ЛД-16 ИН

Federal State Budgetary Educational Institution of Higher Education "North Ossetian State Medical Academy" of the Ministry of Health of the Russian Federation

Department Pharmacology with clinical pharmacology

APPROVED
minutes of the meeting
Central coordination
educational and methodological council
"May 23, 2023 No. 5

ASSESSMENT MATERIALS

by discipline " Pharmacology »

main professional educational program of higher education - specialty program in specialty 31.05.01. General Medicine,
approved on May 24, 2023

for students 3 course

by specialty 05/31/01 General Medicine

Reviewed and approved at a department meeting
From May 22, 2023 (protocol No. 12)

Head of the Department of Pharmacology
with clinical pharmacology
Doctor of Medical Sciences, Prof. L.Z. Bolieva

Vladikavkaz 2023

STRUCTURE OF ASSESSMENT MATERIALS

1. Title page
2. Structure of assessment materials
3. Reviews of evaluation materials
4. Passport of evaluation materials
5. *Set of assessment materials:*

- questions for the module
- questions for the exam
- bank of situational tasks
- standards of test tasks (with title page and table of contents)
- exam papers

FEDERAL STATE BUDGETARY EDUCATIONAL INSTITUTION OF HIGHER EDUCATION "NORTH OSSETIAN STATE MEDICAL ACADEMY" OF THE MINISTRY OF HEALTH OF THE RUSSIAN FEDERATION

REVIEW
for assessment materials

by discipline Pharmacology
for 3rd year students
specialty 31.05.01 General Medicine (specialty)

The evaluation materials were compiled at the Department of Pharmacology with Clinical Pharmacology on the basis of the work program of the discipline and meets the requirements of "Pharmacology" approved by the Scientific Council of the Federal State Budgetary Educational Institution of Higher Education NOSMA of the Ministry of Health of Russia on May 24, 2023, protocol No. 8 and meets the requirements of the Federal State Educational Standard of Higher Education 3++ in specialty 31.05. 01 Medicine,

Evaluation materials include:
- questions for the module,
- questions for the exam,
- bank of situational tasks,
- bank of test tasks (with title page and table of contents),
- exam papers

The bank of situational tasks includes the tasks themselves and answer templates. All tasks correspond to the work program of the discipline "Pharmacology"
competencies formed during its study, and cover all its sections. The bank contains answers to all situational problems.

Test task standards include the following elements: test tasks, answer templates. All tasks correspond to the work program of the discipline "Pharmacology", the competencies formed during its study, and cover all its sections. The number of test tasks is 400. The complexity of the tasks varies. The number of tasks for each section of the discipline is sufficient for testing knowledge and eliminates repeated repetition of the same question in different versions. The standards contain answers to all test tasks.

The number of exam tickets is 40, which is enough to conduct the exam and eliminates the repeated use of the same ticket during the exam within one day. Examination tickets are made on uniform forms in a standard form, on paper of the same color and quality. The exam ticket includes 3 questions. The wording of the questions coincides with the wording of the list of questions submitted for the exam. The content of the questions on one ticket relates to various sections of the work program of the discipline, allowing you to more fully cover the material of the discipline.

In addition to theoretical questions, a bank of situational problems and recipes are offered.

Situational tasks make it possible to objectively assess the level of student mastery of theoretical material during ongoing monitoring of progress and intermediate certification. The difficulty of the questions in the exam papers is evenly distributed.

Comments to the reviewedThere are no evaluation materials.

In general, assessment materials in the discipline "Pharmacology" contribute to a qualitative assessment of students' level of proficiency in universal, general professional, and professional competencies.

Peer-reviewed assessment materials in the discipline "Pharmacology" can be recommended for use for ongoing monitoring of progress and intermediate certification at the Faculty of Medicine for 3rd year students.


Рецензент:

Председатель ЦУМК по естественнонаучных
и математических дисциплин с подкомиссией
по экспертизе оценочных материалов,
доцент кафедры химии и физики Н.И. Боциева

ОТДЕЛ КАДРОВ И ДОКУМЕНТООБОРОТА

ВЕРНО: специалист по кадрам отдела
кадров и документооборота
ФГБОУ ВО СОГМА Минздрава России

"____" _____ 20____ г.

Passport of assessment materials for the discipline
Pharmacology

No.	Name of the supervised section (topic) of the discipline/module	Competence Index	Name of assessment material
1	2	3	4
Type of control - current / intermediate			
1.	Incoming control		• test control
2.	Introduction to Pharmacology	GPC-1	• test control
3	General recipe	GPC-6	• test control, • questions for the module, • exam questions, • bank of situational tasks, • exam papers
4	General pharmacology	GPC-5	• test control, • questions for the module, • exam questions, • bank of situational tasks, • exam papers
5	Facilities,affecting the peripheral nervous system	GPC-5; GPC-6; GPC-7; GPC-8; PC-10; PC-11	• test control, • questions for the module, • exam questions, • bank of situational tasks, • exam papers
6	Facilities,affecting the central nervous system	GPC-5; GPC-6; GPC-7; GPC-8; PC-10; PC-11	• test control, • questions for the module, • exam questions, • bank of situational tasks, • exam papers
7	Means influencing the functions of executive bodies	GPC-5; GPC-6; GPC-7; GPC-8; PC-10; PC-11	• test control, • questions for the module, • exam questions, • bank of situational tasks, • exam papers
8	Substances with a predominant effect on tissue metabolism, inflammation and immune processes	GPC-5; GPC-6; GPC-7; GPC-8; PC-10; PC-11	• test control, • questions for the module, • exam questions, • bank of situational tasks, • exam papers
9	Antimicrobial, antiviral and antiparasitic agents. Antitumor agents.	GPC-5; GPC-6; GPC-7; GPC-8; PC-10; PC-11	• test control, • questions for the module, • exam questions, • bank of situational tasks, • exam papers

Incoming control

1.Metabolic transformation processes include:
1) oxidation; 2) restoration; 3) acetylation; 4) hydrolysis; 5) formation of glucuronides; 6) methylation.

2.Drug conjugation processes include:
1) oxidation; 2) acetylation; 3) restoration; 4) methylation; 5) hydrolysis; 6) glucuronidation.

3.Half-life (half-elimination):
1) the time during which 50% of the drug undergoes biotransformation. 2. time during which the concentration of the drug in the blood plasma decreases by half. 3. time during which half of the drug is released from the body.

4. Which of the enteral routes of administrationensure that drugs enter the systemic circulation bypassing the liver?1) oral; 2) sublingual; 3) rectal; 4) into the duodenum; 5) transbuccal.

5. Specify indications for the use of ganglion blockers:
1) hypertensive crisis; 2) vascular collapse; 3) controlled hypotension; 4) obliterating endarteritis; 5) atherosclerosis; 6) glaucoma; 7) arterial embolism.

6. Note the side effects of atropine:
1) constipation and difficulty urinating; 2) diarrhea; 3) increased intraocular pressure; 4) spasms of smooth muscle organs; 5) bradycardia; 6) tachycardia; 7) dry mouth.

7. Specify the indications for the use of adrenaline: 1) anaphylactic shock; 2) hypertension; 3) thyrotoxicosis; 4) hypoglycemic coma; 5) hyperglycemic coma; 6) cardiac arrest 7) open-angle glaucoma.

8. Specify non-selective α-blockers: 1) atenolol; 2) propranolol; 3) prazosin; 4) doxazosin; 5) tropafen; 6) pyrroxane; 7) phentolamine 8) nicergoline.

9. Specify α1-blockers: 1) prazosin; 2) doxazosin; 3) terazosin; 4) nicergoline; 5) phenoxybenzamine; 6) tamsulosin; 7) phentolamine; 8) tropafen.

10. Specify indications for the use of β1-blockers:
1) angina pectoris; 2) cardiac arrhythmias; 3) arterial hypertension; 4) bronchial asthma; 5) obliterating endarteritis; 6) diabetes.

11. Specify the indications for the use of β2-adrenergic agonists:1) hypotension; 2) bronchial asthma; 3) premature birth; 4) threat of miscarriage; 5) acute heart failure; 6) AV block.

12. Specify a means for reflex stimulation of breathing:
1) rocuronium; 2) lobeline hydrochloride; 3) galantamine hydrobromide; 4) tubocurarine chloride; 5) arfonade.

13. Identify the drughaving the following properties:1) reduces myocardial oxygen demand; 2) increases coronary blood flow and oxygen delivery to the myocardium; 3) slows down heart rate; 4) reduces conductivity; 5) has an antiarrhythmic effect.

14. Specify the indications for the use of phentolamine:1) vascular collapse; 2) spasms of peripheral vessels; 3) hypertension; 4) pheochromocytoma; 5) obliterating endarteritis; 6) benign prostatic hyperplasia; 7) glaucoma.

15. Identify the drug.
The drug has an antidepressant and sedative effect, indiscriminately inhibits the neuronal uptake of monoamines, and can be used as an analgesic: 1) maprotiline; 2) fluoxetine; 3) amitriptyline; 4) imizin; 5) moclobemide.

16. Choose the correct statements: Morphine has the following pharmacological effects: 1) stimulates the centers of the vagus nerves; 2) inhibits the centers of the oculomotor nerves; 3) inhibits the cough center; 4) stimulates the respiratory center; 5) increases the tone of the gastrointestinal sphincters; 6) excites the vasomotor center.

17. Specify nootropics:
1) piracetam; 2) imizin; 3) aminalon; 4) caffeine; 5) buspirone.

18. Specify the means for inhalation anesthesia:1) enflurane; 2) nitrous oxide; 3) propanidide; 4) fluorotane; 5) ketamine; 6) isoflurane.

19. Specify narcotic analgesics –Opioid receptor agonists:1) morphine; 2) naloxone; 3) pentazocine; 4) fentanyl; 5) butorphanol.

20. Choose the correct statement:
*Clozapine:*1) selectively blocks D2 receptors; 2) predominantly blocks D4 receptors; 3) blocks 5-HT2A receptors; 4) stimulates M-cholinergic receptors and α-adrenergic receptors; 5) has pronounced psychostimulating activity.

1. General pharmacology as a branch of pharmacology.
2. The concept of pharmacokinetics. Problems of pharmacokinetics.
3. Routes of administration of drugs into the body. Characteristics of enteral and parenteral routes of administration.
4. Absorption of drugs from the injection site. Absorption mechanisms (diffusion, filtration, active transport, pinocytosis).
5. Factors affecting the absorption of drugs (properties of drugs, food intake, pH value, state of the gastrointestinal tract, etc.).
6. The concept of bioavailability.
7. Features of the penetration of drugs through the placenta and the blood-brain barrier.
8. Transport of drugs in the body. Association of drugs with blood plasma proteins. The meaning of this connection. Factors influencing the distribution of drugs.
9. The concept of first-pass metabolism. First pass effect through the liver. Circulation circles of medicinal substances in the body. The importance of enterohepatic circulation of drugs.
10. Biotransformation of medicinal substances in the body. Biotransformation phases. Factors influencing the biotransformation of medicinal substances.
11. The concept of inducers and inhibitors of microsomal oxidation. Their influence on the metabolism of drugs.
12. The influence of genetic factors on the metabolism of drugs. The concept of pharmacogenetics.
13. Ways of removing drugs from the body. Factors influencing the excretion of drugs.
14. Main pharmacokinetic indicators: volume of distribution (V_d), elimination rate constant (K_{elim}), half-elimination (half-life) period ($t_{1/2}$), clearance (Cl), equilibrium concentration (C_{ss}), bioavailability (F) the value of these indicators.
15. Basic content of pharmacodynamics.
16. The main types of action of medicinal substances: local, resorptive, reflex, selective, main, side, reversible and irreversible, direct, indirect.
17. Primary and secondary pharmacological reactions. Stages and mechanisms of pharmacological reaction.
18. The concept of targets for drug action. Concept of receptor, effector, second messengers, affinity and intrinsic activity.
19. Factors influencing the action of medicinal substances. Chronopharmacology.
20. Types of doses (minimum, average, highest, one-time, daily, course). General principles of dosing. The concept of “breadth of therapeutic action”
    "therapeutic index". Lethal and toxic doses.
21. The concept of activity and efficiency.
22. Combined action of medicinal substances. Rational and irrational combinations. Changes in the action of drugs when used in combination (synergy, antagonism, antidotism), examples.
23. Repeated use of drugs. Phenomena that occur with repeated use of medicinal substances: sensitization, cumulation, addiction, tachyphylaxis, drug dependence.
24. Side and toxic effects of drugs.
25. Pharmacological terms: medicinal substance, dosage form, medicinal product, INN, trade name, original drug, generic, pharmacopoeial monograph, State Pharmacopoeia, single dose, daily dose.
26. Medical prescription: structure, design rules, types of prescription forms.
27. Classification of dosage forms.
28. Pills. General characteristics. Prescription rules.
29. Dragee. General characteristics. Prescription rules.
30. Capsules. General characteristics. Prescription rules.
31. Powders. General characteristics. Prescription rules.
32. Ointments. General characteristics. Ointment bases, requirements for ointment bases.
33. Methods of preparation and dispensing of main and official ointments, rules for prescribing in recipes.
34. Pastas. General characteristics. Formative substances in pastes, features of preparing pastes,

rules for prescribing in recipes.

35. Suppositories. General characteristics. Features of formative substances in suppositories, methods of preparation and packaging of suppositories, rules for writing in recipes.
36. General idea of plasters.
37. Ointments. General characteristics. Ointment bases, requirements for ointment bases.
38. Methods of preparation and dispensing of main and official ointments, rules for prescribing in recipes.
39. Pastas. General characteristics. Formative substances in pastes, features of preparing pastes, rules for prescribing in recipes.
40. Suppositories. General characteristics. Features of formative substances in suppositories, methods of preparation and packaging of suppositories, rules for writing in recipes.
41. General idea of plasters.
42. Solutions: components, solvents, methods of using solutions, rules for prescribing.
43. Suspensions: components, rules for prescribing.
44. Galenic and novogalenic preparations, methods of their biological standardization, prescribing rules.
45. Features of preparing infusions and decoctions, application, rules for prescribing.
46. Features of tinctures and extracts, preparation methods, differences in consistency of extracts, rules for prescribing.
47. Emulsions, rules for prescribing.
48. Liniments, difference from ointments, formative substances, prescribing rules.
49. Potions. General characteristics. Prescription rules.
50. Aerosols. General characteristics. Prescription rules.
51. Dosage forms for injections. General characteristics. Prescription rules.

Questions for the module on the topic "Drugs affecting efferent innervation"

1. The mechanism of transmission of nerve impulses in the central nervous system and the region of the endings of efferent nerve fibers, mediators, specific receptors that react with mediators.
2. Localization of M- and N-cholinergic receptors in the body, their functional significance,
3. Classification of pharmacological agents affecting cholinergic receptors.
4. Main effects of M- and N-cholinomimetics, indications for use, side effects.
5. Main effects of M-cholinomimetics, indications for use, side effects. Comparative characteristics of drugs.
6. Clinical manifestations of muscarine poisoning, measures of assistance.
7. The main properties of anticholinesterase drugs, the mechanism and features of their action, use in practical medicine, possible complications.
8. Clinical manifestations And measures help at acute poisoningorganophosphorus compounds (OPCs).
9. The main properties of M-anticholinergics, the mechanism and features of their action, use in practical medicine, possible complications.
10. Clinical manifestations of atropine poisoning, measures of assistance.
11. N-cholinomimetics, mechanism of action, indications for use, side effects.
12. Classification of ganglion blockers by chemical structure and duration actions. Mechanisms of action of ganglion blockers, pharmacological effects. Indications for use, side effects, contraindications.
13. Classification of muscle relaxants by mechanism of action.
14. Clinical manifestations and measures of assistance in acute poisoning with muscle relaxants.
15. Structure and functioning of the adrenergic synapse.
16. Localization and functions of α and β-adrenergic receptors. Classification of adrenergic and sympathomimetics.
17. Mechanism of action, main effects of α- and β-adrenergic agonists, indications for use, side effects. Comparative characteristics of adrenaline and norepinephrine.
18. Mechanism of action, main effects of α-adrenergic agonists, indications for use, side effects.
19. Mechanism of action, main effects of β-adrenergic agonists, indications for use, side effects.
20. Features of the action of ephedrine. Side effects. Comparative characteristics of adrenaline and ephedrine.
21. Classification of adrenergic blockers.
22. α-blockers. Classification; indications for use, side effects, contraindications.
23. β-blockers. Classification, indications for use, side effects, contraindications.
24. Sympatholytics. Mechanism of action, indications for use, side effects, contraindications.

Questions for the module on the topic: "Drugs affecting the central nervous system"

1. Classification of general anesthetics. Comparative characteristics of means for inhalation anesthesia.
2. Classification of general anesthetics. Comparative characteristics of drugs for non-inhalation anesthesia. Combined use of drugs.
3. The mechanism of action of ethyl alcohol on the human body, pharmacokinetics, pharmacological effects, application. Treatment of alcoholism.
4. Classification of sleeping pills. Characteristics of drugs with a narcotic type of action: mechanism of action, indications for use, side effects.
5. Classification of sleeping pills. Pharmacological characteristics of benzodiazepine receptor agonists: mechanism of action, effect on sleep phases, indications for use, side effects.
6. Classification of neuroleptics. Pharmacological effects of "typical" antipsychotics.
7. Comparative characteristics of neuroleptics from different groups. Indications and contraindications for prescribing drugs. Complications during use.
8. Classification of antidepressants. Mechanism of action and comparative characteristics of drugs. Indications for use, side effects.
9. Classification of tranquilizers. Mechanism of action, pharmacological effects, indications for use, side effects, comparative characteristics of drugs.
10. Sedatives. Mechanisms of action, indications for use.
11. Nootropic drugs: mechanism of action, pharmacological effects, application.
12. Psychostimulants: classification, comparative characteristics of drugs (mechanism of action, pharmacological effects, indications for use, side effects).
13. Classification of narcotic analgesics. Pharmacological characteristics of opioid receptor agonists.
14. Comparative characteristics of narcotic analgesics. Indications and contraindications for use, side effects. Acute and chronic morphine poisoning, assistance measures, prevention.
15. Classification of antiepileptic drugs. Mechanisms of action. Use for certain forms of epilepsy.
16. Comparative characteristics of antiepileptic drugs. Indications and contraindications for prescribing drugs. Side effects.
17. Classification of antiparkinsonian drugs. Comparative assessment of the effectiveness of drugs. Side effects.
18. Analeptics: classification, mechanisms of action, indications for use.
19. Medicines used to treat and prevent mania. Side effects.

Questions for the module on the topic:

"Means influencing the functions of executive bodies"

1. Respiratory stimulants: classification, mechanisms of action, application.
2. Antitussives: classification, mechanism of action, application.
3. Expectorants and mucolytics: classification, mechanisms of action, application.
4. Medicines used for bronchial asthma. Classification.
5. Inhaled glucocorticoid preparations, mechanism of action, application. Mast cell membrane stabilizers: mechanism of action, application.
6. Antileukotriene drugs: classification, mechanisms of action, application.
7. Methylxanthines: mechanism of action, application.
8. The mechanism of action of bitters on the secretory activity of the stomach. Principles of treating obesity with anorexigenic drugs.
9. Complex therapy of diseases of the gastrointestinal tract accompanied by decreased secretion and peristalsis. Replacement therapy for decreased gastric secretion;
10. Complex therapy of diseases of the gastrointestinal tract, accompanied by increased secretion and peristalsis.
11. Peculiarities of prescribing emetics. Drugs and mechanism of antiemetic action.
12. The importance of choleretic drugs in the complex treatment of diseases of the liver and biliary system. Classification and principles of action of drugs in this group. Hepatoprotectors and cholelitholytics: mechanisms of action, application.
13. Laxatives. Classification. The mechanism of action of castor oil, anthraglycosides, saline and synthetic laxatives. Indications for use.
14. Classification of drugs affecting the myometrium.
15. Drugs that increase the tone and contractile activity of the myometrium. Classification, mechanism of action. Differences in the effect on the uterus and the use of posterior pituitary hormones and prostaglandin preparations. Side effects.
16. Drugs that mainly increase the tone of the myometrium. Classification and application.
17. Drugs that reduce cervical tone, application. Drugs that reduce the tone and contractile activity of the myometrium. Mechanisms of action and application.
18. Classification of drugs affecting erythropoiesis.
19. Iron supplements. Classification. Indications for use. Side effects. Mechanisms of action of cyanocobalamin and folic acid in hyperchromic anemia. Erythropoietin preparations.
20. Classification of antianginal drugs.
21. Organic nitrates: mechanism actions, pharmacological effects,side effects, application.
22. Calcium antagonists: mechanism of action, pharmacological effects, side effects, application.
23. Beta-blockers: mechanism of antianginal action, side effects, application.
24. Classification of diuretics by chemical structure and mechanism of action.

25. Mechanism of action, indications and contraindications for the use of thiazide and thiazide-like diuretics.
26. Mechanism of action, indications and contraindications for the use of loop diuretics.
27. Mechanism of action, indications and contraindications for the use of potassium-sparing diuretics.
28. Mechanism of action, indications and contraindications for the use of osmotically active diuretics.
29. Hypotensive facilities, drugs central actions. Peculiaritiesmechanism of action and pharmacological effects of clonidine and moxonidine.
30. Antihypertensive drugs, drugs with peripheral neurotropic hypotensive action: ganglion blockers, α-blockers, β-blockers, α, β-blockers, sympatholytics.
31. Myotropic hypotensive drugs. Mechanisms of the vasodilatory action of Ca2+ channel blockers (features of the action of dihydropyridine drugs); activators of K+ channels; nitric oxide donors.
32. Mechanism of action and pharmacological effects of ACE inhibitors, angiotensin II receptor blockers and vasopeptidase inhibitors. Indications for use, side effects. Mechanism of action and pharmacological effects.
33. The mechanism of hypotensive action and pharmacological effects of drugs affecting water-salt metabolism (thiazide and thiazide-like diuretics, loop diuretics, aldosterone antagonists).
34. Classification of hypertensive drugs by localization of action. Mechanism of action and effects of drugs used for acute hypotension: adrenergic agonists, angiotensin receptor agonists.
35. Classification of hypertensive drugs by localization of action. The mechanism of action and effects of drugs used for chronic hypotension: general tonics and analeptics.
36. Classification and general characteristics of cardiotonic drugs. Sources of cardiac glycosides, galenic, novogalenic preparations and individual glycosides.
37. Mechanism of action of cardiac glycosides. Intra- and extracardiac effects of cardiac glycosides.
38. Indications for the use of cardiac glycosides. The choice of drugs depends on the type and manifestations of heart failure. Symptoms of overdose of cardiac glycosides and measures of assistance.
39. "Non-glycoside" cardiotonic drugs: classification, mechanism of action, indications for use, side effects, comparative characteristics of drugs.
40. Classification of antiarrhythmic drugs. Mechanisms of action of antiarrhythmic drugs.
41. The choice of antiarrhythmic drug depending on the type of cardiac arrhythmia.

Questions for the module on the topic:

"Medicines affecting metabolic processes"

1. Classification of anti-gout drugs.
2. Antigout drugs used to prevent attacks, mechanism of action. side effects.
3. Antigout drugs used to relieve an acute attack of gout, mechanism of action. side effects.
4. Classification of drugs used to treat osteoporosis.
5. B vitamins: role in metabolism, influence on the nervous and cardiovascular systems, gastrointestinal tract, hematopoiesis, regeneration processes, clinic of hypo- and avitaminosis. Application, side effects.
6. Ascorbic acid, rutin, folic acid: pharmacological effects, therapeutic use, clinic of hypo- and avitaminosis. Application, side effects.
7. Vitamin A: pharmacological effects, therapeutic use, clinic of hypo- and avitaminosis.
8. Vitamin K: pharmacological effects, therapeutic use, clinic of hypo- and avitaminosis.
9. Vitamin E: pharmacological effects, therapeutic use, clinic of hypo- and avitaminosis.
10. Vitamin D: pharmacological effects, therapeutic use, clinic of hypo- and avitaminosis.
11. Drugs glucocorticoids: mechanisms anti-inflammatory, antiallergic and immunosuppressive effects of glucocorticoids, pharmacological effects.
12. Dosage forms of glucocorticoids, indications for use, side effects and contraindications for use.
13. Mineralocorticoid preparations (deoxycorticosterone acetate): indications for use, side effects.
14. Preparations of hormones of the female reproductive glands: (estrogenic and progestin preparations) indications for use, side effects.
15. Preparations of male sex hormones: (testosterone propionate, methyltestosterone) indications for use, side effects.
16. Anabolic steroids (retabolil, phenobolin) indications for use, side effects.
17. Classification of non-steroidal anti-inflammatory drugs.
18. Non-steroidal anti-inflammatory drugs (indiscriminate inhibitors COX-1 and COX-2): indications, contraindications for use, side effects.
19. Nonsteroidal anti-inflammatory drugs (selective COX-2 inhibitors): indications, contraindications for use, side effects.
20. Drugs hormones hypothalamus And pituitary gland: (somatotropin, oxytocin,vasopressin): pharmacological effects, therapeutic applications.
21. Thyroid hormone preparations: (L-thyroxine, thyroidin, calcitrin): pharmacological effects, therapeutic use.
22. Antithyroid facilities: (mercazolyl): pharmacological effects,therapeutic use.
23. Pancreatic hormone preparations: classification of drugs used to treat diabetes mellitus.
24. Synthetic antidiabetic agents (butamide, glibenclamide, metmorphine): mechanism of action, side effects.
25. Medicines used for different types of allergic reactions.

26. Blockers histamine N_1-receptors: classification, mechanism actions,application, side effects.
27. Mast cell membrane stabilizers: mechanism of action, application, side effects.
28. Immunostimulating agents: classification, mechanisms of action, application.
29. Immunosuppressants: classification, mechanisms of action, application.

Questions for the module on the topic: "Chemotherapeutic agents"

1. Penicillins. Classification, mechanism and spectrum of action, routes of administration, duration of action of drugs. Features of pharmacodynamics, pharmacokinetics and use of individual drugs. Side effects. Prevention and treatment of side effects.
2. Cephalosporins. Classification, mechanism and spectrum of action, routes of administration, duration of action of drugs. Features of pharmacodynamics, pharmacokinetics and use of individual drugs. Side effects. Prevention and treatment of side effects.
3. Carbopenems. Classification, mechanism and spectrum of action, routes of administration, duration of action of drugs. Features of pharmacodynamics, pharmacokinetics and use of individual drugs. Side effects. Prevention and treatment of side effects.
4. Monobactams. Classification, mechanism and spectrum of action, routes of administration, duration of action of drugs. Features of pharmacodynamics, pharmacokinetics and use of individual drugs. Side effects. Prevention and treatment of side effects.
5. Macrolides (erythromycin, clarithromycin, roxithromycin, azithromycin, spiramycin,). Classification, mechanism and spectrum of action, routes of administration, duration of action of drugs. Features of pharmacodynamics, pharmacokinetics and use of individual drugs. Side effects. Prevention and treatment of side effects.
6. Tetracyclines: tetracycline, tetracycline hydrochloride, oxytetracycline, metacycline, doxycycline. Classification, mechanism and spectrum of action, routes of administration, duration of action of drugs. Features of pharmacodynamics, pharmacokinetics and use of individual drugs. Side effects. Prevention and treatment of side effects.
7. Levomycetin group: chloramphenicol, chloramphenicol succinate soluble. Mechanism and spectrum of action. Indications for use, side effects.
8. Aminoglycosides: streptomycin sulfate, streptomycin calcium chloride complex, neomycin sulfate, monomycin, kanamycin, gentamicin sulfate, tobramycin, sisomycin, amikacin, netilmicin. Classification. Mechanism and spectrum of action, routes of administration, duration of action of drugs. Features of pharmacodynamics, pharmacokinetics and use of individual drugs, side effects. Prevention and treatment of side effects.
9. Rifampicins (rifamycin, rifampicin), cyclic polypeptides (polymyxin M-sulfate). Mechanism and spectrum of action. Indications for use. Features of application. Side effects.
10. Lincosamides (clindamycin), glycopeptides: vancomycin,teicoplanin.
Features of application. Side effects.
11. Sulfonamides. Classification, spectrum and mechanism of antibacterial actions. Indications for use Complications when taking measures to prevent them. Side effects.
12. Quinolone derivatives, benefits of fluorinated quinolone derivatives (fluoroquinolones). Classification, spectrum and mechanism of antibacterial action. Application. Side effects.
13. Oxazolidinones, nitrofuran derivatives. Spectrum, nature and mechanism of antimicrobial action. Application. Side effects.
14. Derivatives 8 – hydroxyquinoline, quinoxaline derivatives. Indications for use. Side effects.
15. Classificationanti-tuberculosis drugs.

16. Classification of antisyphilitic drugs.
17. The most effective drugs (isoniazid, rifampicin), drugs with
moderate effectiveness (ethambutol, streptomycin, cycloserine, etc.), drugs with moderate activity (sodium para-aminosalicylate). Side effects, prevention and treatment measures.
18. Antiviral drugs used for influenza, mechanism of action, features of use, side effects.
19. Antiviral drugs used for herpes, mechanisms of action, features of use, side effects.
20. Antiviral agents used for HIV infections and cytomegalovirus infections. Mechanisms of action, features of use, side effects.
21. Antimalarials. Classification.
22. Quinidine, sources of obtaining. Spectrum of antimalarial action. Side effects. Application. Acute quinine poisoning, its treatment.
effects.
23. Classification of antiprotozoal drugs.
24. Classification of antifungal agents.
25. Classification of anthelmintic drugs.
26. Medicines used for intestinal cestodiasis, features of use, side effects.
27. Medicines used for extraintestinal helminthiases, features of use, side effects.
28. Drugs used to treat systemic mycoses. Features of pharmacokinetic action. Complications and side effects.
29. Drugs used For treatment of dermatomycosis. Features of their action. Treatment rules.
30. Drugs used to treat candidiasis. Mechanism of action. Side effects. Indications and contraindications.

EXAM QUESTIONS IN PHARMACOLOGY

for students of the Faculty of Medicine

1. Pharmacology and its role in the development of medicine. The place of pharmacology among other biological and medical sciences. Merits of N.P. Kravkova, I.P. Pavlova, S.V. Anichkova, V.V. Zakusov and other outstanding scientists in the development of domestic pharmacology.
2. Pharmacokinetics, definition. Routes of administration. Basic mechanisms of drug absorption; factors affecting absorption. The concept of bioavailability. Distribution of medicines. Biological barriers. Tissue depots.
3. Pharmacokinetics, definition. Biotransformation of drugs: stages of biotransformation, biotransformation reactions, factors influencing biotransformation processes. Pharmacogenetics.
4. Pharmacodynamics, definition. Basic mechanisms of action of drugs. Interaction of drugs with receptors (the concept of agonists and antagonists). Types of action of drugs. Examples.
5. Synergism and antagonism of drugs:types and practical significance.
6. Basic kinds pharmacotherapy. Kinds doses, latitude therapeutic actions. Combined use of drugs, practical significance.
7. Individual characteristics of the body and the effect of drugs: the role of age, genetic factors, concomitant diseases.
8. Repeated use of medications. Cumulation, its types. Sensitization. Addiction. Drug addiction.
9. Main and side effects of drugs. Hypersensitivity reactions.
10. Main and side effects of drugs. Teratogenicity, mutagenicity, carcinogenicity.
11. Drug poisoning, principles of assistance. Examples.
12. Drug interactions, definition, types.
13. Drugs that reduce the sensitivity of afferent nerves, classification. Local anesthetics, classification, mechanism of action, comparative characteristics of individual drugs, main effects and indications for use, undesirable effects.
14. M-and N-cholinomimetics, M-cholinomimetics:mechanism of action, pharmacological effects, indications for use, side effects. Acute muscarine poisoning, relief measures.
15. Anticholinesterase drugs, classification, mechanism of action, main effects, indications for use, side effects. Acute poisoning with anticholinesterase drugs, main symptoms, measures of assistance.
16. M-anticholinergics: classification, mechanism of action, pharmacological effects and indications for use, side effects. Acute muscarine poisoning and relief measures.
17. Nicotine, main effects. Medicaland social aspects of smoking. N-cholinomimetics: mechanism of action, pharmacological effects, indications for use, side effects.
18. Ganglion blockers: mechanism of action, main effects, indications for use, side effects.
19. Curare-like drugs: classification, mechanism of action, indications for use, side effects, measures to help in case of overdose.
20. α- and β-adrenergic agonists: classification, mechanism of action, main effects, indications for use, side effects.
21. α-adrenergic agonists: mechanism of action, main effects, indications for use, side effects.
22. β-adrenergic agonists: classification, mechanism of action, main effects, indications for use, side effects
23. α- and β-blockers: classification, mechanism of action, main effects, indications for use, side effects.

24. α-blockers: classification, mechanism of action, main effects, indications for use, side effects.
25. β-blockers: classification, mechanism of action, main effects, indications for use, side effects.
26. Sympatholytics: mechanism of action, main effects, indications for use, side effects.
27. History of the discovery and use of anesthesia. Theories of anesthesia. Classification of anesthetic drugs. Means for inhalation anesthesia: comparative characteristics of drugs.
28. Classification of anesthetic drugs. Means for non-inhalation anesthesia: classification, comparative characteristics of drugs.
29. Ethanol. Local and resorptive action. Application in medicine. Toxicological characteristics. Acute poisoning and its treatment. Alcoholism, possible approaches to therapy.
30. Hypnotics with a narcotic type of action: classification, mechanism of action, main effects, indications for use, side effects. Acute poisoning and measures of assistance.
31. Hypnotics, classification, comparative characteristics of drugs with narcotic and non-narcotic types of action, indications for use, side effects. Acute barbiturate poisoning, symptoms and measures of assistance.
32. Sedatives, mechanism of action, indications for use, side effects.
33. Neuroleptics: classification. Typical antipsychotics: mechanism of antipsychotic action, indications for use, side effects.
34. Drugs for the treatment of mania: mechanism of action, application, side effects.
35. Antidepressants: classification. Comparative characteristics of drugs: mechanisms of action, indications for use, side effects.
36. Nootropics: mechanism of action, pharmacological effects, indications for use, side effects.
37. Psychostimulants and analeptics: classification, mechanism of action, application, side effects.
38. Tranquilizers: classification, mechanism of action, indications for use, side effects.
39. Antiepileptic drugs: classification, main mechanisms of action, comparative characteristics of drugs. General principles of pharmacotherapy of epilepsy.
40. Antiparkinsonian drugs: classification. Comparative characteristics of drugs:mechanism of action, application, side effects.
41. Narcotic analgesics: classification, mechanism of action, pharmacological effects, indications for use, side effects. Acute poisoning with narcotic analgesics and measures of assistance.
42. Non-narcotic analgesics: classification, mechanism of action, indications for use, side effects. Acute paracetamol poisoning, relief measures.
43. Nonsteroidal anti-inflammatory drugs: classification, mechanism of action, main effects, indications for use, side effects.
44. Glucocorticosteroids: mechanism of action, pharmacological effects. Side effects of systemic use of GCS.
45. Classification and mechanism of action of glucocorticosteroids.
46. Antidiabetic drugs, classification, mechanism of action, main effects, indications for use; complications, assistance and prevention measures.
47. Thyroid hormone preparations and antithyroid drugs: mechanisms of action, main effects, indications for use, side effects.
48. Male sex hormone preparations, main effects, indications for use, undesirable effects. Antiandrogen drugs, application. Anabolic steroids, indications for use, complications.

49. Preparations of female sex hormones and their antagonists, pharmacological effects, indications for use, side effects.
50. Preparations of hormones of the hypothalamus, pituitary gland, pineal gland: mechanism of action, application, side effects.
51. Drugs affecting the myometrium: classification, indications for use, side effects.
52. Preparations of water-soluble vitamins, main effects and indications for use, side effects.
53. Preparations of fat-soluble vitamins, main effects and indications for use, side effects.
54. Vitamin C: pharmacological effects, therapeutic use.
55. Vitamin D: biological role, main effects, application, side effects.
56. Antiallergic drugs, classification. H1 histamine receptor blockers, mechanism of action, pharmacological effects, indications for use, side effects.
57. Antiallergic drugs, classification. Antileukotriene drugs and mast cell membrane stabilizers, mechanism of action, pharmacological effects, indications for use, side effects.
58. Drugs used to treat bronchial asthma: classification, mechanism of action, use in bronchial asthma, side effects.
59. Antitussives and expectorants: classification, mechanism of action, application, side effects.
60. Drugs used for disorders of the secretory function of the gastric glands: classification, mechanisms of action, indications for use, side effects.
61. Drugs that reduce the secretory activity of the gastric glands: classification, mechanism of action, indications for use.
62. Drugs affecting gastric motility, emetics and antiemetics, gastroprotectors: mechanism of action, application, side effects.
63. Drugs for pancreatic dysfunction, hepatoprotectors, choleretic drugs: pharmacological effects, indications for use, side effects.
64. Drugs affecting intestinal motor function, features of action, indications for use, side effects.
65. Antiplatelet agents: classification, mechanism of action and pharmacological effects, indications for use, side effects.
66. Anticoagulants: classification, mechanism of action, indications for use, possible complications and measures of assistance.
67. Fibrinolytics and antifibrinolytics: mechanism of action, pharmacological effects, application, side effects.
68. Drugs that increase blood clotting: mechanism of action, application, side effects.
69. Drugs affecting hematopoiesis: classification, mechanism of action, application, side effects.
70. Diuretics: classification, mechanism of action, indications for use; side effects.
71. Antihypertensive drugs, classification. Antiadrenergic drugs: classification, mechanism of action, main effects, indications for use, side effects.
72. Antihypertensive drugs: classification. Drugs affecting the RAAS: classification, mechanism of action, pharmacological effects, application, side effects.
73. Antihypertensive drugs of direct myotropic action and vasopeptidase inhibitors: mechanism of action, application, side effects.
74. Hypertensive drugs: mechanism of action, application, side effects.
75. Drugs used for cerebrovascular accidents: mechanism of action, application, side effects.
76. Ca channel blockers: classification, mechanism of action, pharmacological effects,

indications for use, side effects.

77. Drugs used for ischemic heart disease: classification, mechanism of action, use for ischemic heart disease, side effects.
78. Cardiac glycosides: classification, mechanism of cardiotonic action, pharmacological effects, action in heart failure, ECG changes under the influence of cardiac glycosides, side effects.
79. Cardiotonic drugs of non-glycoside structure: mechanism of action, application, side effects.
80. Antiarrhythmic drugs: classification, features of the mechanism of action and pharmacological effects of the main groups of antiarrhythmic drugs, indications for use, side effects.
81. Drugs used to treat heart failure: classification, mechanism of action, pharmacological effects, application, side effects.
82. Antiatherosclerotic agents:classification, mechanism of action, pharmacological effects, application, side effects.
83. Antimicrobial chemotherapeutic agents, classification. Basic principles of chemotherapy.
84. Antiseptics and disinfectants: classification, mechanism of action of drugs, application, side effects.
85. Penicillins: classification, mechanism of action, pharmacokinetics, spectrum of action, indications for use, side effects.
86. Cephalosporins: classification, mechanism of action, pharmacokinetic features, side effects.
87. Cephalosporins: classification. I-II generation cephalosporins: spectrum of antimicrobial activity, indications for use.
88. III generation cephalosporins: mechanism of action, spectrum of antimicrobial activity, indications for use.
89. IV-V generation cephalosporins: mechanism of action, spectrum of antimicrobial activity, indications for use.
90. Beta-lactam antibiotics, classification. Carbapenems and monobactams: mechanism of action,pharmacokinetics, spectrum of antimicrobial action, indications for use, side effects.
91. Carbapenems: classification, mechanism of action, pharmacokinetics, spectrum of action, indications for use, side effects.
92. Monobactams: mechanism of action and spectrum of activity, indications for use, side effects.
93. Macrolides: classification, mechanism of action, pharmacokinetic features, spectrum of action, indications for use, side effects.
94. Aminoglycosides:classification, mechanism of action, features of pharmacokinetics and spectrum of action of individual drugs, indications for use, side effects.
95. Tetracyclines: classification, mechanism of action, pharmacokinetic features, spectrum of action, indications for use, side effects.
96. Fluoroquinolones: classification, mechanism of action, indications for use, side effects.
97. Glycopeptides and lincosamides: classification, mechanism of action, pharmacokinetics, spectrum of action, indications for use, side effects.
98. Cyclic polypeptides, amphenicols, oxosalidinones, fusidic acid: mechanism of action, spectrum of antimicrobial activity, application, side effects.
99. Sulfonamides: classification, mechanism of action, pharmacokinetics, spectrum of action, indications for use, side effects.
100. Synthetic antimicrobial agents - derivatives of 8-hydroxyquinoline, nitrofuran, quinoxaline: mechanism of action, comparative characteristics of drugs, indications for

use, side effects.

101. Antituberculosis facilities. Basic principles treatment tuberculosis.Prevention of adverse reactions.
102. Antituberculosis facilities. Classification. Synthetic anti-tuberculosisdrugs: mechanism of action, application, side effects.
103. Antituberculosis facilities. Classification. Antituberculosis antibiotics:mechanism of action, application, side effects.
104. Antifungal agents: classification. Antifungal antibiotics - polyenes: mechanism of action, spectrum of action, indications for use, side effects.
105. Antifungal agents: classification. Azoles: mechanism of action, spectrum of action, indications for use, side effects.
106. Antiviral drugs: classification, mechanisms of action, application, side effects.
107. Antiviral drugs for the treatment of influenza: classification, mechanism of action, indications for use, side effects.
108. Antihelminthics: classification, mechanism of action, features of pharmacokinetics and spectrum of action of individual drugs, indications for use, side effects.
109. Antiprotozoal drugs: classification, mechanism of action, application, side effects.
110. Drugs used for malignant neoplasms: classification, mechanisms of action, application, side effects.

ЛД-16 ИН

Federal State Budgetary Educational Institution of Higher Education "North Ossetian State Medical Academy"
Ministry of Health of the Russian Federation Department

Pharmacology with clinical pharmacology

Standards of test tasks

in the discipline "Pharmacology"

main professional educational program of higher education - specialty program
31.05.01General medicine approved on May 24, 2023

For students 3 course

by specialty 31.05.01 General medicine

Reviewed and approved at the department
meeting on May 22, 2023 (minutes No. 12)

Head of the Department of Pharmacology
with clinical pharmacology
Doctor of Medical Sciences, Prof. L.Z. Bolieva

Vladikavkaz 2023

Standards of test tasks

1. Half-life (half-elimination):

1) the time during which 50% of the drug undergoes biotransformation; 2) the time during which the drug concentration in the blood plasma decreases by half; 3) the time during which half of the drug is released from the body.

2.Specify M-cholinomimetics:
1) dipyroxime; 2) bethanechol; 3) aceclidine; 4) neostigmine (prozerin); 5) isonitrosine; 6) pilocarpine hydrochloride; 7) distigmine bromide.

3. Choose the correct statements:
*Pilocarpine reduces intraocular pressure because it causes:*1) contraction of the circular muscle of the iris; 2) contraction of the radial muscle of the iris; 3) increased curvature of the lens; 4) facilitating the outflow of intraocular fluid through the fountain spaces into Schlemm's canal.

4. Specify the location of M-cholinergic receptors:
1) neurons of the parasympathetic ganglia; 2) neurons of the sympathetic ganglia; 3) neurons of the central nervous system; 4) carotid glomeruli; 5) chromaffin cells of the adrenal medulla; 6) cells of effector organs in the area of the endings of cholinergic fibers; 7) skeletal muscle cells.

5. Specify indications for the use of adrenaline:

1) anaphylactic shock; 2) hypertension; 3) thyrotoxicosis; 4) hypoglycemic coma; 5) hyperglycemic coma; 6) cardiac arrest 7) open-angle glaucoma.

6. Choose the correct statement:
*The mechanism of antianginal action of β-blockers is associated with:*1) a decrease in myocardial oxygen demand due to a decrease in heart function; 2) decreased cardiac output; 3) increasing blood flow to the heart due to expansion of the coronary vessels;
4) decreased automaticity of ectopic foci.

7. Antiatherosclerotic drugs that inhibit the absorption of cholesterol: 1) cholestyramine; 2) clofibrate; 3) simvastatin; 4) parmidine; 5) colestipol.

8. Choose the correct statements:

*The effectiveness of dipyridamole in ischemic heart disease is due to:*1) accumulation of adenosine; 2) blockade of monoamine oxidase; 3) a decrease in venous return to the heart; 4) expansion of coronary vessels; 5) expansion of peripheral vessels.

9. The mechanism of action of heparin is due to the fact that it:

1) activates fibrinolysis; 2) activates antithrombin III; 3) acts like streptokinase; 4) disrupts the transition of antithrombin to thrombin; 5) inhibits thrombin; 6) enhances iron absorption.

10. In a patient suffering from peptic ulcer, the doctor revealed a persistent increase in blood pressure. This patient can be prescribed any of the following antihypertensive drugs, with the exception of: 1) cyclomethiazide; 2) dichlorothiazide; 3) apressina; 4) anaprilin; 5) reserpine.

11. Specify antiparkinsonian drugs that activate dopaminergic effects: 1) midantan; 2) bromocriptine; 3) selegelin; 4) cyclodol; 5) levodopa.

12. Choose the correct statements:

*Nitrazepam induces sleep because:*1) stimulates benzodiazepine receptors in the central nervous system;
2) blocks benzodiazepine receptors in the central nervous system; 3) enhances the effect of GABA; 4) excites central adrenergic receptors; 5) stimulates barbiturate receptors.

13. Note the side effects of haloperidol:

1) dry mouth; 2) hypotension; 3) extrapyramidal disorders; 4) leukopenia; 5) increased intraocular pressure.

14. Specify anti-inflammatory drugs used for bronchial asthma: 1) phenylbutazone; 2) prednisolone; 3) hydrocortisone; 4) diclofenac sodium; 5) budesonide.

15. Specify antitussives that do not cause drug dependence: 1) libexin; 2) glaucine hydrochloride; 3) codeine; 4) oxaladine citrate.

16. *Omeprazole:*1) is a proton pump inhibitor; 2) increases the formation of hydrochloric acid; 3) is an H blocker$_2$-histamine receptors; 4) refers toantacid drugs; 5) used for peptic ulcers and reflux esophagitis.

17. Choose the correct statement:

*Adding adrenaline to local anesthetic solutions:*1) increases the risk of developing seizures; 2) increases the duration of local anesthesia; 3) reduces the severity of resorptive effects; 4) increases the rate of metabolism of local anesthetics.

18. Specify the antibiotic most effective for severe multidrug-resistant staphylococcal infections (MRSA):

1) bicillin I; 2) cefazolin; 3) vancomycin; 4) erythromycin; 5) fusidine.

19. Isonicotinic acid hydrazide derivatives inhibit:
1. Peptidoglycan synthesis. 2. Synthesis of mycolic acids.3. Synthesis of nucleic acids. 4. Formation of the active form of vitamin B_1.5. Formation of the active form of vitamin B_6.

20. Specify the side effects of acyclovir:

1) photodermatosis; 2) dyspeptic disorders; 3) osteoporosis;. 4) nephrotoxicity; 5) tremor, convulsions; 6) irritating effect
21.Bioavailability:

1) part of the drug dose (expressed in %) that reaches the systemic bloodstream unchanged; 2) the rate of entry of the substance into the systemic circulation from the injection site; 3) part of the

administered dose of the drug (expressed in %) that reaches the sites of action in the tissues unchanged.

22. Please note the indications for the use of M-cholinomimetics:
1) myasthenia gravis; 2) as antispasmodics; 3) glaucoma; 4) postoperative atony of the gastrointestinal tract and bladder.

23. Specify anticholinesterase drugs:
1) neostigmine (prozerin); 2) distigmine bromide; 3) armin; 4) aceclidine; 5) isonitrosine;
6) pilocarpine hydrochloride; 7) galantamine hydrobromide.

24. Note the side effects of ganglion blockers: 1) orthostatic collapse; 2) hypertensive crisis; 3) paralysis of accommodation; 4) bradycardia; 5) tachycardia; 6) dry mouth; 7) decreased intestinal motility; 8) increased intestinal motility.

25. Specify indications for use β_1- adrenergic agonists:
1) hypotension; 2) bronchial asthma; 3) premature birth; 4) threat of miscarriage; 5) acute heart failure; 6) AV block.

26. Specify non-selective β-blockers: 1) propranolol; 2) timolol; 3) nadolol; 4) nebivolol; 5) betaxolol; 6) talinolol; 7) metoprolol.

27. Please note the contraindications for the use of verapamil: 1) cardiogenic shock; 2) hypercalcemia; 3) hyponatremia; 4) sick sinus syndrome; 5) bradycardia;
6) atrioventricular block.

28. Select the diuretic - the drug of choice for acute heart failure: 1) amiloride; 2) furosemide; 3) beckons; 4) dichlorothiazide; 5) spironolactone.

29. When nifedipine is administered, the following adverse reactions may occur: 1) tachycardia; 2) AV block; 3) hypertension; 4) swelling in the legs and ankles; 5) syndrome "cancellations"; 6) facial hyperemia; 7) “coronary steal” syndrome.

30. Check the combinations of drugs that are not recommended for the treatment of hypertension: 1) anaprilin + dichlothiazide; 2) captopril + cyclomethiazide; 3) octadin + clonidine; 4) methyldopa + clonidine; 5) octadine + reserpine.

31. Specify antidepressants - selective inhibitors of neuronal monoamine uptake: 1) amitriptyline; 2) maprotiline; 3) fluoxetine; 4) imizin; 5) nialamide.

32. Choose the correct statement:

*The pharmacological effects of chlorpromazine are due to:*1) block of α-adrenergic receptors; 2) block of dopamine receptors; 3) stimulation of dopamine receptors; 4) GABA block$_A$-receptors; 5) stimulation of M-cholinergic receptors; 6)antihistamine activity.

33. Note the clinical manifestations of bromism: 1) agitation; 2) lethargy; 3) acne bromica; 4) cough; 5) tachycardia; 6) constipation; 7) diarrhea.

34. Specify the drugs used for pulmonary edema: 1) codeine; 2) benzohexonium; 3) ethyl alcohol; 4) isadrin; 5) furosemide.

35. Choose the correct statements:

*Cititon:*1) is a respiratory stimulant of mixed action; 2) is a reflex stimulator of breathing; 3) is an agonist of N-cholinergic receptors; 4) is an agonist of M- and N-cholinergic receptors; 5) excites cholinergic receptors of the parasympathetic ganglia.

36. Note the side effects of acetylcysteine: 1) nausea; 2) constipation; 3) tinnitus; 4) sleep disorders; 5) tremor; 6) urticaria.

37. Specify the principle of action of antacids: 1) neutralize hydrochloric acid in the lumen of the stomach; 2) reduce the secretion of hydrochloric acid by blocking the proton pump; 3) reduce the secretion of hydrochloric acid, blocking H_2-histamine receptors.

38. Specify a drug that is resistant to β-lactamases: 1) benzylpenicillin sodium salt; 2) bicillin I; 3) ampicillin; 4) oxacillin; 5) amoxicillin.

39. Indicate the properties characteristic of rifampicin: 1) inhibits RNA synthesis; 2) inhibits DNA synthesis; 3) disrupts protein synthesis; 4) has a wide spectrum of action; 5) affects only mycobacteria; 6) is used only for tuberculosis.

40. For ascariasis the following is used: 1) piperazine adipate; 2) levamisole; 3) fenasal; 4) mebendazole; 5) aminoacrichine; 6) pyrantel pamoate.

41. What is typical for administering a drug orally? 1) rapid development of the effect; 2) relatively slow development of the effect; 3) dependence of drug absorption on the pH of the medium, the nature of the contents, and the intensity of gastrointestinal motility; 4) the possibility of drugs entering the systemic circulation, bypassing the liver.

42. Specify ganglion blockers:

1) tubocurarine chloride; 2) hexamethonium benzosulfonate (benzohexonium); 3) pempidine tosylate (pyrylene); 4) vecuronium bromide; 5) azamethonium bromide (pentamine).

Please note the indications for the use of M-cholinomimetics:

1) myasthenia gravis; 2) as antispasmodics; 3) glaucoma; 4) postoperative atony of the gastrointestinal tract and bladder.

Select the correct statements: Platyphylline: 1) is an alkaloid; 2) is a synthetic drug; 3) superior to atropine in m-anticholinergic activity; 4) inferior to atropine in M-anticholinergic activity; 5)

penetrates the blood-brain barrier; 6) eliminates spasms of smooth muscle organs; 7) relaxes skeletal muscles.

43. Select the correct statement: The mechanism of action of tubocurarine chloride is associated with: 1) disruption of the synthesis of acetylcholine in the endings of motor nerves; 2) persistent depolarization of the postsynaptic membrane; 3) blockade of Nm-ChR of skeletal muscles, preventing their excitation by acetylcholine; 4) increasing the rate of acetylcholine hydrolysis.
44. Specify the indications for the use of ephedrine:

1) bronchial asthma; 2) anaphylactic shock; 3) enuresis; 4) arterial hypertension;
5) thyrotoxicosis; 6) narcolepsy.

45.

46. Propranolol lowers blood pressure: 1) by blocking β1 receptors of the heart; 2) blocking β2-adrenergic receptors of blood vessels; 3) reducing the content of endogenous adrenaline; 4) reducing cardiac output; 5) reducing the secretion of renin.

47. Specify the diuretic - the drug of choice for cerebral edema: 1) amiloride; 2) furosemide; 3) mannitol; 4) ethacrynic acid; 5) spironolactone.

48. Specify a drug used for heart failure that has a negative inotropic effect: 1) digoxin; 2) carvedilol; 3) dobutamine; 4) enalapril; 5) furosemide.

49. A decrease in the anticoagulant effect of neodicoumarin is possible when administered simultaneously with the following drugs: 1) phenobarbital; 2) butadione; 3) cholestyramine; 4) phenylin; 5) acetylsalicylic acid.

50. Specify nootropics: 1) piracetam; 2) aminalon; 3) imizin; 4) pyriditol; 5) caffeine; 6) buspirone.
51. Choose the correct statements:

*Nialamid:*1) is an antidepressant; 2) blocks the reuptake of serotonin; 3) stimulates the central nervous system; 4) irreversibly inhibits MAO; 5) reversibly inhibits MAO-A; 6) has a sedative effect.

52. Note the side effects of levodopa: 1) nausea, vomiting; 2) hypotension; 3) hypertension; 4) tachycardia; 5) bradycardia; 6) arrhythmias.

53. Specify a highly selective cyclooxygenase-2 inhibitor: 1) phenylbutazone; 2) celecocosib; 3) nimesulide; 4) diclofenac sodium; 5) acetylsalicylic acid.

54. Acetylsalicylic acid is used:

1) as an antipyretic; 2) with increased bleeding; 3) as an anti-inflammatory agent for the treatment of bronchial asthma; 4) for the prevention of myocardial infarction; 5) for gout.

55. Note the side effects of cromolyn sodium: 1) headache; 2) cough; 3) sedative effect; 4) bronchospasm; 5) thrombocytopenia.

56. Suppress intestinal motility: 1) M-anticholinergics; 2) ganglion blockers; 3) M-cholinomimetics; 4) anticholinesterase drugs; 5) antispasmodics of myotropic action.

57. Specify the antibiotic most effective for syphilis: 1) bicillin I; 2) cefazolin; 3) vancomycin; 4)

erythromycin; 5) benzylpenicillin sodium salt; 6) fusidine; 7) tetracycline.

58. Indicate the properties characteristic of ciprofloxacin: 1) has a bactericidal effect; 2) disrupts the process of DNA supercoiling by blocking DNA gyrase; 3) violates the integrity of the cytoplasmic membrane; 4) used for severe infections of the lungs, gastrointestinal tract, skin, peritonitis and pseudomonas infections; 5) all of the above.

59. Specify the side effects of streptomycin: 1) photodermatosis; 2) dyspeptic disorders; 3) osteoporosis; 4) nephrotoxicity; 5) curare-like effect; 6) irritant effect; 7) tendonitis; 8) ototoxicity.

60. *Metabolic transformation processes include:*1) oxidation; 2) restoration; 3) acetylation; 4) hydrolysis; 5) formation of glucuronides; 6) methylation.

61. Indicate the effects of M-cholinomimetics that have therapeutic significance: 1) constriction of the pupils and decrease in IOP; 2) spasm of accommodation; 3) increased tone of smooth muscles of the gastrointestinal tract and bladder; 4) increased secretion of the salivary glands; 5) increased secretion of the bronchial glands.

62. Note the side effects of atropine:
1) constipation and difficulty urinating; 2) diarrhea; 3) increased intraocular pressure;
4) spasms of smooth muscle organs; 5) bradycardia; 6) tachycardia; 7) dry mouth.

63. Note the side effects of ganglion blockers:
1) orthostatic collapse; 2) hypertensive crisis; 3) paralysis of accommodation; 4) bradycardia; 5) tachycardia; 6) dry mouth; 7) decreased intestinal motility; 8) increased intestinal motility.

64. Specify the indications for the use of adrenaline: 1) anaphylactic shock; 2) hypertension; 3) thyrotoxicosis; 4) hypoglycemic coma; 5) hyperglycemic coma; 6) cardiac arrest 7) open-angle glaucoma.

65. Specify non-selective α-blockers: 1) atenolol; 2) propranolol; 3) prazosin;
4) doxazosin; 5) tropafen; 6) pyrroxane; 7) phentolamine 8) nicergoline.

66. Specify a diuretic not used in the treatment of arterial hypertension: 1) dichlorothiazide; 2) mannitol; 3) furosemide; 4) spironolactone.

67. Specify contraindications to the prescription of digoxin: 1) hyperkalemia; 2) hypercalcemia; 3) atrioventricular block; 4) increased frequency of angina attacks;
5) severe bradycardia; 6) hyponatremia.

68. Choose the correct statements:

*The antianginal effect of nifedipine is due to:*1) a decrease in the force of heart contractions and a decrease in myocardial oxygen demand; 2) an increase in coronary blood flow; 3) inhibition of the sympathetic ganglia; 4) increased ATP synthesis; 5) blockade of calcium channels.

69. The mechanism of action of low molecular weight heparins is due to the fact that they: 1) activate fibrinolysis; 2) activate antithrombin III; 3) act like streptokinase; 4) disrupt the transition of antithrombin to thrombin; 5) inhibit thrombin; 6) enhance iron absorption.

70. Specify the means for inhalation anesthesia: 1) enflurane; 2) nitrous oxide; 3) propanidide; 4)

fluorotane; 5) ketamine; 6) isoflurane.

71. Choose the correct statement:

*Lamotrigine:*1) blocks sodium channels; 2) is a benzodiazepine derivative; 3) has a hypnotic effect; 4) effective for minor attacks of epilepsy; 5) not effective for grand mal seizures; 6) reduces the release of glutamate.

72. Note the side effects of fluorophenazine:

73. Specify the groups of drugs for broncho-obstructive syndrome:

1) M-cholinomimetics; 2) β-adrenergic agonists; 3) M-anticholinergics; 4) β-blockers; 5) sympatholytics; 6) antispasmodics of myotropic action.

74. Choose the correct statements:

*Metamizole sodium for toothache:*1) interacts with opioid receptors; 2) affects the conduction of pain impulses in the thalamus; 3) reduces pain associated with the development of inflammatory edema; 4) reduces the emotional coloring of pain; 5) reduces pain due to inhibition of COX and suppression of prostaglandin synthesis.

75. Note the side effects of fenoterol:

1) anxiety; 2) diarrhea; 3) increased blood pressure; 4) tremor; 5) nausea; 6) heartbeat; 7) drowsiness.

76. Ascorbic acid:

1) increases collagen synthesis; 2) reduces vascular permeability; 3) restores ferric iron in the intestines to divalent; 4) oxidizes divalent iron into trivalent iron in the intestine; 5) stimulates the synthesis of glucocorticoids; 6) has an antioxidant effect.

77. Specify polyene antifungal antibiotics: 1) terbinafine; 2) fluconazole;
3) amphotericin B; 4) nystatin; 5) griseofulvin; 6) levorin; 7) ketoconazole; 8) clotrimazole.

78. *Acyclovir:*1) inhibits RNA synthesis; 2) inhibits DNA polymerase; 3) applied only externally; 4) used for influenza; 5) used for herpes infection.

79. Specify the side effects of cephalosporins: 1) photodermatosis; 2) dyspeptic disorders; 3) osteoporosis; 4) nephrotoxicity; 5) curare-like effect; 6) local irritant effect; 7) superinfection; 8) ototoxic effect.

80. Drug conjugation processes include:

1) oxidation; 2) acetylation; 3) restoration; 4) methylation; 5) hydrolysis; 6) glucuronidation.

81. Specify curare-like drugs with antidepolarizing action: 1) pancuronium bromide; 2) pipecuronium bromide (Arduan); 3) atracurium; 4) suxamethonium iodide (ditylin);
5) tubocurarine chloride; 6) dioxonium.

82. Specify indications for the use of ganglion blockers:
1) hypertensive crisis; 2) vascular collapse; 3) controlled hypotension; 4) obliterating endarteritis; 5) atherosclerosis; 6) glaucoma; 7) arterial embolism.

83. Select the correct statements: Suxamethonium iodide (ditylin) is characterized by:
1) muscle fasciculations preceding relaxation of skeletal muscles; 2) muscle relaxation lasting up to 40-60 minutes; 3) muscle relaxation lasting up to 10 minutes; 4) increasing the duration of action with low pseudocholinesterase activity to 2-6 hours; 5) enhanced effect under the influence of anticholinesterase drugs; 6) muscle pain after restoration of muscle tone.

84. Specify α1-blockers: 1) prazosin; 2) doxazosin; 3) terazosin; 4) nicergoline;
5) phenoxybenzamine; 6) tamsulosin; 7) phentolamine; 8) tropafen.

85. Specify indications for the use of β1-blockers:

1) angina pectoris; 2) cardiac arrhythmias; 3) arterial hypertension; 4) bronchial asthma; 5) obliterating endarteritis; 6) diabetes.

86. Select the correct statement: Amiodarone: 1) non-competitively blocks β-adrenergic receptors; 2) blocks phosphodiesterase and increases the accumulation of cAMP; 3) blocks glucagon receptors; 4) blocks potassium channels in cardiomyocytes; 5) used for ischemic heart disease; 6) used for hypertension; 7) used for arrhythmias.

87. In a patient suffering from bronchial asthma, the doctor revealed a persistent increase in blood pressure. This patient can be prescribed any of the following antihypertensive drugs, with the exception of: 1) methyldopa; 2) dichlorothiazide; 3) apressina; 4) anaprilin; 5) prazosin.

88. Specify contraindications to the use of Celanide: 1) hyperkalemia; 2) hypercalcemia; 3) increased frequency of angina attacks; 4) severe bradycardia; 5) atrioventricular block.

89. Select the correct statements: in case of coronary artery disease, the work of the heart can be reduced by: 1) reducing systemic venous and blood pressure; 2) weakening of adrenergic innervation; 3) blockade of parasympathetic innervation; 4) oppression

transport of calcium into myocardial cells; 5) increased calcium transport into myocardial cells; 6) stimulation of cardiac adrenergic receptors.

90. Specify an antidepressant – selective MAO-A inhibitor:

1) moclobemide; 2) maprotiline; 3) nialamide; 4) imizin; 5) amitriptyline.

91. *Carbamazepine:*1) blocks sodium channels; 2) prevents petit epileptic seizures; 3) prevents major seizures; 4) used for myoclonus epilepsy; 5) has a pronounced sedative and hypnotic effect; 6) has an activating effect.

92. *Note the side effects of zolpidem:*1) hypotension; 2) hypertension; 3) daytime sleepiness; 4) addiction; 5) only mental dependence; 6) mental and physical dependence.

93. Specify non-steroidal anti-inflammatory drugs - selective COX-2 inhibitors: 1) betamethasone; 2) phenylbutazone; 3) naproxen; 4) meloxicam; 5) piroxicam: 6) nimesulide; 7) ibuprofen.

94. Choose the correct statement:

*Ambroxol:*1) is mucolytic; 2) is an expectorant of reflex action; 3) is a direct action expectorant; 4) causes depolymerization of sputum mucopolysaccharides; 5) increases the viscosity of sputum.

95. Note the side effects of codeine:

1) addiction; 2) cough; 3) drug dependence; 4) respiratory depression; 5) constipation;
6) allergic reactions.

96. What is characteristic of oxytocin?

1) has a tocolytic effect; 2) increases the amplitude and frequency of myometrial contractions; 3) in a large dose increases the tone of the myometrium; 4) reduces milk secretion; 5) effective when taken orally.

97. Specify antibiotics that disrupt the permeability of the cytoplasmic membrane:
1) erythromycin; 2) polymyxin M; 3) chloramphenicol; 4) doxycycline; 5) ciprofloxacin; 6) streptomycin; 7) amikacin.

98. Specify the drugs used to treat HIV infection: 1) zidovudine; 2) acyclovir; 3) valacyclovir; 4) remantadine; 5) saquinavir; 6) interferon alpha.

99. Specify the side effects most typical for gentamicin: 1) photodermatosis; 2) dyspeptic disorders; 3) ototoxic effect; 4) nephrotoxicity; 5) curare-like effect; 6) irritant effect; 7) damage to bone tissue; 8) dysbiosis; 9) allergic reactions; 10) tendonitis.

100. Half-life (half-elimination):

1) the time during which 50% of the drug undergoes biotransformation. 2. time during which the concentration of the drug in the blood plasma decreases by half. 3. time during which half of the drug is released from the body.

101. Specify a means for reflex stimulation of breathing:

1) rocuronium; 2) lobeline hydrochloride; 3) galantamine hydrobromide; 4) tubocurarine chloride; 5) arfonade.

102. Indicate the main distinctive properties of depolarizing muscle relaxants:

1) stabilizing effect on the end plate membrane; 2) depolarization of the end plate membrane; 3) antagonism with anticholinesterase drugs; 4) synergism with anticholinesterase drugs; 5) the presence of muscle fasciculations; 6) absence of fasciculations.

103. Specify local adrenergic agonists: 1) naphazoline (naphthyzin); 2) oxymetazoline (Nasivin); 3) guanfacine; 4) phenylephrine (mesaton); 5) xylometazoline (galazolin).

104. Specify sympatholytics: 1) reserpine; 2) ephedrine; 3) tamsulosin; 4) terazosin; 5) octadine; 6) dihydroergotamine.

105. Specify the location of β_1-adrenoreceptors: 1) radial muscle of the iris; 2) heart; 3) ureters, urethra; 4) myometrium; 5) intestines; 6) bronchi; 7) adipose tissue.

106. Identify a drug that has the following properties: 1) reduces myocardial oxygen demand; 2) increases coronary blood flow and oxygen delivery to the myocardium; 3) slows down heart rate; 4) reduces conductivity; 5) has an antiarrhythmic effect.

107. When nifedipine is administered, the following adverse reactions may occur: 1) tachycardia; 2) “coronary steal” syndrome; 3) hypertension; 4) swelling in the legs and ankles; 5) “withdrawal” syndrome; 6) facial hyperemia; 7) AV block.

108. List rational combinations of drugs for the treatment of hypertension.

Propranolol + dichlorothiazide; Clonidine + dichlorothiazide; Nifedipine + propranolol; Verapamil + propranolol; Enalapril + dichlorothiazide.

109. Note the main properties of heparin:

1) effective when taken orally. 2) effective when administered parenterally. 3) does not cumulate. 4) the effect develops almost immediately after administration. 5) delays blood clotting only in vitro.

110. Specify antiparkinsonian drugs that inhibit cholinergic effects:

1) levodopa; 2) cyclodol; 3) midantan; 4) selegelin; 5) bromocriptine.

111. Identify the drug.

The drug has an antidepressant and sedative effect, indiscriminately inhibits the neuronal uptake of monoamines, and can be used as an analgesic: 1) maprotiline; 2) fluoxetine; 3) amitriptyline; 4)

imizin; 5) moclobemide.

112. Note the side effects of sodium valproate:

1) hypertension; 2) nausea; 3) drowsiness; 4) psychomotor agitation; 5) ataxia; 6) arrhythmias.

113. Specify drugs that eliminate bronchospasm:

1) aminophylline; 2) salbutamol; 3) hydrocortisone; 4) cromolyn sodium; 5) atropine sulfate.

114. Specify an anti-inflammatory drug with minimal ulcerogenic effect:

1) ibuprofen; 2) prednisolone; 3) diclofenac sodium; 4) celecoxib; 5) piroxicam.

115. Choose the correct statements:

*Diclofenac sodium:*1) reduces the synthesis of prostaglandins by indiscriminately blocking cyclooxygenase; 2) reduces the synthesis of prostaglandins by indiscriminately blocking phospholipase A_2; 3) reduces the severity of chronic pain; 4) reduces normalbody temperature; 5) reduces inflammatory swelling; 6) suppresses the synthesis of pyrogenic prostaglandins; 7) reduces the effect of bradykinin on nociceptors.

116. Determine the group of medicines that:

1) stimulate protein synthesis in the body; 2) increase muscle mass; 3) promote calcium fixation in bones; 4) are similar in structure to male sex hormones; 5) are used for cachexia, osteoporosis, injuries, to accelerate reparative processes after extensive burns.

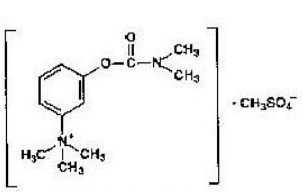
117. *Specify the most effective anti-tuberculosis drugs (group I):*1) isoniazid; 2) ethambutol; 3) rifampicin; 4) PASK; 5) streptomycin; 6) kanamycin.

118. Amphotericin B is characterized by: 1) a wide spectrum of action; 2) minor toxicity; 3) disruption of the structure of the cytoplasmic membrane; 4) nephrotoxicity; 5) hepatotoxicity; 6) fungicidal effect; 7) antiviral activity.

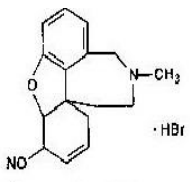
119. Specify the side effects common to all antibiotics: 1) allergic reaction;

2) irritant effect; 3) damage to bone tissue; 4) dysbiosis; 5)all of the above

120. Which of the two anticholinesterase drugs is advisable to use to affect the central nervous system and why?



Неостигмин



Галантамин

121. Specify anticholinesterase drugs: 1) acetylcholine; 2) physostigmine salicylate; 3) dipyroxime; 4) bethanechol; 5) pyridostigmine bromide; 6) Troventol; 7) neostigmine methyl sulfate.

122. Note the indications for the use of M-cholinergic blockers: 1) poisoning with M-cholinomimetics; 2) poisoning with anticholinesterase drugs; 3) tachyarrhythmias; 4) bradyarrhythmias and AV block; 5) bronchial asthma; 6) ulcer of the stomach and duodenum; 7) glaucoma; 8) for potentiated anesthesia.

123. Specify the indications for the use of trepirium iodide (hygronium): 1) hypertensive crisis; 2) glaucoma; 3) relaxation of skeletal muscles during anesthesia; 4) controlled hypotension; 5) thyroidectomy.

124. Select the correct statement: The mechanism of action of isadrin is associated with: 1) stimulation of α- and β-adrenergic receptors; 2) blockade of α- and β-adrenergic receptors; 3) stimulation of β1 and β2 adrenergic receptors; 4) blockade of β1 and β2 adrenergic receptors; 5) predominant stimulation of β1-adrenergic receptors; 6) predominant stimulation of β2-adrenergic receptors.

125. Specify the indications for the use of phentolamine: 1) vascular collapse; 2) spasms of peripheral vessels; 3) hypertension; 4) pheochromocytoma; 5) obliterating endarteritis; 6) benign prostatic hyperplasia; 7) glaucoma.

126. Choose the correct statements: Nitroglycerin: 1) begins to act in 1-3 minutes; 2) begins to act after 10-15 minutes; 3) has a duration of action of 20-30 minutes;
4) has a duration of action of 30-60 minutes; 5) causes tachycardia; 6) causes bradycardia; 7) is used to relieve attacks of angina pectoris.

127. Note the effects observed when using nifedipine in patients with coronary artery disease: 1) reduction in afterload; 2) ↑HR; 3) ↓HR; 4) increased cardiac output; 5) decrease in cardiac output; 6) expansion of coronary vessels; 7) lowering blood pressure.

128. In a patient suffering from angina and second degree AV block, the doctor detected a persistent increase in blood pressure. This patient can be prescribed any of the following antihypertensive drugs, with the exception of: 1) enalapril; 2) dichlorothiazide; 3) losartan; 4) reserpine; 5) prazosin.

129. Note the side effects of amiodarone: 1) tachycardia; 2) bradycardia; 3) neurological disorders; 4) hypertension; 5) AV block; 6) dysfunction of the thyroid gland.

130. Specify neuroleptics - phenothiazine derivatives: 1) fluorophenazine; 2) chlorpromazine; 3) haloperidol; 4) chlorprothixene; 5) stepperizin; 6) sulpiride.

131. Select the correct statements: Morphine has the following pharmacological effects: 1) stimulates the centers of the vagus nerves; 2) inhibits the centers of the oculomotor nerves; 3) inhibits the cough center; 4) stimulates the respiratory center; 5) increases the tone of the gastrointestinal sphincters; 6) excites the vasomotor center.

132. Note the side effects of lithiumcarbonate: 1) muscle weakness; 2) dyspeptic disorders; 3) hypertension; 4) non-toxic goiter; 5) tremor; bradycardia.

133. Select an anti-inflammatory drug that irreversibly inhibits COX-11) 1) ketoprofen; 2) acetylsalicylic acid; 3) metamizole sodium; 4) nimesulide; prednisolone.

134. Specify drugs that reduce the secretion of gastric glands: 1) antacids; 2) inhibitors of H+, K+-ATPase; 3) M-anticholinergics; 4) histamine H blockers$_2$-receptors; 5) synthetic analogues of PGE.

135. *Codeine:* 1) is an opium alkaloid; 2) has a pronounced analgesic effect; 3) has pronounced antitussive activity; 4) causes mental and physical dependence; 5) depresses the respiratory center; 6) is not addictive.

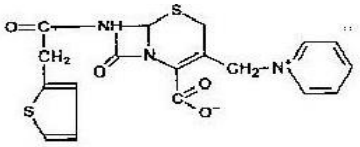
136. Select the correct statements: Phenylbutazone: 1) is an inhibitor of phospholipase A_2; 2) indiscriminately inhibits COX-1 and COX-2; 3) increasesuric acid content in blood plasma; 4) has a pronounced ulcerogenic effect; 5) increases the excretion of uric acid from the body; 6) the elimination period is about 24 hours; 7) the half-life is 6 hours.

137. Specify antipseudomonas penicillins: 1) benzylpenicillin sodium salt; 2) amoxicillin/clavulanate; 3) ampicillin; 4) oxacillin; 5) carbenicillin; 6) phenoxymethylpenicillin; 7)ampiox.

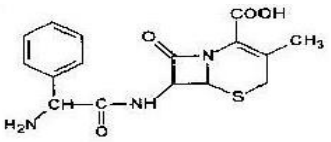
138. Indicate the properties characteristic of streptomycin: 1) has a bactericidal effect; 2) has a bacteriostatic effect; 3) has an ototoxic effect; 4) acts on spirochetes, fungi, protozoa; 5) used for tuberculosis; 6) does not cause candidiasis.

139. Specify the side effects most typical for tetracyclines: 1) photodermatosis; 2) curare-like effect; 3) ototoxicity; 4) hepatotoxicity; 5) damage to bone tissue; 6) damage to teeth.

140. Which of the two drugs is advisable to prescribe orally, which intramuscularly and why?



Цефалоридин



Цефалексин

141. Specify curare-like drugs with antidepolarizing action: 1) pancuronium bromide; 2) pipecuronium bromide (Arduan); 3) atracurium; 4) suxamethonium iodide (ditylin); 5) tubocurarine chloride; 6) dioxonium.

142. Note the indications for the use of anticholinesterase drugs:

1) glaucoma; 2) myasthenia gravis; 3) renal colic; 4) bronchial asthma; 5) atony of the gastrointestinal tract and bladder.

143. Specify the localization of adrenergic receptors: 1) cells of effector organs in the area of the endings of adrenergic fibers; 2) neurons of the sympathetic ganglia; 3) neurons of the parasympathetic ganglia; 4) neurons of the central nervous system; 5) chromaffin cells of the adrenal medulla; 6) carotid glomeruli; 7) skeletal muscle cells.

144. Specify β1-blockers: 1) prazosin; 2) timolol; 3) atenolol; 4) nebivolol; 5) propranolol; 6) tropafen; 7) phentolamine; 8) metoprolol.

145. Specify the indications for the use of β2-adrenergic agonists: 1) hypotension; 2) bronchial asthma; 3) premature birth; 4) threat of miscarriage; 5) acute heart failure; 6) AV block.

146. Select the correct statements: When using nitroglycerin, heart rate: 1) increases due to stimulation of beta-adrenergic receptors; 2) decreases due to inhibition of central sympathetic influences; 3) increases reflexively due to a decrease in blood pressure; 4) decreases due to the cardio-cardiac reflex.

147. Identify a drug that has the following properties:

1) reduces myocardial oxygen demand; 2) has a negative inotropic and chronotropic effect; 3) does not increase coronary blood flow; 4) reduces blood pressure; 5) has an antiarrhythmic effect.

148. When reserpine is administered, the following adverse reactions may occur: 1) tachycardia; 2) bradycardia; 3) drowsiness; 4) swelling in the legs and ankles; 5) swelling of the nasal mucosa.

149. A patient suffering from gastric and duodenal ulcers was found to have a persistent increase in blood pressure. This patient can be prescribed any of the listed antihypertensive drugs, with the exception of: 1) enalapril; 2) dichlorothiazide; 3) losartan; 4) doxazosin; 5) reserpine; 6) clonidine.

150. Specify narcotic analgesics - opioid receptor agonists: 1) morphine; 2) naloxone; 3) pentazocine; 4) fentanyl; 5) butorphanol.

151. Choose the correct statement:

Clozapine: 1) selectively blocks D_2-receptors; 2) predominantly blocks D_4- receptors; 3) blocks 5-HT_{2A}-

receptors; 4) stimulates M-cholinergic receptors and α-adrenergic receptors; 5) has pronounced psychostimulating activity.

152. Note the side effects of cordiamine: 1) vomiting; 2) drowsiness; 3) arrhythmias; 4) muscle twitching; 5) hypotension.

153. Specify a diuretic used for pulmonary edema: 1) diacarb; 2) spironolactone; 3) furosemide; 4) aminophylline; 5) dichlorothiazide.

154. Select the correct statements: Tiotropium: 1) is an M-anticholinergic blocker of non-selective action; 2) blocks predominantly M3-cholinergic receptors; 3) duration of action is about 20-24 hours; 4) duration of action is about 6 hours; 5) administered orally and inhaled; 6) administered only by inhalation.

155. Fepranon: 1) acts like phenamine; 2) blocks dopamine receptors of the central nervous system; 3) inhibits the hunger center; 4) is an adrenergic agonist; 5) neutralizes hydrochloric acid in the stomach.

156. Note the side effects of indomethacin: 1) increased blood glucose levels; 2) increased excretion of sodium and water from the body; 3) ulceration of the gastrointestinal mucosa; 4) depression; 5) increase in body weight; 6) arterial hypertension; 7) leukopenia.

157. Specify acid-fast penicillins: 1) benzylpenicillin sodium salt. 2) amoxicillin. 3) ampicillin. 4) carbenicillin. 5) phenoxymethylpenicillin. 6) ampiox. 7) bicillin-1.

158. Specify anti-tuberculosis drugs of average effectiveness (group II): 1) isoniazid; 2) rifampicin; 3) ethambutol; 4) PASK; 5) streptomycin. 6) ethionamide; 7) thioacetazone; 8) cycloserine.

159. Indicate the properties characteristic of ampiox: 1) it is a mixture of ampicillin with oxacillin; 2) is a mixture of ampicillin with oxytetracycline; 3) has a bacteriostatic effect; 4) has a bactericidal effect; 5) well absorbed in the intestines; 6) resistant to penicillinase; 7) acts only on gram-positive bacteria.

160. Which enteral routes of administration ensure that drugs enter the systemic circulation, bypassing the liver? 1) oral; 2) sublingual; 3) rectal; 4) into the duodenum; 5) transbuccal.

161. Specify the location of M-cholinergic receptors:

1) neurons of the parasympathetic ganglia; 2) neurons of the sympathetic ganglia; 3) neurons of the central nervous system; 4) carotid glomeruli; 5) chromaffin cells of the adrenal medulla; 6) cells of effector organs in the area of the endings of cholinergic fibers; 7) skeletal muscle cells.

162. Specify the means for the treatment of glaucoma: 1) atropine sulfate; 2) armin; 3) galantamine hydrobromide; 4) acetylcholine; 5) prozerin; 6) pilocarpine hydrochloride.

163. Choose the correct statements:

The mechanism of action of suxamethonium iodide is associated with:

1) impaired synthesis of acetylcholine in the endings of motor nerves; 2) persistent depolarization of the postsynaptic membrane; 3) hyperpolarization of the postsynaptic membrane; 4) stabilization of the postsynaptic membrane; 5) increasing the rate of acetylcholine hydrolysis.

164. Specify α-adrenergic agonists: 1) phenylephrine hydrochloride (mesaton); 2) isadrin; 3) epinephrine (adrenaline); 4) norepinephrine (norepinephrine); 5) clonidine; 6) terbutaline; 7) dobutamine.

165. Note the contraindications to the administration of adrenaline: 1) hypertension; 2) anaphylactic shock; 3) IHD; 4) thyrotoxicosis; 5) hypoglycemic coma; 6) diabetes.

166. Specify anti-ischemic drugs from the group of selective β_1- adrenergic blockers:

1) atenolol; 2) propranolol; 3) oxprenolol; 4) nifedipine; 5) verapamil; 6) metoprolol.

167. The mechanism of the antiplatelet action of acetylsalicylic acid:

1. Inhibits phospholipase A_2. 2. Increases the synthesis of prostacyclin. 3. Inhibitscyclooxygenase. 4. Activates antithrombin III. 5. Prevents the formation of thromboxane.6. Inhibits thrombin.

169. Specify contraindications to the use of digitoxin: 1) hyperkalemia; 2) hypercalcemia; 3) hyponatremia; 4) increased frequency of angina attacks; 5) severe bradycardia; 6) atrioventricular block.

170. Which of the following drugs is used for hypertension only to relieve a hypertensive crisis? 1) atenolol; 2) captopril; 3) sodium nitroprusside; 4) hydralazine; 5) labetalol; 6) nifedipine.

171. Specify an antipsychotic – a dibenzodiazepine derivative: 1) fluorophenazine; 2) chlorprothixene; 3) clozapine; 4) haloperidol; 5) sulpiride.

172. Select the correct statements: Promedol: 1) is a partial agonist of opioid receptors; 2) inferior to morphine in analgesic activity; 3) increases the tone of the biliary tract and sphincter of Oddi; 4) can be used for renal colic; 5) provokes the development of withdrawal syndrome in persons addicted to morphine.

173. Note the side effects of phenamine: 1) drop in blood pressure; 2) increased blood pressure; 3) tachycardia; 4) bradycardia; 5) excitement; 6) drug dependence.

174. Specify glucocorticoids used by inhalation:

1) dexamethasone; 2) acetylcysteine; 3) beclomethasone; 4) hydrocortisone; 5) budesonide.

175. Select the correct statement: Zafirlukast: 1) is a 5-lipoxygenase inhibitor; 2) is a leukotriene receptor blocker; 3) has an anti-inflammatory effect; 4) used to relieve attacks of bronchial asthma; 5) administered by inhalation; 6) used to prevent attacks of bronchial asthma.

176. With the resorptive use of novocaine, the following effects are observed: 1) ganglion-blocking; 2) reflex vasospasm; 3) hypotensive; 4) local anesthetic; 5) stimulating central nervous system.

177. Identify a drug that: 1) inhibits the function of the proton pump of gastric parietal cells; 2) effectively suppresses the secretion of hydrochloric acid, reduces the volume of gastric secretion; 3) indications for use are gastric ulcer and reflux esophagitis.

178. Specify antibiotics that interfere with intracellular protein synthesis: 1) erythromycin; 2) doxycycline; 3) chloramphenicol; 4) ampicillin; 5) ofloxacin; 6) streptomycin; 7) amikacin; 8) azithromycin.

179. Specify macrolide-azalides: 1) amoxicillin; 2) azitomycin; 3) erythromycin; 4) amikacin; 5) clarithromycin; 6) vancomycin; 7) roxithromycin.

180. Benzylpenicillin is administered every 4-6 hours, since it: 1) is quickly destroyed in the liver; 2) actively secreted in the renal tubules; 3) accumulates in the liver; 4) quickly excreted by renal filtration; 5) creates a depot in muscle tissue.

181. What does the term “pharmacokinetics” mean?:

1) drug absorption; 2) distribution of drugs in the body; 3) deposit of drugs; 4) localization of drug

action; 5) mechanisms of action; 6) pharmacological effects; 7) types of action; 8) biotransformation; 9) drug removal.

182. Specify drugs for the treatment of myasthenia: 1) proserin; 2) galantamine hydrobromide; 3) aceclidine; 4) scopolamine hydrobromide.

183. Note the side effects of ganglion blockers caused by a block of sympathetic ganglia: 1) orthostatic collapse; 2) hypertensive crisis; 3) suppression of the force of heart contractions; 4) increased heart contractions; 5) miosis; 6) mydriasis; 7) decreased secretion of the salivary, bronchial and gastric glands; 8) increased secretion of glands;
9) decreased gastrointestinal motility; 10) increased gastrointestinal motility; 11) decreased tone of the bladder; 12) increased bladder tone.

184. Specify a curare-like drug with a depolarizing action: 1) suxamethonium iodide (ditylin); 2) tubocurarine chloride; 3) dioxonium; 4) rocuronium bromide; 5) pipecuronium bromide (Arduan); 6) atracurium besilate.

185. Specify α- and β-adrenergic agonists: 1) salbutamol; 2) ephedrine; 3) norepinephrine (norepinephrine); 4) naphthyzin; 5) Nazivin; 6) fenoterol; 7) epinephrine (adrenaline).

186. Choose the correct statements:

*The mechanism of the hypotensive effect of β-blockers is associated with:*1) decreased cardiac output; 2) restoration of the baroreceptor depressor reflex; 3) decrease in renin secretion; 4) a decrease in the release of norepinephrine by sympathetic fibers;
5) decreased automatism of the sinus node; 6) decreased automaticity and conductivity of the AV node.

187. Which of the following statements are correct? 1) nifedipine dilates coronary vessels; 2) anaprilin reduces the heart's need for oxygen; 3) all antianginal drugs increase oxygen delivery to the myocardium; 4) one of the most effective antianginal agents are calcium channel blockers; 5) with angina, a discrepancy develops between the delivery of oxygen to the heart and its need for oxygen.

188. Indicate combinations of drugs that are not recommended for the treatment of coronary artery disease. 1) propranolol + dichlorothiazide; 2) isosorbide dinitrate + propranolol; 3) nifedipine + propranolol; 4) nifedipine + dipyridamole; 5) isosorbide dinitrate + nifedipine.

189. Note the effects observed when using cardiac glycosides in patients with heart failure: 1) increase in venous pressure; 2) tachycardia; 3) increase in systolic volume of the heart; 4) reduction of edema; 5) increase in blood flow speed.

190. Specify the adverse reactions that occur when prescribing verapamil: 1) bronchospasm; 2) bradycardia; 3) inhibition of heart activity; 4) visual and hearing impairment; 5) hypotension.

191. Specify a mixed action analgesic: 1) codeine; 2) papaverine; 3) pentazocine; 4) tramadol; 5) amitriptyline.

192. When using tranquilizers the following are observed:

1) disappearance of delusions and hallucinations; 2) increased blood pressure; 3) reduction of anxiety, fear; 4) increased skeletal muscle tone; 5) development of drug-induced parkinsonism; 6) development of drug dependence.

193. Note the side effects of nialamide: 1) hepatitis; 2) hypertension; 3) hypotension; 4) convulsions; 5) drug addiction.

194. *Specify means for preventing attacks of bronchial asthma:* 1) salbutamol; 2) salmeterol; 3) ketotifen; 4) platiphylline hydrotartrate; 5) zafirlukast.

195. Select preparations of fat-soluble vitamins:

1) thiamine; 2) riboflavin; 3) ascorbic acid; 4) retinol; 5) tocopherol; 6) pyridoxine; 7) phytomenadione.

196. The ulcerogenic effect of salicylates is due to:

1) stimulating effect on n.vagus centers; 2) increased histamine production; 3) inhibition of cyclooxygenase-1 activity; 4) inhibition of cyclooxygenase-2 activity;
5) direct irritant effect on the gastric mucosa; 6) decreased synthesis of gastroprotective prostaglandins.

197. Note the side effects of prednisolone: 1) increased blood glucose levels; 2) increased excretion of sodium and water from the body; 3) osteoporosis; 4) decreased appetite;
5) increase in body weight; 6) arterial hypertension.

198. Specify antibiotics that are effective mainly against gram-positive microorganisms: 1) benzylpenicillin sodium salt; 2) cefazolin; 3) vancomycin; 4) erythromycin; 6) fusidic acid; 7) tetracycline.

199. Select irrational combinations of anti-tuberculosis drugs:

1) streptomycin + kanamycin; 2) streptomycin + isoniazid; 3) isoniazid + ethambutol + rifampicin; 4) streptomycin + isoniazid + kanamycin; 5) streptomycin + isoniazid + ethionamide.

200. Specify the main side effect of β-lactams: 1) hepatotoxicity; 2) nephrotoxicity; 3) dysbiosis; 4) allergic reactions; 5) ototoxicity; 6) curare-like action.

201. What is typical for administering a drug orally? 1) rapid development of the effect; 2) relatively slow development of the effect; 3) dependence of drug absorption on the pH of the medium, the nature of the contents, and the intensity of gastrointestinal motility; 4) the possibility of drugs entering the systemic circulation, bypassing the liver.

202. Specify anticholinesterase drugs: 1) neostigmine (prozerin); 2) distigmine bromide; 3) armin; 4) aceclidine; 5) isonitrosine; 6) pilocarpine hydrochloride; 7) galantamine hydrobromide.

203. Choose the correct statements:

Atropine, blocking M_3-XP, causes: 1) decreased tone of smooth muscle organs; 2) decreased skeletal muscle tone; 3) increasing the automaticity and conductivity of the heart muscle; 4) decreased automaticity and conductivity of the heart muscle; 5) decreased secretion of bronchial and digestive glands; 6) mydriasis; 7) miosis; 8) paralysis of accommodation.

204. Specify the indications for the use of ganglion blockers: 1) hypertensive crisis; 2) vascular collapse; 3) controlled hypotension; 4) obliterating endarteritis; 5) atherosclerosis; 6) glaucoma; 7) arterial embolism.

205. Select the correct statements: When excitation of postsynaptic α-adrenergic receptors is observed:

1) dilation of the pupils; 2) narrowing of blood vessels; 3) dilation of blood vessels; 4) relaxation of the

bronchial muscles; 5) increased contractile activity of the myometrium; 6) stimulation of the heart; 7) decreased heart function.

206. Note the side effects of phentolamine: 1) nasal congestion; 2) orthostatic hypotension; 3) tachycardia; 4) bradycardia; 5) angina pectoris; 6) diarrhea.

207. Specify the drugs used for systematic treatment of ischemic heart disease:

1) validol; 2) propranolol; 3) nitroglycerin; 4) nitrosorbide; 5) dipyridamole.

208. Select the correct statement: The effectiveness of nitroglycerin in ischemic heart disease is due to: 1) a decrease in preload due to varicose veins; 2) a decrease in afterload due to dilation of the arteries; 3) increased heart function; 4) improvement of coronary blood flow due to expansion of coronary vessels; 5) decreased blood supply to the myocardium; 6) increased systemic blood pressure.

209. Identify the drug by the following properties: Refers to L-type calcium channel blockers. Acts mainly on blood vessels. It has a hypotensive and antianginal effect.

210. Note the side effects of cardioselective β-blockers:

1) AV block; 2) hypertension; 3) bronchospasm; 4) bradycardia; 5) hypoglycemia.

211. Specify herbal preparations that have a sedative effect: 1) tincture of valerian; 2) belladonna extract; 3) eleutherococcus extract; 4) infusion of motherwort herb;
5) infusion of thermopsis herb.

212. Identify the drug.

The drug has an antidepressant and activating effect, selectively inhibits the neuronal uptake of serotonin, does not have an atropine-like effect, and can be prescribed to patients with glaucoma and prostate alenoma: 1) maprotiline; 2) fluoxetine; 3) amitriptyline; 4) moclobemide: 5) imizin.

213. Note the side effects of caffeine: 1) nausea, vomiting; 2) respiratory depression; 3) insomnia; 4) excitement; 5) hypotension; 6) tachycardia.

214. Specify H blockers$_1$-histamine receptors, non-sedativeaction: 1) chloropyramine (suprastin); 2) mebhydrolin (diazolin); 3) clemastine (tavegil); 4) promethazine (pipolfen); 5) loratadine (Claritin); 6) fexofenadine (Telfast).

215. For neuritis and paresis, vitamins are prescribed:

1) ascorbic acid; 2) riboflavin; 3) thiamine; 4) retinol acetate; 5) ergocalciferol; 6) pyridoxine.

216. Select the correct statement: The analgesic effect of NSAIDs is determined by:
1) inhibition of excitation of the associative nuclei of the thalamus; 2) inhibition of the sensitivity of kinin receptors; 3) disruption of the conduction of pain impulses through the visual thalamus; 4) reducing compression of nerve endings as a result of suppression of exudation; 5) inhibition of the activity of pain centers of the cerebral cortex; 6) inhibition of cyclooxygenase.

217. Note the side effects of inhaled glucocorticosteroids:

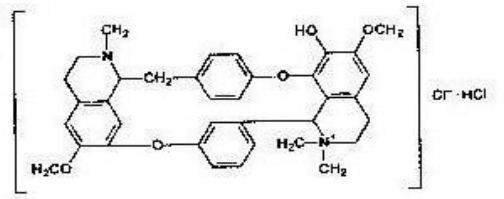
1) arterial hypertension; 2) suppression of the adrenal cortex; 3) cough; 4) irritation of the pharyngeal mucosa; 5) candidiasis of the oral mucosa.

218. Specify the most effective antibiotic in the treatment of severe hospital infections: 1) amoxicillin; 2) cefazolin; 3) meropenem; 4) erythromycin; 5) benzylpenicillin sodium salt; 6) azithromycin; 7) tetracycline.

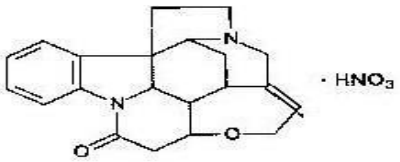
219. Specify the drug used for the prevention and treatment of influenza caused by influenza virus type A: 1) azidothymidine; 2) acyclovir; 3) valacyclovir; 4) remantadine;
5) interferon alpha.

220. Indicate the main effects of chloroquine: 1) antimalarial hematoschizotropic effect. 2) antimalarial gasontotropic effect. 3) antimalarial histo-isotropic effect. 4) immunosuppressive effect. 5) amoebicidal effect.

221. Which of the two substances is not absorbed into the gastrointestinal tract and why?



Тубокуранин



Стрихнин

222. Check the remedies for FOS poisoning: 1) aceclidine; 2) atropine sulfate; 3) isonitrosine; 4) neostigmine

223. Note the side effects of aceclidine: 1) spasms of smooth muscle organs; 2) increased intestinal motility with the development of diarrhea; 3) increased blood pressure; 4) bradycardia; 5) tachycardia; 6) increased intraocular pressure.

224. Select the correct statements: Pipecuronium bromide is characterized by: 1) muscle fasciculations do not precede relaxation of skeletal muscles; 2) muscle relaxation lasting more than 30 minutes; 3) muscle relaxation lasting up to 10 minutes; 4) anticholinesterase drugs eliminate the residual neuromuscular block; 5) anticholinesterase drugs do not affect the residual neuromuscular block; 6) muscle pain after restoration of muscle tone.

225. Specify indications for the use of dobutamine:

1) cardiogenic shock; 2) myocardial infarction; 3) premature birth; 4) threat of miscarriage; 5) bronchial asthma; 6) sepsis.

226. Specify α1 and α2 adrenergic blockers: 1) phentolamine; 2) tropafen; 3) prazosin; 4) doxazosin; 5) betaxolol; 6) pyrroxane; 7) nicergoline; 8) terazosin.

227. Identify a drug that has the following properties:

1) reduces myocardial oxygen demand; 2) increases oxygen delivery to the myocardium; 3) administered sublingually; 4) used to relieve attacks of angina pectoris; 5) contraindicated in cases of severe hypotension.

228. Note the pharmacological effects of nitroglycerin in patients with ischemic heart disease: 1) bradycardia; 2) tachycardia; 3) expansion of coronary vessels; 4) increased afterload; 5) reduction of preload; 6) decrease in heart function; 7) increase in diastolic tension of the myocardial wall; 8) relaxation of smooth muscles of peripheral vessels.

229. When anaprilin is administered, the following adverse reactions may occur: 1) tachycardia; 2) inhibition of myocardial contractility; 3) hypertension; 4) hearing impairment; 5) "withdrawal" syndrome.

230. A persistent increase in blood pressure was detected in a patient suffering from diabetes mellitus and receiving insulin. This patient can be prescribed any of the following antihypertensive drugs, with the exception of: 1) reserpine; 2) prazosin; 3) atenolol; 4) enalapril; 5) propranolol.

231. Indicate the drugs that have a direct stimulating effect on the respiratory center: 1) camphor; 2) cytisine; 3) bemegrid; 4) caffeine; 5) lobeline hydrochloride; 6) piracetam.

232. Identify the drug. Eliminates the productive symptoms of psychosis, is superior to aminazine in the severity of antipsychotic action and inferior in psychosedative activity, causes more pronounced extrapyramidal disorders, does not have M-anticholinergic activity: 1) haloperidol; 2) sulpiride; 3) clozapine; 4) chlorprothixene; 5) fluorophenazine.

233. Specify the side effects of morphine: 1) drug dependence; 2) hypertension; 3) diarrhea; 4) skin itching; 5) respiratory depression; 6) tachycardia.

234. Specify anti-inflammatory drugs - phospholipase A inhibitors$_2$: 1) acidacetylsalicylic; 2) dexamethasone; 3) hydrocortisone; 4) phenylbutazone; 5) prednisolone; 6) triamcinolone; 7) piroxicam.

235. Choose the correct statement:

Salmeterol: 1) stimulates β_1- and β_2-adrenoreceptors; 2) stimulates β_1-adrenergic receptors; 3) duration of action 4-6 hours; 4) duration of action up to 12 hours; 5) used only by inhalation; 6) used internally and inhaled.

236. Identify the drug: ester of diethylaminoethanol and para-aminobenzoic acid. It is used for conduction and infiltration anesthesia and has antiarrhythmic and ganglion-blocking activity.

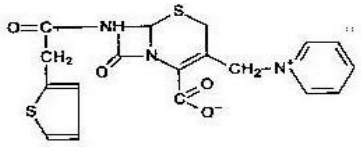
237. Insulin: 1) is synthesized by alpha cells of the islets of Langerhans; 2) synthesized by beta cells of the islets of Langerhans; 3) used for the systematic treatment of diabetes mellitus; 4) used to relieve hyperglycemic coma; 5) causes hyperglycemia; 6) administered parenterally; 8) is administered orally.

238. For personal prevention of malaria, use: 1) hingamine; 2) chloridine; 3) quinine; 4) primaquine; 5) sulfonamides; 6) doxycycline.

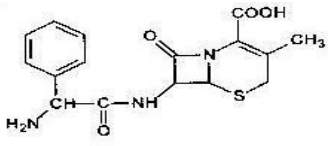
239. Specify the drugs used to treat infection caused by the herpes simplex virus: 1) rimantadine; 2) acyclovir; 3) saquinavir; 4) valacyclovir; 5) azidothymidine; 6) interferon alpha; 7) vidarabine.

240. Which statement regarding sulfonamides is incorrect: 1) they inhibit dihydrofolate reductase; 2) are competitive antagonists of PABA; 3) crystalluria is observed at acidic pH values; 4) may cause hypersensitivity cross reactions with thiazides; 5) disrupt the synthesis of DNA and RNA.

241. Which of the two drugs is advisable to prescribe orally, which intramuscularly and why?



Цефалоридин



Цефалексин

242. Specify M- and N-cholinomimetics: 1) aceclidine; 2) carbacholin; 3) armin; 4) acetylcholine; 5) isonitrosine; 6) phosphacol; 7) melliktin.

243. Note the side effects of ganglion blockers caused by a block of parasympathetic ganglia: 1) orthostatic collapse; 2) hypertensive crisis; 3) miosis; 4) mydriasis; 5) bradycardia; 6) tachycardia; 7) decreased secretion of bronchial and digestive glands; 8) increased secretion of glands; 9) decreased gastrointestinal motility;
10) increased gastrointestinal motility.

244. Select the correct statement: Salbutamol has an adrenomimetic effect due to: 1) stimulation of α_1– adrenergic receptors, causing through the G system$_q$-proteins activation of phospholipase C and inositol-1,4,5-triphosphate, increasing the level of Ca ions in smooth muscle cells; 2) stimulation α_2– adrenergic receptors, causing through the G system$_i$-proteins inactivation of adenylate cyclase and protein kinase, increasing the level of Ca2+ ions in smooth muscle cells; 3) β stimulation$_2$– adrenergic receptors, causing through the G system$_s$-protein activation of adenylate cyclase and protein kinase A,decrease in the level of Ca2+ ions in smooth muscle cells.

245. Specify indications for use α_2- adrenergic agonists: 1) AV block; 2) rhinitis; 3)premature birth; 4) vascular collapse; 5) bronchial asthma; 6) sinusitis; 7) conjunctivitis.

246. Please note the absolute contraindications to the use of propranolol:

1) AV block II-III stage; 2) spasms of peripheral vessels; 3) angina pectoris; 4) severe bradycardia; 5) tachycardia; 6) hyperglycemia; 7) bronchial asthma; 8) pregnancy; 9) CHF IIb-III.

247. Which of the following statements are correct? 1) all antianginal drugs reduce myocardial oxygen demand; 2) anaprilin causes bradycardia; 3) nifedipine increases the tone of the coronary arteries; 4) the goal of therapy for angina pectoris is to eliminate the discrepancy between the myocardial need for oxygen and its delivery; 5) one of the most effective groups of antianginal drugs are myotropic antispasmodics.

1) Identify a drug that has the following properties: reduces heart function; 2) reduces myocardial oxygen demand; 3) does not dilate coronary vessels; 4) does not affect the tone of the bronchi, uterus, peripheral vessels; 5) used for ischemic heart disease.

248. Verapamil causes all of the listed effects, with the exception of: 1) hyperglycemia;
2) peripheral edema; 3) bradycardia; 4) lengthening the PR interval; 5) constipation.

249. Note the side effects of propranolol: 1) tachycardia; 2) bradycardia; 3) hypertension; 4) AV block; 6) bronchospasm; 7) hyperglycemia; 8) sleep disorders.

250. Specify drugs for the treatment of mania: 1) chlorpromazine; 2) lithium carbonate; 3) amitriptyline; 4) imizin; 5) haloperidol.

251. Select the correct statements: Chlorpromazine: 1) is a phenothiazine derivative; 2) is a butyrophenone derivative; 3) depresses the central nervous system; 4) causes vomiting; 5) has an antipsychotic effect; 6) inhibits the trigger zone of the vomiting center.

252. Select the symptoms of acute morphine poisoning: 1) shallow or periodic breathing; 2) miosis; 3) mydriasis; 4) decreased skeletal muscle tone; 5) skin hyperemia; 6) hyperthermia; 7) hypotension.

253. Specify antitussives that depress respiration: 1) glaucine hydrochloride; 2) ethylmorphine hydrochloride; 3) oxeladine citrate; 4) libexin; 5) codeine.

254. Glucocorticoids in comparison with NSAIDs: 1) have a narrower spectrum of pharmacological activity; 2) have a more pronounced anti-inflammatory effect; 3) cause fewer side effects; 4) have a pronounced immunosuppressive effect; 5) suppress the synthesis of prostaglandins and leukotrienes; 6) have fewer contraindications for use.

255. *Ranitidine:* 1) blocks H_2-histamine receptors; 2) excites N_2- histamine receptors; 3) blocks H_1-histamine receptors; 4) reduces secretionstomach glands; 5) used for peptic ulcers.

256. An overdose of novocaine can cause: 1) depression of the respiratory center; 2) decreased myocardial excitability; 3) a sharp drop in blood pressure; 4) a sharp increase in blood pressure; 5) AV block.

257. Specify an antiviral drug that has an immunostimulating effect: 1) levorin; 2) interferon alpha; 3) idoxuridine; 4) azidothymidine; 5) acyclovir; 6) vidarabine; 7) terbinafine.

258. Indicate the properties characteristic of polymyxin M: 1) it is a cyclic polypeptide; 2) similar in structure to cefazolin; 3) disrupts the synthesis of peptidoglycan; 4) disrupts the permeability of the cytoplasmic membrane; 5) well absorbed when taken orally; 6) prescribed orally and locally.

259. Indicate the main method of introducing bicillin I into the patient's body: 1) enterally; subarachnoidally; 3) intramuscularly; 4) intravenously; 5) subcutaneously.

260. Half-life (half-elimination):

1) the time during which the concentration of the drug in the blood plasma decreases by half; 2) the time during which half of the drug is released from the body; 3) the time during which 50% of the drug undergoes biotransformation.

261. Choose the correct statements:

Prozerin: 1) reversibly blocks acetylcholinesterase; 2) irreversibly blocks acetylcholinesterase; 3) reactivates acetylcholinesterase; 4) has an antispasmodic effect; 5) causes tachycardia; 6) used for atony of the intestines and bladder.

262. Specify curare-like drugs: 1) pancuronium bromide; 2) azamethonium bromide (pentamine); 3) pipecuronium bromide (Arduan);

263. Specify long-acting ganglion blockers: 1) pempidinatosylate (pyrylene); 2) trimethaphan camphorsulfonate; 3) pachycarpine hydroiodide; 4) azamethonium bromide (pentamine); 5) hexamethoniumbenzenesulfonate (benzohexonium).

264. Please note the contraindications for prescribing ephedrine: 1) arterial hypertension; 2) hypotension; 3) thyrotoxicosis; 4) insomnia; 5) bronchial asthma; 6) enuresis.

265. Note the side effects of non-selective β-blockers:

1) bradycardia; 2) tachycardia; 3) hypoglycemia; 4) hyperglycemia; 5) difficulty in AV conduction; 6) hypertension; 7) bronchospasm; 8) increased tone and contractile activity of the myometrium.

266. Identify a drug that has the following properties:

1) reduces afterload on the myocardium; 2) reduces the force of heart contractions; 3) increases coronary blood flow; 4) inhibits the flow of calcium ions into cells; 5) has an equally strong effect on the heart and blood vessels.

267. A patient who had been receiving digoxin for a long time was prescribed atropine. Which effect of digoxin will be almost completely blocked by atropine? 1) shortening of the QT interval; 2) increased contractile activity of the myocardium; 3) prolongation of the PR interval; 4) smoothing of the T wave; 5) increased myocardial excitability.

268. Note the side effects of verapamil: 1) hypertension; 2) hypotension; 3) AV block; 5) tachycardia; 4) bradycardia; 6) dizziness; 7) allergic reactions.

269. Indicate the general properties characteristic of nitrates and beta-blockers: 1) reduce the myocardial oxygen demand; 2) slow down heart rate; 3) lower blood pressure; 4) increase oxygen delivery to the myocardium; 5) reduce platelet aggregation. Specify narcotic analgesics - opium alkaloids: 1) morphine; 2) pentazocine; 3) promedol; 4) fentanyl; 5) codeine; 6) omnopon.

270. Identify the drug: it has anxiolytic, sedative, hypnotic and anticonvulsant effects. It is administered orally and intravenously. Can be used for neuroses, as a sleeping pill, for the treatment of withdrawal symptoms, for the relief of status epilepticus - 1) pyriditol; 2) diazepam; 3) buspirone; 4) sidnocarb; 5) hydroxyzine.

271. Note the side effects of haloperidol: 1) dry mouth; 2) hypotension; 3) extrapyramidal disorders; 4) leukopenia; 5) increased intraocular pressure.

272. Specify an antiasthmatic drug from group β_2- adrenergic agonists: 1) tiotropiumbromide; 2) bemegrid; 3) fenoterol; 4) bromhexine; 5) salmeterol; 6) aminophylline.

273. What is characteristic of loperamide? 1) stimulates intestinal motility; 2) inhibits intestinal motility; 3) is an agonist of μ-opioid receptors; 4) is an agonist of M-cholinergic receptors; 5) used for diarrhea; 5) does not cause drug dependence.

274. Select the correct statements: Lidocaine: 1) according to its chemical structure it belongs to amides; 2) is quickly metabolized by plasma cholinesterase; 3) used to create all types of local anesthesia; 4) cannot be used in patients allergic to novocaine; 5) has antiarrhythmic activity.

275. Note the side effects of long-term corticosteroid therapy:

1) lupus syndrome; 2) tumor of the adrenal medulla; 3) hepatotoxicity; 4) osteoporosis; 5) early puberty in children.

276. Specify an antifungal drug that has a predominantly local effect: 1) terbinafine; 2) fluconazole; 3) amphotericin B; 4) nystatin.

277. Specify low-effective anti-tuberculosis drugs (group III): 1) isoniazid; 2) rifampicin; 3) ethambutol; 4. PASK; 5) streptomycin; 6) ethionamide; 7) thioacetazone; 8) cycloserine; 9) prothionamide.

278. With the simultaneous introduction of a combination of streptomycin and gentamicin into the patient's body, the development of the following effects can be observed: 1) increased antimicrobial action; 2)

increased ototoxicity; 3) increased hepatotoxicity;
4) weakening of nephrotoxicity; 5) weakening of the curare-like effect.

279. Drugs bound to plasma proteins:

1) do not exhibit pharmacological activity; 2) are metabolized faster; 3) are eliminated from the body more slowly.

280. Specify M-anticholinergics: 1) platiphylline hydrotartrate; 2) distigmine bromide; 3) tropicamide; 4) aceclidine; 5) atropine; 6) pirenzepine; 7) scopolamine hydrobromide.

281. Note the side effects of suxamethonium iodide (ditilin): 1) bronchospasm; 2) muscle pain in the postoperative period; 3) heart rhythm disturbances; 4) increased blood pressure; 5) decrease in blood pressure; 6) increased IOP; 7) malignant hyperthermia.

282. Select the correct statement: Dobutamine has a cardiotonic effect due to: 1) stimulation of β1-adrenergic receptors, causing activation of adenylate cyclase and protein kinase A through the Gs protein system, increasing the flow of Ca2+ ions into the cytoplasm of cardiomyocytes; 2) stimulation of α2-adrenergic receptors, causing, through the Gi-protein system, inactivation of adenylate cyclase and protein kinase, increasing the level of Ca2+ ions in smooth muscle cells; 3) stimulation of α1-adrenergic receptors, which through the Gq-protein system causes activation of phospholipase C and inositol-1,4,5-triphosphate, increasing the level of Ca2+ ions in smooth muscle cells; 4) β2 stimulation
– adrenergic receptors, which through the Gs protein system causes activation of adenylate cyclase and protein kinase A, a decrease in the level of Ca2+ ions in smooth muscle cells.

283. Specify the indications for the use of prazosin: 1) glaucoma; 2) spasms of peripheral vessels; 3) hypertension; 4) Raynaud's disease; 5) benign prostatic hyperplasia.

284. Note the side effects of reserpine: 1) insomnia; 2) nasal congestion; 3) depression; 4) drug-induced parkinsonism; 5) diarrhea; 6) lethargy, drowsiness.

285. Identify a drug that has the following properties: 1) blocks the flow of sodium ions through cell membranes; 2) shortens the duration of AP; 3) inhibits ventricular automaticity; 4) has a local anesthetic effect; 5) used to relieve ventricular arrhythmia and acute myocardial infarction - 1) novocainamide.
2) lidocaine. 3) verapamil. 4) quinidine. 5) diphenin.

286. Note the side effects of dipyridamole: 1) dyspepsia; 2) hypertension; 3) hypotension; 4) “coronary steal” syndrome; 5) headache.

287. Check the combinations of drugs that are recommended for the treatment of ischemic heart disease: 1) anaprilin + dichlothiazide; 2) isosorbide dinitrate + anaprilin; 3) nifedipine + anaprilin; 4) nifedipine + dipyridamole; 5) isosorbide dinitrate + nifedipine.

288. Verapamil causes all of the listed effects, with the exception of: 1) bradycardia; 2) constipation; 3) peripheral edema; 4) lengthening the PR interval; 5) hyperglycemia

289. Specify anxiolytics that do not have a sedative effect: 1) diazepam; 2) buspirone; 3) medazepam; 4) phenazepam; 5) nozepam; 6) hydroxyzine.

290. Identify the drug.

The drug has an antidepressant and sedative effect, indiscriminately inhibits the neuronal uptake of monoamines, and can be used as an analgesic -1) maprotiline; 2) amitriptyline; 3) fluoxetine; 4)

moclobemide; 5) imizin.

291. Specify the symptoms of withdrawal syndrome in morphine addiction:

1) mydriasis; 2) hyperthermia; 3) respiratory depression; 4) diarrhea; 5) muscle pain; 6) irritability; 7) drowsiness.

292. *Specify the means for spinal anesthesia:* 1) bupivacaine; 2) cocaine; 3) lidocaine; 4) anesthesin; 5) dicaine; 6) novocaine..

293. For hemeralopia, the following is prescribed: 1) ascorbic acid; 2) retinol acetate; 3) thiamine; 4) riboflavin; 5) ergocalciferol; 6) pyridoxine.

294. Inhibition of cyclooxygenase activity is associated with: 1) antipyretic effect of diclofenac; 2) anti-inflammatory effect of gold preparations; 3) ulcerogenic
the effect of acetylsalicylic acid; 4) immunosuppressive effect of prednisolone; 5) anti-asthmatic effect of beclomethasone.

295. Note the side effects of zafirlukast:

1) headache; 2) constipation; 3) gastritis; 4) myalgia; 5) visual impairment; increased transamine activity

296. Specify the antibiotic most effective for infections caused by Pseudomonas aeruginosa: 1) cefazolin; 2) amoxicillin/clavulanate; 3) vancomycin; 4) tetracycline; 5) azithromycin; 6) fusidine; 7) cefepime.

297. Specify anti-tuberculosis drugs with a narrow spectrum of antimicrobial activity limited to Mycobacterium tuberculosis: 1) streptomycin; 2) rifampicin;
3. ethambutol; 4. PASK; 5. isoniazid.

300. With the simultaneous introduction of a combination of ampicillin and gentamicin into the patient's body, one can expect: 1) increased antimicrobial action; 2) weakening of the antimicrobial effect

301. Which enteral routes of administration ensure that drugs enter the systemic circulation, bypassing the liver? 1) sublingual 2) oral. 3) into the duodenum. 4) rectal. 5) transbuccal.

302. Specify cholinesterase reactivators: 1) isonitrosine; 2) acetylcholine; 3) dipyroxime; 4) alloxime; 5) ipratropium bromide; 6) phosphacol; 7) edrophonium.

303. Choose the correct statements:

Azamethonium bromide blocks: 1) Nm-ChR of skeletal muscles; 2) Nn-ChR of the autonomic ganglia; 3) M-cholinergic receptors of the ganglia; 4) Nn-ChR of adrenal chromaffin cells; 5) Nn-ChR of carotid glomeruli; 6) Nn-ChR of the central nervous system.

304. Indicate how adrenaline acts on blood pressure against the background of the action of α-blockers and justify your answer: 1) reduces blood pressure; 2) increases blood pressure.

305. Note the main side effects of β-adrenergic agonists:

1) bronchial obstruction; 2) tremor; 3) tachycardia; 4) bradycardia; 5) chest pain.

306. The mechanism of the antianginal action of β-blockers is associated with: 1) a decrease in myocardial oxygen demand due to a decrease in heart function; 2) decreased cardiac output; 3) increasing blood flow to the heart due to expansion of the coronary vessels; 4) decreased automaticity of ectopic foci.

307. A patient receiving treatment for hypertension and angina pectoris was admitted to the emergency department due to a drug overdose. Objectively – pronounced tachycardia. Which of the following drugs was taken by the patient?

1) diltiazem; 2) verapamil; 3) isosorbide dinitrate; 4) propranolol; 5) clonidine.

308. Note the side effects of potassium channel activators:

1) tachycardia; 2) bradycardia; 3) headache; 4) arrhythmias; 5) swelling.

309. Indicate the general properties characteristic of nitrates and beta-blockers: 1. Reduce myocardial oxygen demand. 2. Slow down heart rate. 3. Lower blood pressure. 4. Increase oxygen delivery to the myocardium. 5. Reduce platelet aggregation.

310. What are the contraindications to the use of Celanide? 1.Hyperkalemia. 2.Hypercalcemia. 3. Increased frequency of angina attacks. 4. Severe bradycardia. 5. Atrioventricular block.

311. *Specify means for relieving acute psychosis:*1) chlorpromazine; 2) chlorprothixene; 3) sulpiride; 4) haloperidol; 5) droperidol.

312. Select the correct statements: The analgesic effect of narcotic analgesics is due to: 1) stimulation of $GABA_A$-receptors; 2) activation of the antinociceptive system; 3) blockadeantinociceptive system; 4) stimulation of opioid receptors; 5) stimulation of adenosine receptors.

313. Choose the correct statements:

*Caffeine:*1) enhances glycogenolysis; 2) reduces basal metabolism; 3) causes hypoglycemia; 4) increases lipolysis; 5) acts like insulin; 6) increases basal metabolism.

314. Specify a drug that is contraindicated for bronchial asthma:

1) fenoterol; 2) salbutamol; 3) cromolyn sodium; 4) propranolol; 5) ketotifen.

315. Specify laxatives that act primarily on the large intestine: 1) magnesium sulfate; 2) isafenin; 3) rhubarb preparations; 4) buckthorn preparations;
5) castor oil.

316. Choose the correct statement:

*Celecoxib:*1) has a pronounced anti-inflammatory effect; 2) is a narcotic analgesic; 3) selectively inhibits COX-2; 4) promotes the removal of uric acid; 5) reduces normal body temperature.

317. Note the side effects of suprastin: 1) nausea, vomiting; 2) dizziness; 3) drug dependence; 4) allergic reactions; 5) drowsiness; 6) dryness of the oral mucosa; 7) addiction.

318. Synthetic analogues of nucleosides with antiviral activity: 1) poludan; 2) acyclovir; 3) amantadine; 4) ganciclovir; 5) interferon alpha; 6) vidarabine;
7) zidovudine.

319. With the simultaneous introduction of a combination of penicillin and erythromycin into the patient's

body, the following can be observed: 1) increased antimicrobial action; 2) weakening of the antimicrobial effect.

320. Specify the methods of using bicillin-1: 1) intramuscularly; 2) inside; 3) intravenous stream; 4) intravenous drip; 5) endolumbar; 6) intratracheal;
7) externally in the form of an ointment.

321. Metabolic transformation processes include: 1) oxidation; 2) restoration; 3) hydrolysis; 4) acetylation; 5) formation of glucuronides; 6) methylation.

322. Select the correct statements: Pirenzepine: 1) predominantly blocks M1-cholinergic receptors of enterochromaffin-like cells of the stomach; 2) predominantly blocks M3-cholinergic receptors of smooth muscles of the bronchi and bronchial glands; 3) blocks all subtypes of M-cholinergic receptors; 4) used in the treatment of ulcerative disease; 5) used for bronchial asthma; 7) used for Parkinson's disease.

323. Please note the contraindications to the use of ganglion blockers:

1) hypotension; 2) hypertensive crisis; 3) angle-closure glaucoma; 4) increased susceptibility to thrombosis; 5) myocardial infarction; 6) bronchial asthma; 7) dysfunction of the liver and kidneys.

324. Select the correct statements: By stimulating α-adrenergic receptors, adrenaline: 1) constricts the pupils; 2) dilates the pupils; 3) increases blood pressure; 4) reduces blood pressure; 5) increases the strength and frequency of heart contractions; 6) increases AV conduction; 7) narrows the smooth muscles of the bronchi, intestines, and uterus; 8) relaxes the smooth muscles of the bronchi, intestines, and uterus; 9) constricts blood vessels of the skin and mucous membranes; 10) dilates blood vessels of the skin and mucous membranes; 11) constricts the blood vessels of skeletal muscles; 12) dilates the blood vessels of skeletal muscles.

325. Specify β2-adrenergic agonists: 1) salbutamol; 2) orciprenaline sulfate; 3) midodrine;
4) dobutamine; 5) fenoterol; 6) terbutaline; 7) guanfacine.

326. Please note the contraindications to the use of phentolamine:

1) pheochromocytoma; 2) angina pectoris; 3) after myocardial infarction; 4) Raynaud's disease; 5) arterial hypotension.

327. Select the correct statements: in case of coronary artery disease, the work of the heart can be reduced by: 1) reducing systemic venous and blood pressure; 2) weakening of adrenergic innervation; 3) blockade of parasympathetic innervation; 4) inhibition of calcium transport into myocardial cells; 5) increased calcium transport into myocardial cells; 6) stimulation of cardiac adrenergic receptors.

328. A patient receiving treatment for hypertension and angina pectoris was admitted to the emergency department due to a drug overdose. Objectively – pronounced tachycardia. Which of the following drugs was taken by the patient? 1) diltiazem; 2) clonidine; 3) isosorbide dinitrate; 4) propranolol; 5) verapamil.

329. When anaprilin is administered, the following adverse reactions may occur: 1) tachycardia; 2) hypertension; 3) inhibition of myocardial contractility; 4) hearing impairment; 5) “withdrawal” syndrome.

330. Specify a diuretic that is not used in the treatment of arterial hypertension? 1) beckons; 2)

dichlorothiazide; 3) furosemide; 4) spironolactone.

331. Specify tranquilizers - long-acting benzodiazepine derivatives: 1) phenazepam; 2) nozepam; 3) midazolam; 4) diazepam; 5) lorazepam.

332. Select the correct statements: Lithium salts: 1) have an antidepressant effect; 2) used for manic states; 3) enhance the reuptake of monoamines; 4) compete with sodium for membrane transport systems; 5) have M-anticholinergic activity; 6) replaceable with antipsychotics.

333. Note the side effects of amitriptyline: 1) dry mouth; 2) hypertension; 3) orthostatic hypotension; 4) urinary retention; 5) drowsiness; 6) excitement.

334. Specify non-steroidal anti-inflammatory drugs - non-selective cyclooxygenase inhibitors: 1) naproxen; 2) phenylbutazone; 3) betamethasone; 4) ibuprofen; 5) piroxicam; 6) nimesulide; 7) meloxicam.

335. Choose the correct statements:

Atropine sulfate: 1) the bronchodilator effect is associated with the blockade of N-cholinergic receptors; 2) the bronchodilator effect is associated with the blockade of M-cholinergic receptors; 3) the bronchodilator effect is associated with a direct effect on the smooth muscles of the bronchi; 4) reduces the secretion of bronchial glands; 5) increases the secretion of bronchial glands.

336. Depending on the dose and route of administration, magnesium sulfate has the following effects: 1) laxative; 2) choleretic; 3) hypotensive; 4) anticonvulsant; 5) psychostimulant; 6) cardiotonic; 7) anti-inflammatory.

337. Specify the side effects of cocaine: 1) drug dependence; 2) addiction; 3) tachyphylaxis; 4) euphoria; 5) stimulation of the central nervous system.

338. Specify semisynthetic penicillins that have dosage forms for both enteral and parenteral administration: 1) benzylpenicillin sodium salt; 2) amoxicillin; 3) ampicillin; 4) phenoxymethylpenicillin; 5) carbenicillin; 6) oxacillin; 7) ampiox.

339. *Acyclovir:* 1) inhibits DNA polymerase; 2) inhibits RNA synthesis; 3) applied only externally; 4) used for herpes infection; 5) used for influenza.

340. Specify the side effects of cephalosporins: 1) photodermatosis; 2) dyspeptic disorders; 3) osteoporosis; 4) nephrotoxicity; 5) curare-like effect; 6) local irritant effect; 7) superinfection; 8) ototoxic actions

341. In which case (A or B) will diffusion of a weakly acidic compound occur more easily?

$$R—COOH \rightleftharpoons R—COO^- + H^+$$

	Плазма крови (pH = 7,4)	Липопротеиновая мембрана	Просвет почечных канальцев (pH = 5,0)
А	R—COOH →		
Б		←	R—COOH

342. Specify sympathomimetics: 1) amphetamine; 2) clonidine; 3) ephedrine; 4) epinephrine; 5) hexoprenaline; 6) dobutamine; 7) isadrin.

343. Specify a ganglion blocker used in hypertensive crisis and justify your choice: 1) pachycarpine hydroiodide; 2) hexamethonium benzosulfonate (benzohexonium); 3) trepirium iodide (hygronium); 4)

trimethaphane camphorsulfonate (arfonade).

344. Select the correct statements: Platiphylline: 1) has a myotropic antispasmodic effect; 2) has a myotropic spasmogenic effect; 3) superior to atropine in anticholinergic activity; 4) inferior to atropine in anticholinergic activity; 5) narrows blood vessels and increases blood pressure; 6) dilates blood vessels and reduces blood pressure.

345. Select the correct statement: The main mechanism of action of reserpine is associated with: 1) blockade of vascular α-adrenergic receptors; 2) blockade of neuronal uptake of norepinephrine; 3) a violation of the release of norepinephrine from the endings of adrenergic nerves.

346. Specify the indications for the use of dihydrogenated ergot alkaloids: 1) chronic cerebrovascular accidents; 2) migraine; 3) hypertension; 4) peripheral circulatory disorders.

347. Identify a drug that has the following properties: 1) reduces myocardial oxygen demand; 2) increases coronary blood flow and oxygen delivery to the myocardium; 3) slows down heart rate; 4) reduces conductivity; 5) has an antiarrhythmic effect.

348. Note the effects observed when using nifedipine in patients with coronary artery disease: 1) reduction in afterload; 2) ↓HR; 3) ↑HR; 4) increased cardiac output; 5) decrease in cardiac output; 6) expansion of coronary vessels; 7) lowering blood pressure.

349. The mechanism of action of heparin is due to the fact that it: 1) activates fibrinolysis; 2) activates antithrombin III; 3) acts like streptokinase; 4) disrupts the transition of antithrombin to thrombin; 5) inhibits thrombin; 6) enhances iron absorption.

350. What are the contraindications to the use of digitoxin? 1) hypokalemia; 2) hypercalcemia; 3) hyponatremia; 4) severe bradycardia; 5) increased frequency of angina attacks; 6) atrioventricular block. Specify an antidepressant - a selective norepinephrine uptake inhibitor: 1) fluoxetine; 2) maprotiline; 3) nialamide; 4) amitriptyline; 5) transamine.

351. Select the correct statements: Fentanyl: 1) superior to morphine in analgesic activity; 2) acts longer than morphine; 3) used for pain relief during labor; 4) used for neuroleptanalgesia; 5) is prescribed internally.

352. Note the side effects of chlorpromazine: 1) psychomotor agitation; 2) drowsiness; 3) extrapyramidal disorders; 4) inhibition of hematopoiesis; 5) dry mouth; 6) hypertension.

353. Specify the means used for infiltration anesthesia: 1) dicaine; 2) cocaine; 3) lidocaine; 4) novocaine; 5) trimecaine; 6) anesthesin.

354. Specify expectorants used by inhalation:

1) mucaltin; 2) acetylcysteine; 3) bromhexine; 4) ambroxol; 5) trypsin.

355. Note the effects characteristic of thiamine: 1) cardiotonic; 2) neurotropic;
3) immunosuppressive; 4) hypoglycemic; 5) anabolic.

356. Select the correct statements: Indomethacin: 1) is a derivative of phenylacetic acid; 2) is a derivative of indoleacetic acid; 3) has pronounced anti-inflammatory activity; 4) in terms of anti-inflammatory activity it is inferior to acetylsalicylic acid; 5) causes mental and physical dependence; 6) is one of the most toxic NSAIDs.

357. Specify anti-tuberculosis antibiotics: 1) isoniazid; 2) rifampicin; 3) ethambutol; 4) PASK; 5) streptomycin.

358. Benzylpenicillin is administered every 4-6 hours, since it: 1) accumulates in the liver; 2) actively secreted in the renal tubules; 3) is quickly destroyed in the liver; 4) quickly excreted by renal filtration; 5) creates a depot in muscle tissue.

359. Specify the main side effect of β-lactams: 1) hepatotoxicity; 2) nephrotoxicity; 3) dysbiosis; 4) allergic reactions; 5) ototoxicity; 6) curare-like action.

360. Medicinal substances bound to blood plasma proteins: 1) are metabolized faster; 2) do not exhibit pharmacological activity; 3) are eliminated from the body more slowly.

361. Note the side effects of tubocurarine chloride:

1) bronchospasm; 2) decrease in blood pressure; 3) increased blood pressure; 4) cardiac arrhythmias; 5) muscle pain in the postoperative period; 6) hyperkalemia; 7) malignant hyperthermia.

362. Select the correct statement: The mechanism of the hypotensive action of prazosin is associated with: 1) blockade of postsynaptic $\alpha_1$and extrasynaptic α_2-adrenoreceptors of vascular smooth muscle cells; 2) blockade of postsynaptic $\alpha_1$and presynaptic α_2-adrenoreceptors; 3) preferential blockade postsynaptic α_1 – adrenergic receptors; 4) preferential blockade presynaptic α_2 – adrenoreceptors.

363. Specify β-blockers with intrinsic sympathomimetic activity: 1) timolol; 2) pindolol; 3) bopindolol; 4) talinol; 5) nadolol; 6) oxprenolol; 7) propranolol.

364. Specify the indications for the use of sympatholytics: 1) cardiac arrhythmias; 2) hypertension; 3) hyperacid gastritis; 4) increased intestinal motility.

365. Select the correct statement: Mezaton has a vasoconstrictor effect due to: 1) stimulation of α_1– adrenergic receptors, causing through the G system$_q$-proteinsactivation of phospholipase C and inositol 1,4,5-triphosphate, increasing the level of Ca2+ ions in smooth muscle cells; 2) stimulation α_2– adrenergic receptors, causing through the G system$_i$-proteins inactivation of adenylate cyclase and protein kinase, increasing the level of Ca2+ ions in smooth muscle cells; 3) β stimulation$_2$– adrenergic receptors, causing through the G system$_s$-protein activation of adenylate cyclase and protein kinase A,decrease in the level of Ca2+ ions in smooth muscle cells.

366. Choose the correct statements: Nitroglycerin: 1) begins to act in 1-3 minutes; 2) begins to act after 10-15 minutes; 3) has a duration of action of 20-30 minutes;
4) has a duration of action of 30-60 minutes; 5) causes tachycardia; 6) causes bradycardia; 7) is used to relieve attacks of angina pectoris.

367. Identify a drug that has the following properties:

1) reduces afterload on the myocardium; 2) reduces the force of heart contractions; 3) increases coronary blood flow; 4) inhibits the flow of calcium ions into cells; 5) has an equally strong effect on the heart and blood vessels.

368. In a patient suffering from bronchial asthma, the doctor revealed a persistent increase in blood pressure. This patient can be prescribed any of the following antihypertensive drugs, with the exception of: 1) anaprilin; 2) dichlorothiazide; 3) apressina; 4) methyldopa; 5) prazosin.

369. Specify contraindications to the prescription of digoxin: 1) hyperkalemia; 2) hypercalcemia; 3) atrioventricular block; 4) increased frequency of angina attacks;
5) severe bradycardia; 6) hyponatremia.

370. Specify hypnotics that disrupt sleep structure to a lesser extent:
1) phenobarbital; 2) sodium hydroxybutyrate; 3) zopiclone; 4) etaminal sodium; 5) nozepam.

371. Select the correct statement: The antipsychotic effect of neuroleptics is due to: 1) blockade of dopamine receptors; 2) increased synthesis and
release of dopamine; 3) inhibition of the ascending reticular formation; 4) blockade of GABA receptors; 5) activation of the reticular formation.

372. When prescribing nialamide, the use of products containing tyramine is prohibited, since: 1) nialamide selectively blocks MAO in the central nervous system; 2) nialamide blocks MAO in the central nervous system and peripheral tissues; 3) tyramine weakens the antidepressant effect of nialamide; 4) a hypertensive crisis may develop; 5) collapse may develop.

373. Specify the means for surface anesthesia: 1) novocaine; 2) trimecaine; 3) dicaine;
4) anesthesin; 5) tannin; 6) decoction of oak bark.

374. Select the correct statement: Ketotifen: 1) inhibits the release of allergy mediators from mast cells; 2) used to relieve attacks of bronchial asthma; 3) can be used for other allergic diseases; 4) has a sedative effect; 5) used to prevent attacks of bronchial asthma.

375. Saline laxatives: 1) increase osmotic pressure in the intestinal lumen; 2) reduce absorption in the intestine; 3) increase the volume of intestinal contents, leading to activation of intestinal mechanoreceptors; 4) act predominantly on the large intestine; 5) act throughout the intestine; 6) used for chronic constipation; 7) are used in the treatment of acute poisoning.

376. Note the side effects observed with long-term use of salicylates:
1) decrease in blood pressure; 2) ulceration of the gastrointestinal mucosa; 3) hearing impairment; 4) nausea, vomiting; 5) respiratory depression; 6) bradycardia; 7) hemorrhages.

377. Specify third generation cephalosporins: 1) cefazolin; 2) cefotaxime; 3) cefuroxime;
4) cefepime; 5. all listed drugs.

378. Amphotericin B is characterized by: 1) a wide spectrum of action; 2) minor toxicity; 3) disruption of the structure of the cytoplasmic membrane; 4) nephrotoxicity; 5) hepatotoxicity; 6) fungicidal effect; 7) antiviral activity.

379. With the simultaneous introduction of a combination of ampicillin and gentamicin into the patient's body, one can expect: 1) a weakening of the antimicrobial effect; 2) enhancing the antimicrobial effect.

380. What does the concept of "pharmacokinetics" mean?: 1) drug absorption; 2) distribution of drugs in the body; 3) deposit of drugs; 4) biotransformation; 5) mechanisms of action; 6) pharmacological effects; 7) types of action; 8) localization of drug action; 9) drug removal.

381. Specify drugs for the treatment of progressive dementia:
1) edrophonium; 2) pilocarpine hydrochloride; 3) galantamine hydrobromide; 4) rivastigmine;
5) prozerin; 6) scopolamine hydrobromide.

382. How do anticholinesterase drugs affect the myoparalytic effect of anti-depolarizing curare-like drugs: 1) enhance; 2) weaken; 3) prolonged over time.

383. Select the agents used to prolong the action of local anesthetics:
1) norepinephrine; 2) adrenaline; 3) ephedrine hydrochloride; 4) fenoterol.

384. Select the correct statements: The mechanism of vasodilatory action of phentolamine is associated with: 1) blockade of postsynaptic $\alpha_1$and extrasynaptic α_2- adrenoreceptors; 2) blockade of postsynaptic $\alpha_1$and presynaptic α_2- adrenoreceptors; 3) preferential blockade of postsynaptic α_1– adrenoreceptors; 4) preferential blockade of presynaptic α_2–adrenoreceptors.

385. Select the correct statement: The mechanism of action of β-blockers with intrinsic sympathomimetic activity is associated with: 1) blockade of $\alpha_1$and α_2-adrenoreceptors; 2) weak stimulation of $\alpha_1$and α_2-adrenoreceptors; 3) β blockade$_1$and β_2-adrenoreceptors; 4) stimulation of $\beta_1$and β_2-adrenoreceptors.

386. Note the pharmacological effects of nitroglycerin in patients with ischemic heart disease: 1) bradycardia; 2) tachycardia; 3) expansion of coronary vessels; 4) increased afterload; 5) reduction of preload; 6) decrease in heart function; 7) increase in diastolic tension of the myocardial wall; 8) relaxation of smooth muscles of peripheral vessels.

387. Specify the diuretic - the drug of choice for acute heart failure: 1) furosemide; 2) amiloride; 3) mannitol; 4) dichlorothiazide; 5) spironolactone.

388. A patient suffering from gastric and duodenal ulcers was found to have a persistent increase in blood pressure. This patient can be prescribed any of the listed antihypertensive drugs, with the exception of: 1) reserpine; 2) dichlorothiazide; 3) losartan; 4) doxazosin; 5) enalapril; 6) clonidine.

389. Note the side effects of amiodarone: 1) tachycardia; 2) bradycardia; 3) neurological disorders; 4) hypertension; 5) AV block; 6) dysfunction of the thyroid gland.

390. Specify the drugs used for depression: 1) imipramine; 2) lithium hydroxybutyrate;
3) chlorpromazine; 4) amitriptyline; 5) fluoxetine; 6) etimizol; 7) maprotiline.

391. Identify the drug. The drug eliminates the productive symptoms of psychosis, is superior to aminazine in terms of the severity of its antipsychotic effect and is inferior in terms of psychosedative activity, causes more pronounced extrapyramidal disorders, and does not have M-anticholinergic activity - 1) haloperidol; 2) sulpiride; 3) clozapine; 4) chlorprothixene; 5) fluorophenazine.

392. Note the side effects of chlordiazepoxide: 1) drowsiness; 2) headache; 3) arterial hypertension; 4) memory impairment; 5) drug dependence; 6) arrhythmias

393. Specify respiratory stimulants that have a direct effect on the respiratory center: 1) tsititon; 2) bemegrid; 3) lobeline hydrochloride; 4) caffeine; 5) carbon dioxide.

394. Select the correct statements: Prednisolone: 1) is a glucocorticosteroid; 2) is an inhibitor of cyclooxygenase-2; 3) is an inhibitor of phospholipase A_2; 4) pharmacological effects develop as a resultinteraction with a specific receptor located in the cytoplasm; 5) pharmacological effects develop

as a result of interaction with a specific receptor located in the cell nucleus.

395. Note the indications for the use of tocopherol: 1) dysfunction of the reproductive system; 2) skeletal muscle dystrophy; 3) atherosclerosis; 4) osteoporosis;
5) angina pectoris.

396. Note the side effects of salbutamol: 1) nausea; 2) dizziness; 3) tremor;
4) drowsiness; 5) tachycardia; 6) diarrhea; 7) vomiting.

397. Specify an antibiotic that interacts with the 50S subunit of bacterial ribosomes, inhibits the translocation process and disrupts the synthesis of microbial proteins: 1) erythromycin; 2) tetracycline; 3) chloramphenicol; 4) vancomycin; 5) streptomycin.

398. Isonicotinic acid hydrazide derivatives inhibit: 1) peptidoglycan synthesis;
2) synthesis of mycolic acids; 3) synthesis of nucleic acids; 4) formation of the active form of vitamin B_1; 5) formation of the active form of vitamin B_6.

399. Specify the side effects common to all antibiotics: 1) damage to bone tissue; 2) irritating effect; 3) allergic reactions; 4) dysbiosis; 5) all of the above

400. Specify the drugs used for depression: 1) imipramine; 2) lithium hydroxybutyrate; 3) chlorpromazine; 4) amitriptyline; 5) fluoxetine; 6) etimizol; 7) maprotiline.

TASKS

1. Substances of plant or synthetic origin constrict the pupils, lower intraocular pressure, increase gland secretion, cause bradycardia, and facilitate neuromuscular transmission. They are used for glaucoma, myasthenia gravis, residual effects of poliomyelitis, paralysis, and as antagonists of antidepolarizing muscle relaxants.
Identify the group of drugs and explain the mechanism of action.
2. The drug is an alkaloid. Increases the release of mediators from the endings of adrenergic fibers. Causes vasoconstriction. Increases blood pressure and has a slightly weaker but longer-lasting bronchodilator effect compared to adrenaline. It is used in the treatment and relief of attacks of bronchial asthma and rhinitis.
Identify the drug, explain the mechanism of bronchodilator action.
3. Identify a drug that has the following properties: it is used for inhalation anesthesia, does not cause deep surgical anesthesia, has a pronounced analgesic effect, can be used to relieve pain during childbirth and relieve pain during myocardial infarction. What side effects can develop when using it?
4. Highly active synthetic antibacterial agents containing fluorine atoms in the structure. They have a bactericidal effect. They are used for infections of the respiratory organs, kidneys, pelvic organs, intra-abdominal infections, etc. Possible side effects: arthropathy, arthralgia, myalgia, tendinitis, tendovaginitis, tendon rupture, photosensitivity.
Determine the group affiliation of the drugs, explain the mechanism of antimicrobial action, indicate the spectrum of antimicrobial activity.
5. After a trip to the summer camp, two boys felt very bad. When examining the children, the doctor found dilated pupils, rapid pulse, dry mouth, difficulty swallowing and urinating. The children's behavior was restless. They asked for something to drink in hoarse voices and had difficulty answering questions. What plants could have caused these symptoms? What substance in these plants caused the poisoning? Help measures.
6. Xanthine derivative. Refers to psychostimulants. The nature of the effect on the central nervous system depends on the dose. The main target of action is the neurons of the brain; it also has a pronounced stimulating effect on the respiratory and vasomotor centers. It has a direct or central effect on blood vessels, stimulates the heart, and causes a diuretic effect. Define the drug, explain the mechanisms of its psychostimulating effect and effect on the cardiovascular system.
7. The drug is a substance of a mediator type of action, capable of increasing blood pressure, stimulating the heart, and reducing the tone of the bronchial muscles. It is taken to relieve attacks of bronchial asthma, shock, collapse, and allergic reactions.
Identify the drug, explain the mechanism and features of its hypertensive action.
8. Drugs reduce the strength and frequency of heart contractions, myocardial oxygen demand, block the action of isadrin, and are used for angina pectoris, cardiac arrhythmias, and hypertension.
Determine the group affiliation of the drugs, explain the mechanism of its action in angina pectoris.
9. The drugs cause relaxation of the smooth muscles of the bronchi and uterus. In therapeutic doses, they have little effect on heart activity and blood pressure. Used for bronchial asthma (relief of attacks), can be used to reduce the contractile activity of the myometrium.
Determine the group affiliation of the drugs. Explain the mechanism of bronchodilator action.
10. With long-term use, due to their ability to cumulate, drugs cause: anorexia, nausea, persistent vomiting, diarrhea, heart rhythm disturbances - bradycardia, extrasystole, conduction disturbances, ventricular fibrillation, visual disturbances, headache, weakness, sleep disturbances, hallucinations, delirium , shortness of breath, collapse.
Identify drugs. Measures to help in case of poisoning.
11. Synthetic drug. Reduces the strength and frequency of heart contractions, myocardial oxygen demand, blocks the positive chrono- and inotropic effects of adrenaline and isadrine, increases bronchial tone. Used for hypertension and angina pectoris.
Identify the drug. Explain the mechanism of bronchial obstruction.

12. In case of overdose, the drugs cause: hypersalivation, profuse sweating, nausea, vomiting, abdominal pain, diarrhea, miosis, spasm of accommodation, drop in blood pressure up to collapse, difficulty breathing due to spasm of the bronchi and increased secretion of the bronchial glands. Death from asphyxia.
Determine the group affiliation of the drugs. Help measures.
13. The drugs have anti-inflammatory, analgesic and antipyretic effects, inhibiting the synthesis of prostaglandins. Used for pain, rheumatic and other inflammatory diseases. The main side effect is erosive and ulcerative damage to the gastrointestinal mucosa.
Determine the group affiliation of the drugs. Explain the mechanism of side effects.
14. Antibiotic. Active against pathogens of brucellosis, anthrax, plague, tularemia, cholera, rickettsia, chlamydia, some protozoa, dysentery, typhoid fever and a number of other infections. Disturbs the formation of bone tissue, slows down bone growth in children, and can cause yellow or gray-brown staining of teeth.
Identify the drug. Explain the mechanism of side effects.
15. Antiviral drugs, used to prevent viral infections, are produced by body cells. They have a wide spectrum of action. In addition to the antiviral effect, they have antitumor and immunomodulatory activity.
Identify drugs. Indicate possible adverse reactions when using them.
16. Drugs reduce feelings of fear, tension, anxiety, reduce muscle tone and motor activity, do not eliminate delusions and hallucinations. Used for neuroses and sleep disorders. It is not recommended to use the day before or during work by transport drivers or persons whose work requires a quick reaction.
Identify the group of drugs and explain the mechanism of anxiolytic action.
17. Derivative of barbituric acid. Causes sleep lasting 6-8 hours, disrupts the phase structure of sleep. Has antiepileptic activity. With its long-term use, drug dependence may develop.
Identify the drug, explain the mechanism of hypnotic action.
18. A decrease in blood pressure under the influence of the drug occurs due to the depletion of mediator reserves in the presynaptic endings of adrenergic nerve fibers. In addition, it has a depressant effect on the central nervous system and, with prolonged use, can cause depression. Contraindicated for gastric and duodenal ulcers, hyperacid gastritis.
19. Antibiotics acting on mycobacterium tuberculosis, pathogens of plague, tularemia, anthrax, E. coli and dysentery coli, streptococcus, staphylococcus, diplococcus. Main adverse side effects: damage to the auditory nerve and vestibular apparatus, nephrotoxicity.
Identify the group of drugs and explain the mechanism of antimicrobial action.
20. The substance is involved in many metabolic processes in the body, promotes the synthesis of acetylcholine, improves the conduction of nerve impulses. Contained in yeast, cereal shells, and bread. With its deficiency, weakness, shortness of breath, tachycardia, polyneuritis, and paralysis are observed. The drug is used in the treatment of neuritis, peripheral vascular spasms, gastric and duodenal ulcers.
Identify the drug and indicate its group affiliation.
21. Phenothiazine derivative. Has an antipsychotic effect. Reduces motor activity, has antiemetic, antihistamine, hypotensive, hypothermic effects. Potentiates the effect of narcotic, hypnotics, analgesics and local anesthetics.
Identify the drug. Explain the mechanism of action.
22. Identify a drug that has the following properties: used for non-inhalation anesthesia, has a pronounced analgesic effect, causes “dissociative anesthesia”, duration of action is 5-10 minutes, can cause hallucinations.
Explain the mechanism of action.
23. After the administration of a toxic dose of a substance, deep sleep develops, in severe cases - coma, respiratory depression, decreased blood pressure, progressive weakness of cardiac activity, decreased body temperature, weakened or absent knee reflex.
Determine the drug and measures of assistance.
24. Chemotherapeutic agents acting on streptococcus, staphylococcus, diplococcus, intestinal bacteria, and some protozoa. The mechanism of antimicrobial action is competitive antagonism with para-aminobenzoic acid. Can be used internally and externally.
Determine the group of drugs, list possible adverse reactions when using them.

25. Substances of plant or synthetic origin block neuromuscular transmission for 20-40 minutes. Their antagonists are anticholinesterase drugs. Used to relax skeletal muscles during surgical operations. Side effects: decreased blood pressure, bronchospasm.
Determine the group affiliation of the drugs, explain the mechanism of action.
26. Chemotherapy drug from the sulfonamide group. Slowly absorbed from the gastrointestinal tract. When administered orally, the main part of the drug lingers in the intestines for a relatively long time and creates a high concentration, which determines its effectiveness against intestinal infections. Low toxicity, usually does not cause side effects. Combines well with chloramphenicol.
Identify the drug, explain the mechanism of action.
27. Substances of plant or synthetic origin constrict the pupils, lower intraocular pressure, increase the secretion of glands, cause bradycardia, and facilitate neuromuscular transmission. They are used for glaucoma, myasthenia gravis, residual effects of poliomyelitis, paralysis, and as antagonists of antidepolarizing muscle relaxants.
Identify the group of drugs and explain the mechanism of action.
28. Derivative of barbituric acid, white powder with a yellowish tint. Available in sterile vials. When administered intravenously, anesthesia occurs within a few minutes without the stage of excitement. Increases the tone of the vagus nerve (laryngospasm, increased secretion). Used for intravenous anesthesia.
Identify the drug and explain its mechanism of action.
29. Substances of synthetic origin lower blood pressure, improve peripheral circulation, reduce gastrointestinal motility, gland secretion, and inhibit chromaffin tissue of the adrenal glands. They are used to lower blood pressure, for peripheral vascular spasms, for peptic ulcers, and to create controlled hypotension. Side effects: constipation, intestinal obstruction, orthostatic hypotension.
Identify the group of drugs and explain the mechanism of action.
30. Identify a drug that has the following properties: relaxes skeletal muscles; muscle relaxation lasts 5-10 minutes; increases blood pressure; in the postoperative period causes muscle pain, cardiac arrhythmias; Anticholinesterase drugs enhance the effects of the drug. Explain the mechanism of action.
31. A substance of a mediator type of action, constricts blood vessels, increases heart function, increases blood pressure, decreases the tone of the bronchial muscles and intestines, causes hyperglycemia, and increased tissue metabolism. Used for bronchial asthma (relief of attacks), anaphylactic shock, hypoglycemic coma.
Identify the drug. Explain the mechanism of action for anaphylaxis.
32. In case of overdose, the drug causes: drowsiness, sharp constriction of the pupils, cyanosis, decreased body temperature, urinary and stool retention, constipation. The knee reflex is preserved. Death occurs due to depression of the respiratory center.
Determine the drug and measures of assistance.
33. Drugs enhance inhibition processes in the cerebral cortex and restore the disrupted relationship between the processes of excitation and inhibition. The dosage varies depending on the type of higher nervous activity. They are well absorbed from the gastrointestinal tract and are excreted for a long time.
Identify the drugs, explain the mechanism of action.
34. A synthetic drug that causes constriction of peripheral blood vessels, increases blood pressure, has a longer-lasting effect compared to substances with a mediator type of action, and dilates the pupils. It is used for collapse, hypotension, for the treatment of rhinitis, in ophthalmic practice to dilate the pupils for diagnostic purposes.
Identify the drug, explain the mechanism of hypertensive action.
35. In case of overdose, the drug causes: dizziness, dry skin and mucous membranes, feeling of thirst, difficulty swallowing, dilated pupils, poor vision of nearby objects, anxiety, hallucinations, talkativeness, involuntary laughter, hoarse voice, shortness of breath, tachycardia. Excitation gives way to inhibition with the development of coma and paralysis of the respiratory center. Death from asphyxia.
Determine the drug and measures of assistance.
36. The drug relaxes the smooth muscles of blood vessels, bronchi, biliary and urinary tracts. Used to relieve attacks of angina pectoris. As side effects, it can cause severe headache, tinnitus, dizziness, and a drop in blood pressure.
Identify the drug, explain the mechanism of action for angina pectoris.

37. Identify a drug that has the following properties: causes vasodilation; reduces blood pressure; inhibits the secretory and motor functions of the gastrointestinal tract; dilates the bronchi and reduces their secretory activity; increases heart rate; used to create controlled hypotension in anesthesiological practice. Explain the mechanism of hypotensive action.
38. Identify the drug: it has a pronounced analgesic effect, depresses breathing, increases the tone of the smooth muscles of internal organs, constricts the pupils, acts for 4-5 hours, causes addiction and drug dependence.
Explain the mechanism of analgesic action.
39. Select and prescribe a drug for rapid relief of psychomotor agitation, justify the choice, explain the mechanism of action and possible side effects.
40. Identify the drug. A benzodiazepine derivative, it has anxiolytic, sedative, hypnotic and anticonvulsant properties. It is administered orally and intravenously. It is used for neuroses, as a hypnotic, for premedication before anesthesia, to relieve status epilepticus. Explain the mechanism of its anxiolytic action.

Table of contents

No.	Name of the controlled section (topic) of the discipline/module	competence index	Number of tests (total)	p. from 5 to 67
1	2	3	4	5
Type of control - current / intermediate				
1.	Incoming control of the level of training of students		**20**	**3-4**
2.	questions for module 1 questions for module 2 questions for module 3 questions for module 4 questions for module 5 questions for module 6	GPC-5; GPC-6; GPC-7; GPC-8; PC-10; PC-11	**51** **24** **19** **41** **29** **thirty**	**7-8** **9** **10** **11-12** **13-14** **15-16**
3.	- questions for the exam	GPC-5; GPC-6; GPC-7; GPC-8; PC-10; PC-11	**110**	**17-21**
4.	- bank of situational tasks	GPC-5; GPC-6; GPC-7; GPC-8; PC-10; PC-11	**40**	**60-63**
5.	- standards of test tasks (with title page and table of contents)	GPC-5; GPC-6; GPC-7; GPC-8; PC-10; PC-11	**400**	**23-59**
6.	- exam papers	GPC-5; GPC-6; GPC-7; GPC-8; PC-10; PC-11	**5**	**65-68**

FSBEI HE NOSMA of the Ministry of Health of Russia

Department of Pharmacology with Clinical Pharmacology
Faculty of Medicine Well III
Discipline PHARMACOLOGY

EXAMINATION CARD NO. 1

1. Pharmacology and its role in the development of medicine. MThe place of pharmacology among other biological and medical sciences. Merits of N.P. Kravkova, I.P. Pavlova, S.V. Anichkova, V.V. Zakusov and other outstanding scientists in the development of domestic pharmacology.
2. Narcotic analgesics:classification, mechanism of action, pharmacological effects, indications for use, side effects. Acute poisoning with narcotic analgesics and measures of assistance.
3. Mechanism of action and spectrum of activity of monobactams, indications for use, side effects.
4. Solve a problem.
5. Write out:
   - A sleeping pill with a narcotic type of action.
   - β-blocker as an antiarrhythmic agent.
   - A means to enhance labor.

Head department, professor L.Z. Bolieva
Approval date at CCEAMC
"____»_____20 Ave. No.__

FSBEI HE NOSMA of the Ministry of Health of Russia

Department of Pharmacology with Clinical Pharmacology
Faculty of Medicine Well III
Discipline PHARMACOLOGY

EXAMINATION CARD NO. 2

1. Pharmacokinetics, definition. Routes of administration. Basic mechanisms of drug absorption; factors influencingabsorption. The concept of bioavailability. Distribution of medicines. Biological barriers. Tissue depots.
2. Ethanol. Local and resorptive action. Application in medicine. Toxicological characteristics. Acute poisoning and its treatment. Alcoholism, possible approaches to therapy.
3. Ca channel blockers: classification, mechanism of action, pharmacological effects, indications for use.
4. Solve a problem.
5. Write out:
   - A remedy for the treatment of glaucoma.
   - Febrifuge.
   - Diuretic for pulmonary edema.

Head department, professor L.Z. Bolieva
Approval date at CCEAMC
"____»_____20 Ave. No.__

FSBEI HE NOSMA of the Ministry of Health of Russia

Department of Pharmacology with Clinical Pharmacology
Faculty of Medicine Well III
Discipline PHARMACOLOGY

EXAMINATION CARD NO. 4

1. Pharmacokinetics, definition. Biotransformation of drugs: stages of biotransformation, biotransformation reactions, factors influencing biotransformation processes. Pharmacogenetics.
2. Non-narcotic analgesics: classification, mechanism of action, indications for use, side effects. Acute paracetamol poisoning, relief measures.
3. Fluoroquinolones: classification, mechanism of action, indications for use, side effects
4. Solve a problem.
5. Write out:
   - Means for conduction anesthesia.
   - Peripheral muscle relaxant.
   - Ethyl alcohol for cleaning surgeon's hands.

Head department, professor L.Z. Bolieva
Approval date at CCEAMC
"____»_____20 Ave. No.__

FSBEI HE NOSMA of the Ministry of Health of Russia

Department of Pharmacology with Clinical Pharmacology
Faculty of Medicine Well III
Discipline PHARMACOLOGY

EXAMINATION CARD NO. 5

1. β-blockers: classification, mechanism of hypotensive action.
2. Antiepileptic drugs: classification, main mechanisms of action, comparative characteristics of drugs. General principles of pharmacotherapy of epilepsy.
3. Penicillins: classification, mechanism of action, spectrum of activity, indications for use, side effects.
4. Solve a problem.
5. Write out:
   - Antihypertensive drug.
   - A remedy for postoperative atony of the bladder.
   - Analgesic for headaches.

Head department, professor L.Z. Bolieva
Approval date at *CCEAMC*
" » 20 Ave. No.