

**Evaluation means for carrying out certification on
discipline "Pharmacology"
for students of 2023 year of admission
on the educational program
33.05.01 Pharmacy
orientation (profile) Pharmacy
full-time education form
2025-2026 academic year**

1. Assessment tools for conducting ongoing certification in the discipline

The current assessment includes the following types of tasks: testing, solving situational problems, assessing the acquisition of practical skills (abilities), a test, writing and defending an essay, an interview on test questions, and preparing a report.

1.1.Examples of multiple choice test questions:

Verifiable indicators of competency achievement: SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1

1. Indicate the central antitussive drug with a narcotic type of action:

Select one answer:

- a) Codeine phosphate
- b) Bromhexine
- c) Glaucine hydrochloride
- d) Libexin

2.Which of the antisecretory drugs blocks m1-cholinergic receptors?

Select one answer:

- a) Atropine sulfate
- b) Famotidine
- c) Omeprazole
- d)Pirenzepine**

2. Iron supplements are characterized by the following side effects:

Select one answer:

- a) Obstipation
- b) Diarrhea
- d) Agranulocytosis
- c) Anemia

4. Specify the mechanism of action of indirect anticoagulants:

Select one answer:

- a) Inhibition of the conversion of prothrombin to thrombin
- b)Inhibition of prothrombin and proconvertin synthesis in the liver**
- c) Inhibition of the conversion of fibrinogen to fibrin

d) Dissolution of fibrin clots

5. An antacid that causes constipation.

Select one answer:

- a) Magnesium oxide
- b) Magnesium trisilicate
- c) Aluminum hydroxide
- d) Sodium bicarbonate

6. Antifibrinolytic agent.

Select one answer:

- a) Streptodectase
- b) Aminocaproic acid
- c) Urokinase
- d) Gelatinol

7. "Atypical" antipsychotic drug.

Select one answer:

- a) Sulpiride
- b) Chlorprothixene
- c) Fluorphenazine
- d) Droperidol

8. Analeptic of mixed action.

Select one answer:

- a) Cordiamine
- b) Strychnine
- c) Bemegride
- d) Camphor

9. A hypoglycemic agent that slows down the digestion and absorption of carbohydrates in the intestines.

Select one answer:

- a) Glucagon
- b) Bromocriptine
- c) Amaryl
- d) Acarbose

10. Indications for the use of thiazide diuretics.

Select one answer:

- a) Gout
- b) Overdose of ergocalciferol
- c) Glycoside intoxication
- d) Hypertension

1.2 Examples of test tasks for combining a drug with a pharmacological group and mechanism of action:

Competencies tested: SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1

1. Combine the drug with the pharmacological group:

1. Indirect anticoagulant	A. Ambroxol
2. An indirect-acting expectorant.	B. Metoclopramide
3. Anti-inflammatory agent	V. Neodicumarin
4. Antiemetic drug.	G. Prednisolone

2. Match the drug with its mechanism of action:

1. Reduces the formation of inflammatory mediators	A. Budesonide
2. Proton pump inhibitor	B. Dinoprost
3. Reduces uterine tone	V. Mielosan
4. Inhibits leSCopoiesis.	G. Omeprazole

3. Combine the drug with the indications for use:

1. Paracetamol	A. Myocardial infarction
2. Promedol	B. Pain relief during labor
3. Naloxone	B. Fever in children
4. Fentanyl	G. Morphine overdose

4. Combine a drug with a side effect:

1. Mercazolil	A. Lactic acidosis
2. Prednisolone	B. Lipoatrophy
3. Metformin	B. LeSCopenia, agranulocytosis
4. Insulin	G. Diabetes mellitus

5. Combine a drug with a side effect:

1. Amoxicillin	A. Hearing loss
2. Levomycetin	B. Disruption of tooth formation
3. Tetracycline	B. Aplastic anemia
4. Gentamicin	G. Allergic reactions

1.3 Examples of situational problems:

Competencies tested: SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1

1. Identify the substance based on its description of effects and use. A substance with a vasopressor effect stimulates alpha1-adrenergic receptors, causing reflex bradycardia and pupil dilation. It is used for rhinitis, collapse, and glaucoma.
2. Identify the substance based on its description of effects and use. The substance blocks alpha-

1-a drenergic receptors, dilates blood vessels, and reduces the tone of the prostatic urethra and prostate gland. It is used for benign prostatic adenoma and hypertension.

3. Identify the substance based on its description of effects and uses. This substance has antipyretic and analgesic effects, but lacks a pronounced anti-inflammatory effect. It is the drug of choice for fever in children. It has a narrow therapeutic range. Acetylcysteine is used to treat intoxication with this drug.

4. Identify the drugs that affect hematopoiesis (pentoxyl, cyanocobalamin, folic acid).

Substance	Mechanism of action	Indications for use	Side effects
A	A precursor of tetrahydrofolic acid, involved in the synthesis of purines and pyrimidines	Hyperchromic anemia	No
B	participates in the synthesis of choline, nucleic acids, and the formation of methyl groups	Hyperchromic anemia, polyneuritis, hepatitis	Allergic reactions
IN	Enhances DNA and RNA synthesis		Dyspeptic disorders

5. Identify the substance based on its description of effects and use. The substance reduces cardiac output and total vascular resistance. It has alpha-adrenergic agonist activity. It has a hypotensive effect. It is used to treat hypertensive crises. When administered intravenously, it may cause a short-term increase in blood pressure.

1.4 Examples of tasks for assessing the acquisition of practical skills:

Competencies tested: SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1

Write prescriptions for medications:

- Atropine sulfate
- Neostigmine methylsulfate

2. Write prescriptions for medications:

- Vikasol
- Heparin

1.5. Example of a test option:

Competencies tested: SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1

Answer the following questions:

Cholinomimetic agents, classification of drugs.

Local anesthetics: mechanisms and localization of drug action. Pharmacological characteristics of alpha-adrenergic agonists.

1.6 Examples of paper topics:

Competencies tested: SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1

1. Gene therapy as a new direction in pharmacology.
2. Adaptogens.
3. Actoprotectors.
4. Pharmacological characteristics of antioxidant agents.
5. Biologically active additives and medicinal products: a comparative analysis.
6. Medicines based on monoclonal antibodies.
7. Combination medications for the relief of cold symptoms.
8. Comparative characteristics of multivitamin drugs

1.7 Examples of interview security questions:

Competencies tested: SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1

Pharmacokinetics medicinal funds: paths introductions, distribution of drugs in the body.

1. Hypertensive agents. Classification. Pharmacological characteristics of individual drugs.
1. Anticoagulants. Classification. Mechanism of action. Indications for use. Side effects.

1.2. Assessment tools for conducting interim assessment in the discipline

The midterm assessment is conducted in the form of an exam.

The midterm assessment includes the following types of tasks: testing, completing a task to assess practical skills, and an interview.

1.2.1. Examples of test tasks:

Competencies tested: SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1

Name a drug that acts on one receptor subtype as an agonist and on another as an antagonist:

- a) competitive antagonist
- b) non-competitive antagonist
- c) agonist-antagonist
- d) partial agonist

1. Name the decrease in the effectiveness of a drug with repeated use:

- A) idiosyncrasy
- b) addiction
- c) cumulation
- d) tolerance

2. Specify one of the main mechanisms of action of local anesthetics: a) non-specific effect on m2-cholinergic receptors
b) decrease in membrane permeability for sodium ions +
c) blockade of adrenergic receptors
d) potentiation of the action of GABA
3. Specify a drug that reduces intraocular pressure: a) Pilocarpine
b) Atropine
c) Methocinium iodide
d) all of the above
4. The antagonist of benzodiazepine hypnotics is: a) Hexobarbital
b) flumazenil
c) Zopiclone
d) Sodium oxybutyrate

1.2.2 Tasks for assessing the acquisition of practical skills

Competencies tested: SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1

A list of medications for which students are required to know the medications, forms of release and dosage rules

1. Aminophylline
2. Ampicillin
3. Atropine
4. Acetylsalicylic acid
5. Acyclovir
6. Bendazole
7. Benzylpenicillin sodium salt
8. Warfarin
9. Verapamil
10. Vikasol
11. Heparin
12. Hydrochlorothiazide
13. Glibenclamide
14. Diazepam
15. Digoxin
16. Diclofenac
17. Diphenhydramine

18. Zolpidem
19. Isosorbide dinitrate
20. Insulin
21. Calcium chloride
22. Clonidine
23. Codeine phosphate
24. Caffeine
25. Lidocaine
26. Metoclopramide
27. Metronidazole
28. Morphine
29. Neostigmine
30. Nystatin
31. Nitroglycerin (aerosol)
32. Nitroglycerin (sublingual capsules)
33. Nifedipine
34. Omeprazole
35. Pancreatin
36. Papaverine
37. Piracetam
38. Pyridoxine
39. Prazosin
40. Prednisolone
41. Procaine
42. Propranolol
43. Ranitidine
44. Rifampicin
45. Salbutamol
46. Strophanthin K
47. Sulfacetamide
48. Thiamine bromide
49. Levothyroxine
50. Trimeperidine
51. Furazolidone
52. Furosemide
53. Chlorpromazine
54. Celecoxib
55. Cefotaxime
56. Ciprofloxacin
57. Cyanocobalamin
58. Ergocalciferol
59. Ephedrine
60. Epinephrine

1.2.3 List of examination questions

No.	Questions for midterm assessment	Verifiable indicators of competency achievement
1.	The content and objectives of pharmacology. Its position among other medical disciplines. Pharmacology and its main disciplines. The main branches of pharmacy. The stages of pharmacology's development.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
2.	Development of new drugs. Concepts of drug substances, medicinal substances, medicinal products, and dosage forms. Key stages of drug development and implementation.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
3.	Drug development methods: obtaining drugs from medicinal raw materials, targeted synthesis based on biologically active substances and their interaction substrates. Creation of prodrugs, genetic and cellular engineering.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
4.	Preclinical testing (pharmacological, toxicological) of chemicals. Determination of chronic toxicity of new substances. State expert review of preclinical trials. The Pharmacological Committee of the Ministry of Health of the Russian Federation and its functions. Biological ethics oversight of trials.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
5.	Study of embryotoxicity, teratogenicity, fetotoxicity, gonadotropism, carcinogenicity, immunotropism, and allergenicity of new chemical substances.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
6.	Key stages of clinical trials and the introduction of new drugs into the pharmaceutical industry and general medical practice. Methods for evaluating drug efficacy. The procedure for registering domestic drugs. The concepts of GLP, GCP, and GMP.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
7.	The main sections of pharmacology. Principles of drug classification (class, category, group, name, and dosage forms). The procedure for registering and using foreign drugs.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
8.	Dietary supplements: definition, differences from medications. Classification. General pharmacological characteristics of groups. Application features.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
9.	Pharmacokinetics of drugs: routes of administration, absorption mechanisms, drug distribution. Biological barriers. Deposition. Routes of drug elimination.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1

10.	Pharmacokinetics of drugs: chemical transformations (biotransformation, metabolism) of drugs in the body. Key indicators of drug pharmacokinetics.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
11.	Pharmacodynamics of drugs: types of drug action on the body. Localization and mechanism of action. Definition of receptors and their types.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
12.	The dependence of pharmacotherapeutic effect on the properties of drugs and the conditions of their use. Drug dosage. The concept of therapeutic range of action. Repeated use of drugs.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
13.	Combined use of drugs. Types and mechanisms of interaction (pharmaceutical, pharmacological) of drugs.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
14.	The importance of individual characteristics and the body's condition for the effectiveness of medications. Main types of drug therapy. The concept of pharmacovigilance.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
15.	The primary and secondary effects of medications. Types of side effects. The concept of drug incompatibility.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
16.	General principles of treatment of acute drug poisoning.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
17.	Substances that have a protective and stimulating effect on nerve endings. Classification. Mechanism of action. Pharmacological characteristics. Use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
18.	Local anesthetics. Classification. Mechanism of action. Comparative characteristics of drugs. Use. Side effects. Prescribing and dispensing rules.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
19.	Pharmacology of cholinergic transmission. Classification, distribution of cholinergic receptors and effects upon their activation. Classification of cholinergic substances.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
20.	Cholinomimetic agents and anticholinesterase agents. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1

21.	M-anticholinergic agents. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
22.	N-anticholinergic agents (ganglion blockers and muscle relaxants). Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing rules.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
23.	Pharmacology of adrenergic transmission. Classification, distribution of adrenergic receptors and the effects that occur upon their activation. Classification of adrenergic drugs.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
24.	Adrenergic stimulants. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
25.	Adrenergic blocking agents. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
26.	Sympathomimetic and sympatholytic agents. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
27.	Anesthetics (general anesthetics). Mechanism of action. Pharmacological characteristics of inhalation and non-inhalation anesthetics. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
28.	Ethyl alcohol. Local and resorptive effects. Indications for use. Rules for prescribing and dispensing ethyl alcohol. Acute ethyl alcohol poisoning and its treatment. Social and medical aspects of alcoholism.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
29.	Hypnotics. Classification. Mechanism of action. Pharmacological characteristics. Barbiturate pharmacokinetics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
30.	Narcotic analgesics. Classification. Mechanism of analgesic action. Pharmacological characteristics. Indications for use. Prescribing and dispensing guidelines. Social and medical aspects of drug addiction.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1

31.	Comparative characteristics of narcotic analgesics derived from phenanthrene, piperidine, and other derivatives. Application guidelines. Prescribing and dispensing guidelines. Acute poisoning with narcotic analgesics and its treatment.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
32.	Non-opioid centrally acting analgesic drugs. Mechanism of action. Pharmacological characteristics. Indications for use. Prescribing and storage guidelines. Combination pain relief agents.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
33.	Non-narcotic analgesics. Classification. Mechanism of analgesic and antipyretic action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
34.	Antiepileptic and antiparkinsonian drugs. Classification. Mechanism of action. Pharmacological characteristics. Use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
35.	Antipsychotics. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Rules for prescribing and dispensing drugs.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
36.	Tranquilizers. Differences from neuroleptics. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Rules for prescribing and dispensing drugs.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
37.	Antidepressants. Classification. Mechanism of action. Pharmacological characteristics. Use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
38.	Psychostimulants. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing rules.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
39.	General tonics and nootropics. Mechanism of action. Pharmacological characteristics. Application features. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
40.	Analeptics. Classification. Mechanism of action. Comparative characteristics of drugs. Indications for use. Prescribing and dispensing rules.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
41.	Expectorants and antitussives. Classification. Mechanism of action. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1

42.	Bronchodilators. Classification. Mechanism of action. Pharmacological characteristics. Application features. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
43.	Cardiac glycosides. Sources of production. Structural features. Main effects on the heart and their mechanisms. Indications for use.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
44.	Cardiac glycosides. Pharmacokinetics of foxglove, strophanthus, and lily-of-the-valley preparations. Dosage guidelines. Prescribing and dispensing guidelines. Signs of digitalis intoxication and its treatment.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
45.	Antiarrhythmic drugs. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
46.	Nitroglycerin and organic nitrates. Mechanism of action. Comparative characteristics of the drugs. Features of use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
47.	Antianginal agents with coronary activity, calcium antagonists, beta-blockers. Mechanism of action. Pharmacological characteristics. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
48.	Centrally acting antihypertensive neurotropic agents. Pharmacological characteristics. Use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
49.	Antihypertensive neurotropic agents of peripheral activity. Classification. Pharmacological characteristics. Use. Side effects. Prescribing and dispensing rules.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
50.	Antihypertensive agents with myotropic action; potassium channel activators; calcium antagonists; affecting the renin-angiotensin system. Mechanism of action. Pharmacological characteristics. Side effects. Rules for prescribing and dispensing drugs.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
51.	Hypertensive agents. Classification. Mechanism of action. Comparative characteristics of drugs. Use. Side effects. Prescribing and dispensing rules.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
52.	Substances that enhance gastric and pancreatic secretion. Classification. Mechanism of action. Pharmacological characteristics. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1

53.	Substances that reduce gastric secretion. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
54.	Antacids. Gastroprotectors. Classification. Mechanism of action. Pharmacological characteristics. Features of use. Side effects. Prescribing and dispensing rules.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
55.	Emetics and antiemetics. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
56.	Choleretic agents. Classification. Mechanism of action. Pharmacological characteristics of the drugs. Features of use. Side effects. Rules for prescribing and dispensing.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
57.	Agents affecting intestinal motility. Classification. Pharmacological characteristics of laxatives. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
58.	Drugs affecting blood clotting. Classification. Pharmacological characteristics of antiplatelet agents. Application features. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
59.	Anticoagulants. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines. Pharmacological antagonists of anticoagulants.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
60.	Hemostatic agents for local and systemic use. Classification. Mechanism of action. Pharmacological characteristics of the drugs. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
61.	Drugs used to treat hypochromic and hyperchromic anemia. Mechanism of action. Pharmacological characteristics. Features of use. Side effects. Rules for prescribing and dispensing drugs.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
62.	Medicines affecting the myometrium. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
63.	Diuretics that directly affect renal tubular epithelial function. Mechanism of action. Pharmacological	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1

	characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	
64.	Diuretics - aldosterone antagonists, osmotically active and acid-forming. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
65.	Hypothalamic and pituitary hormone preparations. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines. Gonadotropic hormone inhibitors.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
66.	Thyroid hormone preparations and antithyroid agents. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
67.	Pancreatic hormone preparations. Effect on metabolism. Insulin preparations. Sources. Standardization methods. Classification. Mechanism of hypoglycemic action and dosage guidelines. Pharmacological characteristics. Features of use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
68.	Synthetic hypoglycemic agents. Classification. Mechanism of action. Pharmacological characteristics. Application features. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
69.	Adrenal cortex preparations. Classification. Effect on metabolism. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
70.	Female gonad hormones. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
71.	Hormonal contraceptives. Mechanism of action. Pharmacological characteristics. Use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
72.	Male sex hormones and anabolic steroids. Mechanism of action. Pharmacological characteristics of the drugs. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1

73.	Steroidal anti-inflammatory drugs. Classification. Mechanism of anti-inflammatory action. Comparative characteristics of drugs. Features of use. Prescribing and dispensing rules.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
74.	Adverse reactions and complications arising from the use of glucocorticoid drugs. Mechanisms of their occurrence. Principles of glucocorticoid therapy.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
75.	Nonsteroidal anti-inflammatory drugs. Classification. Mechanism of anti-inflammatory action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
76.	Medicines used for immediate-type allergic reactions. Classification. Mechanism of action. Pharmacological characteristics. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
77.	Immunotropic agents. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
78.	Vitamin preparations. Classification. Transformations in the body. Coenzyme agents. Principles and features of vitamin therapy in children. Multivitamin preparations. Antivitamins.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
79.	Water-soluble vitamin preparations. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
80.	Fat-soluble vitamin preparations. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
81.	Enzyme and antienzyme agents. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
82.	Natural factors regulating calcium and phosphorus metabolism in the body. Mechanisms of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
83.	Vitamin D (active metabolites). Pharmacokinetics, pharmacodynamics, and characteristics of vitamin D preparations. Indications for use. Prescribing and	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1

	dispensing guidelines. Vitamin D overdose and its treatment.	
84.	Medicinal products containing calcium, phosphorus, and magnesium. Mechanisms of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
85.	Anti-atherosclerotic agents that prevent the formation of atherogenic lipoproteins. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
86.	Anti-atherosclerotic agents that enhance the catabolism and elimination of atherogenic lipoproteins from the body. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
87.	Antiseptics and disinfectants. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Prescribing and dispensing guidelines. Heavy metal poisoning and its treatment.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
88.	Classification of antibiotics by chemical structure, mechanism, and spectrum of action. Principles of antibiotic therapy. Side effects of antibiotics.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
89.	Biosynthetic penicillins. Classification. Mechanism of action and spectrum of activity. Pharmacokinetics and pharmacodynamics of the drugs. Indications for use. Prescribing and dispensing guidelines. Complications of penicillin therapy.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
90.	Semisynthetic penicillins. Classification. Mechanism and spectrum of antimicrobial action. Pharmacokinetics and pharmacodynamics of the drugs. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
91.	Antibiotics - cephalosporins, monobactams, carbapenems. Classification. Mechanism and spectrum of antimicrobial action. Pharmacokinetics and pharmacodynamics of drugs. Indications for use. Rules for prescribing and dispensing drugs. Mechanisms of bacterial resistance to β -lactam antibiotics. β -lactamase inhibitors.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
92.	Tetracycline, chloramphenicol, and macrolide antibiotics. Mechanism and spectrum of action. Pharmacokinetics and pharmacodynamics.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1

	Indications for use. Side effects. Prescribing and dispensing guidelines.	
93.	Aminoglycoside and cyclic polypeptide antibiotics. Mechanism and spectrum of action. Pharmacokinetics and pharmacodynamics of the drugs. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
94.	Sulfonamide drugs. Classification. Mechanism and spectrum of action. Pharmacokinetics and pharmacodynamics. Indications for use. Side effects. Combination drugs. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
95.	Synthetic antibacterial agents – derivatives of quinolone, 8-hydroxyquinoline, nitrofurantoin, and quinoxaline. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
96.	Antisymphilitic agents. Classification. Mechanism of action. Pharmacological characteristics of the drugs. Features of use. Side effects. Prescribing and dispensing rules.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
97.	Antibiotics used to treat tuberculosis. Classification. Mechanism of action. Pharmacokinetics and pharmacodynamics of drugs. Features of use. Side effects. Prescribing and dispensing rules.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
98.	Synthetic anti-tuberculosis agents. Mechanism of action. Pharmacological characteristics of the drugs. Features of use. Side effects. Rules for prescribing and dispensing drugs.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
99.	Antiviral agents. Classification. Mechanism of action. Pharmacological characteristics of drugs. Features of use. Side effects. Prescribing and dispensing rules.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
100.	Antiprotozoal agents. Classification. Pharmacological characteristics of antimalarial and antitrichomonal agents. Application features. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
101.	Antifungal antibiotics. Mechanism and spectrum of action. Pharmacokinetics and pharmacodynamics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1

102.	Synthetic antifungal agents. Classification. Mechanism and spectrum of action. Pharmacological characteristics. Application features. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
103.	Anthelmintics. Classification. Pharmacological characteristics of the drugs. Application features. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
104.	Antineoplastic agents: alkylating agents and antimetabolites. Classification. Mechanism of action. Pharmacological characteristics. Indications for use. Side effects.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1
105.	Medicinal products with antitumor activity (antibiotics, hormonal drugs and hormone antagonists, enzymes, herbal remedies, radioactive isotopes). Mechanism of action. Pharmacological characteristics. Indications for use. Side effects. Prescribing and dispensing guidelines.	SC-6.1.1; SC-6.2.1; SC-6.3.1; GPC-2.1.1; GPC-2.2.1; GPC-2.3.1; PC-3.1.1; PC-3.2.1; PC-3.3.1

1.2.4 Example of examination test

Federal State Budgetary Educational Institution of Higher Education
Volgograd State Medical University of the Ministry of
Health of the Russian Federation

Department: _____

Discipline: _____

Specialty 33.05.01 Pharmacy (specialist level) Academic year:
2020 _____

Examination task No. ... (interview)

Phenothiazine derivative antipsychotics. Classification. Mechanism of action. Comparative characteristics of drugs. Indications for use. Side effects.

Anticoagulants. Classification. Mechanism of action. Pharmacological characteristics. Use. Side effects. Pharmacological antagonists of anticoagulants.

Anti-atherosclerotic agents that lower blood cholesterol levels primarily (LDL). Mechanism of action. Pharmacological characteristics. Indications for use. Side effects.

M.P.

Head of Department _____ A.A. Spasov

Federal State Budgetary Educational Institution of Higher Education
Volgograd State Medical University of the Ministry of Health of the Russian Federation

Department: _____

Discipline: _____

Specialty 33.05.01 Pharmacy (specialist level) Academic year: 2020

EXAM TASK No. _
(practical skills)

Write out prescriptions:

1. Atropine
2. Nitroglycerin
3. Furosemide

Head of the Department of Pharmacology _____ A.A. Spasov

The full range of assessment tools for the discipline/practice is available in the Volgograd State Medical University's Electronic Information System (EIIS) at the following link(s): <https://elearning.volgmed.ru/course/view.php?id=5581>

<https://elearning.volgmed.ru/course/view.php?id=9674>

Considered at the department meeting pharmacology and bioinformatics
Protocol No. dated " " 2025

Head of Department
pharmacology and bioinformatics,
Academician of the Russian Academy of Sciences



Spasov A.A.