Assessment tools for conducting attestation in discipline « Fundamentals of design and drug's chemistry » for students of 2021 years of admission under the educational programme cipher 35.05.01 Pharmacy, specialisation (profile) Pharmacy (Specialist's degree), form of study full-time for the 2025-2026 academic year

1. Assessment tools for conducting current attestation in discipline

1.1. Assessment Tools for Conducting Certification in Seminar-Type Classes

Assessment in seminar-type classes includes the following types of assignments:
Текущая аттестация включает следующие типы заданий: testing, solving situational problems, and interviewing on control questions.

1.1.1. Examples of tests

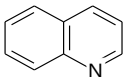
Assessed indicators of competence achievement: УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1

001. AROMATIC COMPOUNDS ARE

1) 

2) 

3) 

4) 

5) 

002. INTERACTION OF BENZENE WITH HALOGENS IN THE PRESENCE OF CATALYSTS – LEWIS ACIDS REACTS LIKE

1) radical addition
2) electrophilic addition
3) nucleophilic substitution
4) radical substitution
5) electrophilic substitution

003. Nitration of benzene belongs to the following types of reactions:

1) radical addition
2) electrophilic addition
3) nucleophilic substitution
4) radical substitution
5) electrophilic substitution

004. SELECT THE POINT CONTAINING AN ERRONEOUS STATEMENT

1) Pyrazolone is a five-membered cycle with two heteroatoms

2) The product of electrophilic substitution reactions for pyrazolone is N-derivatives of pyrazolone

3) Pyrazolone is sulfonated with oleum

4) Pyrazolone does not undergo electrophilic substitution reactions

5) Pyrazolone has the highest negative charge on the C-4 atom

CHOOSE ONE CORRECT ANSWER

005. WHAT AMINO ACID IS COMPOSED OF PROTEINS CAN BE DETERMINED BY XANTHOPROTEIN REACTION

1) glycine;

2) serine;

3) asparagine;

4) proline;

5) phenylalanine.

CHOOSE TWO CORRECT ANSWERS

006. CYTOSINE IS CHARACTERIZED BY PROTOTROPIC TAUTOMERISM;

1) amino-imine tautomerism;

2) lactam-lactimic tautomerism;

3) keto-enol tautomerism;

4) cyclo-oxotautomerism.

CHOOSE ONE CORRECT ANSWER.

007. SELECT THE NAME OF THE THEOBROMINE ALKALOID

1) 1,3,7-trimethylxanthine;

2) 3,7-dimethylxanthine;

3) 1.3-dimethylxanthine;

4) 3,8-dimethylxanthine;

5)1.8-dimethylxanthine.

008. WHICH STATEMENT ABOUT THE STRUCTURE OF COENZYME NAD+ IS INCORRECT?

1) contains a nicotinamide fragment;

2) is an N-glycoside;

3) contains an O-glycosidic bond;

4) contains an anhydride bond;

5) contains an ester bond

009.К А TITRATION CURVE IS CALLED

1) a graphical representation of the dependence of the concentration of the determined component or a property of the system proportional to it on the pH value of the titrated solution.

2) a graphical representation of the dependence of the concentration of the determined component or a property of the system proportional to it on the volume of the added titrant.

3) a graphical representation of the dependence of the concentration of the determined component or a property of the system proportional to it on time.

4) a graphical representation of the dependence of the concentration of the determined component or a property of the system proportional to it on the concentration of the added titrantкомпонента или пропорционального ей свойства системы от концентрации прибавленного титранта

010. DETERMINATION OF ALKALIS AND CARBONATES IN THE PRESENCE OF COEXISTENCE IS CARRIED OUT BY THE METHOD
1) acid-base titration,
2) redox titration;
3) precipitative titration,
4) complexometric titration
5) by the method of pipetting
011. COMPLEX III IS:
1) nitrilacetic acid,
2) ethylendiaminetetraacetic acid,
3) disodium salt of ethylendiaminetetraacetic acid;
4) diamincyclohexanetetraacetic acid.
5) Trilon A

1.1.2. Examples of situational tasks
Assessed indicators of competence achievement: УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
1. A 0.5 g sample of hematite containing 69.9% iron was dissolved in acid. The resulting solution was diluted in a measuring flask to 250 ml. What volume of $KMnO_4$ c $N(KMnO_4)$ =0, mol/L is required to titrate the iron ions reduced toFe^{+2} in 100 ml of this solution?
2. After dissolving, 100 ml of a 0.1 N solution of iodine was added to a 1.5 g sample of technical Na_2SO_3. 40 ml of a solution containing 2.482 $Na_2S_2O_3$ in 200 ml was used to titrate the excess iodine. Determine the percentage of Na_2SO_3.
1.2.1. Examples of a test case
Assessed indicators of competence achievement:УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1

1. Analytical methods for confirming the structure of synthesized drugs: titrimetric analysis. Basic concepts, classification of titrimetric methods, and application of titrimetric methods.
2. Analytical methods for confirming the structure of synthesized drugs: electrochemical analysis methods. Potentiometric titration.
3.After dissolving, 100 ml of a 0.1 N solution of iodine was added to a 1.5 g sample of technical Na_2SO_3. 40 ml of a solution containing 2.482 $Na_2S_2O_3$ in 200 ml was used to titrate the excess iodine. Determine the percentage of Na_2SO_3.

1.2.2. Examples of control question
Assessed indicators of competence achievement: УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
1. Design of the structure of synthetic drugs based on the principle of chemical modification to model their biological activity. Derivatives of heterocyclic compounds

2. Empirical basis for the design of prodrugs to model their biological activity. Amino acids, peptides, and proteins.

3. Analytical methods for confirming the structure of synthesized drugs: The essence of optical analysis methods, their classification, advantages, and disadvantages.

1.3. Assessment tools for students' independent work

Assessment of independent work includes testing.

1.3.1. Examples of single-response test questions

Assessed indicators of competence achievement: УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1

1. Select one answer from five. K^+ ion is not detected by

1) tartaric acid;
2) ammonium perchlorate;
3) sodium hexanitrocobaltate (III);
4) dioxourilate;
5) flame coloration

2. Choose one of the five answers. An analytical chemical reaction is a reaction that is accompanied by
a) a change in the color of the solution
b) a specific analytical effect due to the formation of a reaction product with specific properties
c) a change in the pH of the solution
d) the dissolution of a precipitate
e) the formation of a precipitate
3. . Choose one answer from five. A microcrystalline reaction is accompanied by the formation of
a) crystals of a characteristic shape
b) colored pearls
c) a fine-grained precipitate
d) colored crystals
e) an amorphous precipitate

4. . Choose one of the four answers. Kalin cation reagent
a) ammonium oxalate
b) oxalic acid
c) sodium hydrophosphate
d) sodium hexastirocobaltate (III)
5. Choose one answer from the four. Sodium cation stains the silt in
a) yellow color
b) purple color
c) brick-red color
d) green color
6. Choose one of the four answers. The salt effect is
1) the effect on the solubility of a poorly soluble electrolyte of a salt containing an ion of the same name, which reduces the solubility of a poorly soluble electrolyte
2) the effect on the solubility of a poorly soluble electrolyte of a salt that does not contain an ion of the same name, which reduces the solubility of a poorly soluble electrolyte
3) the effect on the solubility of a poorly soluble electrolyte of a salt containing an ion of the same name, which increases the solubility of a poorly soluble electrolyte
4) effect on the solubility of a poorly soluble electrolyte of a salt that does not have an ion of the same name and increases the solubility of a poorly soluble electrolyte

5) effect on the solubility of a poorly soluble electrolyte of any ion in the direction of decreasing the solubility

7. Choose one answer from the fourn. Physical methods of quantitative determination include:
a) permanganometry
b) iodometry
c) refractometry
d) bromatometry

8. Select one of the four answers. The permanganometer method is used at a pH of
a) pH = 7
b) pH > 7
c) pH < 7

9. Choose one answer from four. Oxidation-reduction method:
a) Mohr's method
b) mercurimetry
c) iodometry
d) trilonometry

10. Choose one answer from the four. Precipitation methods include:
a) trilonometry
b) alkalimetry
c) argentometry
d) nitrometry

1.3.2. Examples of multiple-choice and/or matching and/or sequencing test questions

Assessed indicators of competence achievement: УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1

1. Select three answers from the six. Redox titration methods include:
a) dichromate titration
b) permanganate titration
c) cerimetry
d) argentometry
e) acidimetry
f) alkalimetry

2. Select three answers from the six. The methods of precipitative titration are:
a) Mohr's method
b) Fajans' method
c) Volhard's method
d) Reductometry
e) Complexometry
f) Ring-pulling method

3. Select three answers from the six. Electrochemical methods of analysis include:
a) Potentiometry
b) Polarography
c) Conductometry
d) Photocolorimetry
e) Spectrophotometry
f) Chromatography

4. Set the analytical effect and cation by matching each position in the first column with the corresponding position in the second column:

Analytical effects	The cation
1. Turns the flame purple	a) Na^+
2. Turns the flame yellow	b) Ca^{2+}
3. Turns the flame red	c) Ba^{2+}
4. Turns the flame green	d) K^+

5. Match the measured parameter and the method in the first column with the corresponding position in the second column:

Measured parameter	Method
1. electrode potential	A. Spectrophotometry
2. optical density	B. Potentiometry
3. electrical conductivity	C. Conductometry
4. light transmittance coefficient	
5. pH	
6. solution resistance	

6. Match the indicator and quantitative analysis method in the first column with the corresponding position in the second column:

Indicator	Quantitative analysis method
1. Methyl Orange	A. Mohr's method
2. Potassium Chromate	B. Acidimetry
3. Starch	C. Complexometry
4. Murexide	D. Iodometry
5. Eosin	E. Nitritometry
6. Tropelin 00	F. Fayans method

7. Set the sequence of operations in the Gravimetry method. Write down the corresponding sequence of numbers:

1. Filtration
2. Weighing the sample
3. Calculating the sample and the volume of the precipitant
4. Calculating the results and the error of the analysis
5. Obtaining the precipitated form
6. Dissolving the sample
7. Obtaining and weighing the gravimetric form.

8. Establish the sequence of stages in titrimetric analysis. Write down the corresponding sequence of numbers.

1. Selection of an aliquot
2. Titration
3. Preparation of the analyte solution
4. Visual determination of the CTT
5. Addition of an indicator

9. Establish the sequence of stages in Spectrophotometric determination. Write down the corresponding sequence of numbers.

1. Measuring the optical density of standard solutions
2. Plotting a calibration graph
3. Measuring the optical density of the analyzed solution
4. Preparing a series of standard solutions
5. Calculating the analysis results

10. Set the sequence of Chromatographing stages. Write down the corresponding sequence of numbers.

1. Prepare the Chromatograph plate
2. Put the solvent in the Chromatograph column
3. Put the Chromatograph plate in the column
4. Apply the samples of the analyzed substances on the Chromatograph plate
5. Dry the Chromatograph plate after Chromatographing

1.3.3. Examples of open-ended tasks (open-ended questions)

Assessed indicators of competence achievement: ОПК-1.1.1.

1. Calculate the volume of hydrochloric acid with a density of 1.170 g/ml required to prepare a 200 ml solution with a concentration of HCl of 0.05 mol/L.
2. To standardize the KOH solution, 0.02 g of $H_2C_2O_4$ $2H_2O$ was taken. 15 ml of KOH solution was used for titration. What is the concentration of the titrant?
3. Calculate the molar concentration and titer of the HCl solution if 17.5 ml of this acid was used to titrate 0.4217 g of borax.
4. To determine the molar concentration of the equivalent of H_2SO_4, an excess of $BaCl_2$ was added to 10.0 ml of the acid. The mass of the resulting $BaSO_4$ precipitate after filtration, calcination, and weighing was 0.2762 g. Calculate the molar concentration of the equivalent of the H2SO4 solution and the titer.
5. A sample of $H_2C_2O_4$ $2H_2O$ weighing 0.6000 g was dissolved in a measuring flask with a capacity of 100.0 ml. 18.34 ml of NaOH was used to titrate 20.00 ml of the resulting solution. Determine the molar concentration of the NaOH solution and its titer for $H_2C_2O_4$

2. Assessment tools for conducting intermediate certification in the discipline

Interim certification is carried out in the form of an exam.

List of questions to prepare for intermediate certification:

№	List of questions to prepare for the intermediate attestation	Indicators of competence achievement
1.	Design of the structure of synthetic drugs based on the principle of chemical modification to model their biological activity. Derivatives of aromatic compounds.	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
2.	Design of the structure of synthetic drugs based on the principle of chemical modification to model their biological activity. Derivatives of heterocyclic compounds	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
3.	Drug structure design based on the principle of chemical modification for modeling their biological activity: antibacterial drugs	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
4.	Drug structure design based on the principle of chemical modification for modeling their	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1;

	biological activity: complex compounds	ПК-11.3.1
5.	Design of the structure of synthetic drugs based on the principle of chemical modification to model their biological activity: antiviral drugs	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
6.	Design of the structure of drugs based on the principle of chemical modification to model their biological activity: antitumor drugs	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
7.	Design of the structure of medicinal substances based on the principle of chemical modification for modeling their biological activity: modeling the interaction of a medicinal substance with bioreceptors	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
8.	Design of medicinal substances of natural origin for modeling their biological activity. Alkaloids.	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
9.	Design of medicinal substances of natural origin for modeling their biological activity. Glycosides. Conference session.	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
10.	Empirical basis for the design of prodrugs to model their biological activity. Amino acids, peptides, and proteins.	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
11.	Empirical basis for the design of prodrugs to model their biological activity. Nucleic acids.	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
12.	The importance of functional groups in the design of new potential drugs. Heterofunctional compounds.	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
13.	Analytical methods for confirming the structure of synthesized drugs: titrimetric analysis. Basic concepts, classification of titrimetric methods, and application of titrimetric methods.	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
14	Analytical methods for confirming the structure of synthesized drugs: titrimetric analysis. Basic concepts, classification of	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-

	titrimetric methods, and application of titrimetric methods: acid-base titration	8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
15	Analytical methods for confirming the structure of synthesized drugs: titrimetric analysis. Basic concepts, classification of titrimetric methods, and application of titrimetric methods: redox titration.	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
16	Analytical methods for confirming the structure of synthesized drugs: titrimetric analysis. Basic concepts, classification of titrimetric methods, and application of titrimetric methods: complexometric titration.	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
17	Analytical methods for confirming the structure of synthesized drugs: titrimetric analysis. Basic concepts, classification of titrimetric methods, and application of titrimetric methods: precipitation titration.	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
18.	Analytical methods for confirming the structure of synthesized drugs: electrochemical analysis methods. Potentiometric titration.	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
19.	Analytical methods for confirming the structure of synthesized drugs: The essence of optical analysis methods, their classification, advantages, and disadvantages.	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
20.	Analytical methods for confirming the structure of synthesized drugs: Optical methods of analysis. Photocolorimetry	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
21.	Analytical methods for confirming the structure of synthesized drugs: Optical methods of analysis. Spectrophotometry.	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1
22.	Analytical methods for confirming the structure of synthesized drugs: General characteristics of instrumental methods of analysis.	УК-1.1.1; УК-1.2.1; УК-1.3.1; ОПК-1.1.1; ОПК-1.2.1;ОПК-1.3.1; ПК-5.1.1; ПК-5.2.1; ПК-5.3.1; ПК-8.1.1; ПК-8.2.1; ПК-8.3.1; ПК-11.1.1; ПК-11.2.1; ПК-11.3.1

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