures for dermanisiosis in chickens.
45. Diagnosis and organization of treatment and preventive measures for psoroptosis in cattle.
46. Diagnostics and organization of treatment and preventive measures for psoroptosis in rabbits.
47. Diagnostics and organization of treatment and preventive measures for chorioptosis in cattle.
48. Diagnostics and organization of treatment and preventive measures for otodectosis in carnivores.
49. Diagnostics and organization of treatment and preventive measures for sarcoptosis in pigs.
50. Diagnostics and organization of treatment and preventive measures for cheyletiellosis in carnivores.
51. Edemagenosis in reindeer (diagnosis and organization of treatment and preventive measures).

52. Organization of treatment and preventive measures for hypodermatosis in cattle.
53. Oestrosis in sheep (diagnosis and organization of treatment and preventive measures).
54. Rhinestrosis in horses (diagnosis and organization of treatment and preventive measures).
55. Bovicolosis of cattle (diagnosis and organization of treatment and preventive measures).
56. Diagnosis and organization of treatment and preventive measures for trichodectosis of carnivores.
57. Malophagosis of birds (diagnosis and organization of treatment and preventive measures).
58. Simuliidotoxicosis of animals (control and prevention measures).
59. Hematopinosis of pigs (control and prevention measures).
60. Ctenocephalidosis of carnivores (diagnosis and organization of treatment and prevention measures).

3.2. Standard tasks for intermediate certification

3.2.1. Questions for the test

The competence achieved:

GPC-6

Student is able to analyze, identify and assess the danger of the risk of the occurrence and spread of diseases

GPC-6 ID-1

Student knows the existing programs for the prevention and control of zoonoses, contagious diseases, emergent or newly emerging infections, the use of animal identification systems, tracing and control by the relevant veterinary services.

1. Morphology, biological cycle of babesiids.
2. Diagnostics of babesiosis.
3. Treatment of animals with babesiosis.
4. Morphology, biological cycle of theileriids.
5. Diagnostics of theileriosis.

GPC-6ID-2

Student is able to assess the risk of animal diseases, including the import of animals and animal products and other measures of veterinary services, the control of prohibited substances in the body of animals, animal products and feed.

6. Treatment regimens for animals with theileriosis of animals.
7. Organization of preventive measures for piroplasmosis of animals.
8. Morphology and biological cycle of eimeriids.
9. Diagnostics of eimeriosis.

10. Therapeutic and preventive measures for eimeriosis of animals and birds.

GPC-6ID-3

Student has the skills to carry out identification procedures, select and implement measures that can be used to reduce the level of risk

11. Morphology, biological cycle of toxoplasmas.

12. Routes of infection of animals with toxoplasmas.

13. Diagnostics of toxoplasmosis.

14. Treatment and preventive measures for toxoplasmosis in animals.

PC-5

Developing a treatment plan for animals based on the established diagnosis and individual characteristics of the animals, selecting the necessary chemical and biological drugs for treating animals, taking into account their combined pharmacological effects on the body:

PC-5ID-1

Be able to use specialized information databases when choosing treatment methods for animals;

15. Morphology, biological cycle, and diagnostics for besnoitiosis.

16. Features of the biological cycle of sarcocysts in the body of intermediate hosts.

17. Sarcosporidiosis in cats and dogs.

PC-5ID-2 Be able to calculate the amount of medication for treating animals and preventing diseases with the preparation of prescriptions for a certain period;

18. Etiology and diagnostics of cryptosporidiosis in calves.

19. Morphology and biological cycle of trichomonads.

20. Diagnostics and measures for control and prevention of tritrichomoniasis in cattle.

PC-5ID-3

Be able to calculate the amount of medications for the treatment of animals and disease prevention with the preparation of prescriptions for a certain period, including using digital technologies;

21. Morphology and biological cycle of histomonads and their role in infecting birds with heterokiasis.

22. Therapeutic and preventive measures for histomoniasis.

PC-5ID-4

Be able to administer drugs to the body of animals in various ways;

23. Which trypanosomes belong to the Stercoraria section?

24. Which trypanosomes belong to the Salivaria section?

25. Etiology and clinical signs of mating disease of single-toed animals.

26. Measures to combat mating disease of single-toed animals.

PC-5ID-5

Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnosis, prevention and treatment of animals;

27. Features of differential diagnostics in trypanosomiasis of solitary ungulates.
28. Natural focality of transmissible diseases using leishmaniasis as an example.

PC-5ID-8

Know the technique of administering drugs into the animal's body by enteral (oral, sublingual and rectal administration) and parenteral (injections, inhalations and skin applications).

29. Morphology and biological cycle of balantidia.
30. Diagnostics and treatment and preventive measures for balantidiasis in piglets.

PC-11

Development of an annual plan of anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures

PC-11ID-1

Be able 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.

31. Rickettsiosis of animals: etiology, pathogenesis and diagnostics.
32. Therapeutic and preventive measures for anaplasmosis in cattle.
33. Spirochetosis (borreliosis) of birds.

PC-11ID-2

Know the methods of collecting and analyzing information in veterinary planning, including the use of information databases.

34. Fundamentals of taxonomy and biology of parasitic arachnids.
35. Ixodid ticks, their role in animal pathology and measures to combat them.
36. Argasid ticks, their role in animal and bird pathology and measures to combat them.
37. Gamasid ticks, their role in bird pathology and measures to combat them.

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-13ID-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;

- 38. Psoroptosis of cattle.
- 39. Psoroptosis of sheep and goats.
- 40. Psoroptosis of rabbits.
- 41. Chorioptosis of cattle.
- 42. Sarcoptic mange of pigs.
- 43. Notoedrosis of carnivores.
- 44. Demodicosis of cattle.
- 45. Demodicosis of dogs.

PC-14

Organization of preventive immunizations (vaccinations), therapeutic and prophylactic 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 evaluate the effectiveness of the preventive measures taken and the methods of their implementation, including the use of digital technologies;

- 46. Knemidokoptosis of birds.
- 47. Siringophilosis of birds.
- 48. Oribatid mites and their role in animal pathology.

PC-14ID-2

Know the procedure for conducting a clinical study of animals when planning preventive measures;

- 49. Structure, fundamentals of taxonomy and biology of parasitic insects.
- 50. Hypodermatosis of cattle.
- 51. Gastrophilosis of horses.
- 52. Oestrosis of sheep.
- 53. Rhinestrosis of horses.
- 54. Midges and measures to combat them.

PC-14ID-3

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

- 55. Zoophilic flies and measures to combat them.
- 56. Siphunculatoses of animals.

57. Mallophagosis of animals and birds.
58. Melophagosis of sheep.
59. Wohlfartiosis of animals.
60. Fleas, bedbugs, their role in animal pathology and measures to combat them.

3.2.2. EXAM QUESTIONS

For the 5th year (full-time) and 6th year
(full-time, part-time and part-time forms of study)

The competence achieved:

GPC-6

Student is able to analyze, identify and assess the danger of the risk of the occurrence and spread of diseases

GPC-6 ID-1

Student knows the existing programs for the prevention and control of zoonoses, contagious diseases, emergent or newly emerging infections, the use of animal identification systems, tracing and control by the relevant veterinary services.

1. Parasitology and its components.
2. Brief history of parasitology and the role of domestic scientists in its development.
3. The doctrine of Academician E.N. Pavlovsky on the natural focality of transmissible diseases.
4. The role of Academician K.I. Skryabin in the development of parasitology.
5. The importance of the works of Professor V.L. Yakimov in the development of veterinary protozoology.
6. Prevention of invasive diseases on large farms and complexes.

GPC-6 ID-2

Student is able to assess the risk of animal diseases, including the import of animals and animal products and other measures of veterinary services, the control of prohibited substances in the body of animals, animal products and feed.

1. Definition and content of veterinary protozoology.
2. Methods for diagnosing piroplasmosis.
3. Piroplasmosis of small cattle.
4. Babesiosis of horses.
5. Babesiosis of dogs.
6. Babesiosis of cattle.
7. Differential diagnostics of babesiosis.

GPC-6 ID-3

Student has the skills to carry out identification procedures, select and implement measures that can be used to reduce the level of risk

8. Development of theileria in the body of vertebrate animals.
9. Theileriosis of cattle.
10. Nuttalliosis of horses.
11. Biological cycle of eimeria development.
12. Eimeriosis of cattle.
13. Eimeriosis of rabbits.
14. Eimeriosis of birds.

PC-5

Development of a treatment plan for animals based on the established diagnosis and individual characteristics of animals, selection of necessary chemical and biological drugs for the treatment of animals, taking into account their combined pharmacological effect on the body:

PC-5ID-1

Be able to use specialized information databases when choosing treatment methods for animals;

15. Toxoplasmosis of animals.
16. Besnoitiosis of animals.
17. Sarcocystosis of farm animals.
18. Cryptosporidiosis of calves.
19. Conjugated disease of horses.
20. Su-auru of horses and camels.

PC-5ID-2

Be able to calculate the amount of medication for the treatment of animals and disease prevention with the preparation of prescriptions for a certain period;

21. Leishmaniasis of animals.
22. Trichomoniasis of cattle.
23. Histomoniasis of birds.
24. Balantidiosis of pigs.
25. Anaplasmosis of cattle.
26. Borreliosis (treponemosis, spirochetosis) of chickens.

PC-5ID-3

Be able to calculate the amount of medication for the treatment of animals and disease prevention with the preparation of prescriptions for a certain period, including with the help of digital technologies;

1. Ixodid ticks and their biology.
2. Argasid ticks and their biological characteristics.
3. Gamasid ticks and measures to combat them.
4. Methods of combating ixodid ticks.
5. Methods of diagnosing scabies diseases.

6. Psoroptosis of sheep.
7. Dermatophytosis (chorioptosis) of animals.
8. Otodectosis of carnivores.

PC-5ID-4

Be able to administer drugs to animals in various ways;

9. Sarcoptic mange of pigs.
10. Scabies of carnivores.
11. Methods of combating scabies in animals.
12. Demodicosis of cattle.
13. Hypodermatosis of cattle.
14. Organization of therapeutic and preventive measures for hypodermatosis of cattle.
15. Edemagenosis and cephenomyosis of reindeer.
16. Estrosis of sheep.
17. Rhinestrosis of horses and cephalopinosi of camels.
18. Gastrophilosis of horses.

PC-5ID-5

Know the methods of drug treatment of sick animals and indications for their use in accordance with guidelines, instructions, manuals, rules for diagnostics, prevention and treatment of animals;

19. Horseflies and their veterinary significance.
20. Blood-sucking and non-blood-sucking flies and measures to combat them.
21. Wolfhartiosis of animals.
22. Melophagosis of sheep.
23. Midges and measures to combat them.
24. Mosquitoes, biting midges, mosquitoes and their veterinary significance.

PC-5ID-8

Know the technique of administering medicinal substances into an animal's body by enteral (oral, sublingual and rectal administration) and parenteral (injections, inhalations and skin applications) methods.

25. Midges and methods of combating them.
26. Fleas and measures of combating them.
27. Hematopinosi of pigs.
28. Lice and measures of combating them.
29. Trichodectosis of animals.
30. Bedbugs and measures of combating them.
31. Methods of combating wingless ectoparasites.
32. Characteristics of modern acarine insecticides, methods of application, their impact on the ecology of the environment.

PC-11

Development of an annual plan of anti-epizootic measures, a plan for the prevention of non-communicable animal diseases, a plan for veterinary and sanitary measures

PC-11ID-1

Be able to collect and analyze information, including veterinary statistics, necessary for planning preventive anti-epizootic measures, prevention of non-communicable animal diseases, and veterinary and sanitary measures;

1. Methods for diagnosing helminthiasis.
2. Fascioliasis of ruminants.
3. Paramphistomatosis of cattle.
4. Dicrocoeliosis of ruminants.
5. Opisthorchiasis of carnivores.
6. Prostogonimosis and echinostomatosis of birds

PC-11ID-2

Know the methods of collecting and analyzing information in veterinary planning, including the use of information databases.

7. Cestode orders and their characteristics.
8. The main types of structure of cestode larvae.
9. Diphyllbothriasis of carnivores.
10. Dipylidiosis of carnivores.
11. Moniezirosis, thysaniezirosis and avittelinosis of ruminants.
12. Anoplocephalidoses of solitary ungulates.
13. Drepanidotaeniasis of geese.

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-13ID-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;

14. Cattle cysticercosis (bovine) and its medical and veterinary significance.
15. Swine cysticercosis (cellulosic) and its medical and veterinary significance.
16. Coenurosis of small cattle.
17. Echinococcosis and its medical, veterinary and sanitary significance.
18. Ascariasis in pigs.
19. Parascariosis in horses.
20. Toxocariosis, toxascariosis in carnivores.

PC-14

Organization of preventive immunizations (vaccinations), therapeutic and prophylactic 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 evaluate the effectiveness of preventive measures and methods of their implementation, including the use of digital technologies;

21. Ascariasis and heterakiasis in chickens.
22. Oxyuriasis in horses.
23. Passaluriasis in rabbits.
24. Strongylosis in horses (strongylosis, delafondiosis, alfortiosis).
25. Chabertiosis in sheep.

PC-14ID-2

Know the procedure for conducting clinical studies of animals when planning preventive measures;

26. Swine oesophagostomiasis.
27. Ruminant bunostomosis.
28. Sheep haemonchosis.
29. Small ruminant dictyocaulosis.
30. Bovine dictyocaulosis.
31. Small ruminant protostrongylosis (protostrongylosis and mulleriosis).

PC-14ID-3

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

32. Swine metastrongylosis.
33. Swine trichuriasis.
34. Animal and human trichinosis.
35. Bovine thelaziasis.
36. Swine macrocanthorhynchosis.

4. METHODOLOGICAL MATERIALS DEFINING THE PROCEDURES FOR ASSESSING KNOWLEDGE, SKILLS AND ABILITIES AND WORK EXPERIENCE CHARACTERIZING THE STAGES OF COMPETENCE FORMATION

4.1. Criteria for evaluating students' knowledge during the knowledge survey (written survey)

Mark "**excellent**" - the student clearly expresses his point of view on the issues under consideration, giving appropriate examples.

Mark "**good**" - the student admits some errors in the answer

The mark «**satisfactory**» - the student discovers gaps in knowledge of the basic educational and normative material.

The mark "**unsatisfactory**" - the student discovers significant gaps in knowledge of the basic provisions of the discipline, the inability to obtain the correct solution to a specific practical problem with the help of a teacher.

4.2. Criteria for evaluating students' knowledge during testing

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

The mark "**excellent**" is 25-22 correct answers.

The mark "**good**" is 21-18 correct answers.

The mark "**satisfactory**" is 17-13 correct answers.

The mark "**unsatisfactory**" is less than 13 correct answers

4.3. Criteria for evaluating students' knowledge in the preparation of reports

The mark "**excellent**" - the problem is identified and its relevance is justified; an analysis of various points of view on the problem under consideration is made and one's own position is logically stated; conclusions are formulated, the topic is fully disclosed, the volume is maintained; the requirements for external design are met, the basic requirements for the report are fulfilled.

The mark "**good**" - mistakes have been made. In particular, there are inaccuracies in the presentation of the material; there is no logical consistency in judgments; the volume of the report is not maintained; there are omissions in the design, there are significant deviations from the requirements for the presentation of materials.

The mark "**satisfactory**" - the topic is only partially covered; factual errors were made in the content of the report; there are no conclusions, the topic of the report is not disclosed.

The mark "**unsatisfactory**" - there is a significant misunderstanding of the problem or the report is not submitted.

1.4. Criteria for evaluating students' knowledge when checking control papers

1.5.

The mark "**excellent**" - the problem is identified and its relevance is justified; an analysis of various points of view on the problem under consideration is made and one's own position is logically stated; conclusions are formulated, the topic is fully disclosed, the volume is maintained; the requirements for external design are met, the basic requirements for the abstract are fulfilled

The mark is "**good**" - mistakes have been made. In particular, there are inaccuracies in the presentation of the material; there is no logical consistency in 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 only partially covered; factual errors were made 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 misunderstanding of the problem or the abstract is not presented at all.

4.5. Criteria of knowledge during the test

The mark **"accepted"** must correspond to the parameters of any of the positive ratings ("excellent", "good", "satisfactory").

The mark **"not accepted"** rating should correspond to the parameters of the "unsatisfactory" rating.

The mark "excellent" – all types of educational work provided for in the curriculum have been completed. The student demonstrates the compliance of knowledge, skills, and abilities with the indicators given in the tables, operates with acquired knowledge, skills, and applies them in situations of increased complexity. At the same time, inaccuracies, difficulties in analytical operations, transfer of knowledge and skills to new, non-standard situations may be allowed.

The mark "good" – all types of educational work provided for in the curriculum have been completed. The student demonstrates the compliance of knowledge, skills, and abilities with the indicators given in the tables, operates with acquired knowledge, skills, and applies them in standard situations. At the same time, minor errors, inaccuracies, difficulties in analytical operations, transfer of knowledge and skills to new, non-standard situations may be made.

Mark "satisfactory" – one or more types of educational work provided for in the curriculum have not been completed. The student demonstrates incomplete compliance of knowledge, skills, and abilities with the indicators given in the tables, significant errors are made, a partial lack of knowledge, skills, and skills is manifested in a number of indicators, the student experiences significant difficulties in operating with knowledge and skills when transferring them to new situations. –

The mark «unsatisfactory" – the types of educational work provided for in the curriculum have not been completed. demonstrates incomplete compliance of knowledge, skills, and abilities given in the tables of indicators, significant errors are made, a lack of knowledge, skills, and skills is manifested for a large number of indicators, the student experiences significant difficulties in operating knowledge and skills when transferring them to new situations

4.6. Criteria of knowledge during the examination

The mark "excellent" – all types of educational work provided for in the curriculum have been completed. The student demonstrates the compliance of knowledge, skills, and abilities with the indicators given in the tables, operates with acquired knowledge, skills, and applies them in various situations of increased complexity. At the same time, inaccuracies, difficulties in analytical operations, transfer of knowledge and skills to new, non-standard situations may be allowed. –

The mark "good" – all types of educational work provided for in the curriculum have been completed. The student demonstrates the compliance of knowledge, skills, and abilities with the indicators given in the tables, operates with acquired knowledge, skills, and applies them in standard situations. At the same time, minor errors, inaccuracies, difficulties in analytical operations, transfer of knowledge and skills to new, non-standard situations can be made.

Mark "satisfactory" – one or more types of educational work provided for in the curriculum have not been completed. The student demonstrates incomplete compliance of knowledge, skills, and abilities with the indicators given in the tables, significant errors are made, a partial lack of knowledge, skills, and skills are manifested in a number of indicators, the student experiences significant difficulties in operating with knowledge and skills when transferring them to new situations.

The mark "unsatisfactory" – the types of educational work provided for in the curriculum have not been completed. demonstrate incomplete compliance of knowledge, skills, and abilities given in the tables of indicators, significant errors are made, a lack of knowledge, skills, and skills

are manifested for a large number of indicators, the student experiences significant difficulties in operating with knowledge and skills when transferring them to new situations.

5. ACCESSIBILITY AND QUALITY OF EDUCATION FOR DISABLED PEOPLE

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

When conducting the procedure for evaluating the learning outcomes of disabled people and persons with disabilities, their own technical means can be used.

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

For people with visual impairments:	– in printed form in enlarged font; – in the form of an electronic document.
For people with hearing impairments:	– in printed form; – in the form of an electronic document.
For people with disorders of the musculoskeletal system:	– in printed form, the device; – in the form of an electronic document.

When conducting the procedure for evaluating the learning outcomes of disabled people and persons with disabilities in the discipline, it ensures that the following additional requirements are met, depending on the individual characteristics of the students:

a) instructions on the procedure for conducting the assessment procedure are provided in an accessible form (orally, in writing);

b) an accessible form of assignment of assessment tools (in printed form, in printed form in enlarged font, in the form of an electronic document, assignments are read out by the teacher);

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

If necessary, for students with disabilities and the disabled, the procedure for evaluating the results of training in the discipline can be carried out in several stages.

The procedure for evaluating the learning outcomes of disabled people and persons with disabilities is allowed using distant learning technologies.