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**KROK WITHOUT PROBLEMS**

Study guide for license test preparing  
«Krok-1 Pharmacy»

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## General pharmacology

1. A patient with arterial hypertension was administered a non-prescription drug for symptomatic treatment of rhinitis. What pharmacological form should be recommended the patient in order to reduce as much as possible the likelihood of development of undesirable systemic vasoconstriction?
  - a) Drops
  - b) Tablets
  - c) Aerosol
  - d) \*Ointment
  - e) Gel
2. A 56-year-old patient suffering from essential hypertension was prescribed an inhibitor of angiotensin converting enzyme (ACE) and a potassium-sparing diuretic. Such combination is:
  - a) Reasonable because it potentiates hypotensive effect of ACE inhibitor
  - b) Unreasonable because it increases risk of orthostatic collapse development
  - c) Reasonable because it decreases risk of hyperkalemia development
  - d) Unreasonable because it reduces hypotensive effect of ACE inhibitor
  - e) \*Unreasonable because it increases risk of hyperkalemia development
3. Continuous taking of drug results in reduction of its efficiency. This phenomenon called:
  - a)\* Habituation
  - b) Cumulation
  - c) Sensibilization
  - d) Dependence
  - e) Tachyphylaxis
4. One of the major indicator of drug elimination from the human body is:
  - a). Bioavailability
  - b). Volume of distribution
  - c). Bioequivalence
  - d). \*Effective halfbreak
  - e). Highest concentration in blood
5. A 6-year-old child with pneumonia was prescribed an antibiotic. After the treatment the child became deaf. Which antibiotic group might cause this complication?
  - a)\* Aminoglycosides
  - b) Cephalosporins
  - c) Macrolides
  - d) Natural penicillin
  - e) Semisynthetic penicillin
6. A patient has been taking isosorbide for stenocardia prevention for quite a long time. Now he notes a significant decrease in the effect of the drug. What is this phenomenon called?
  - A. Allergy
  - B. Physical dependence
  - C. \*Tolerance
  - D. Cumulation
  - E. Potentiation
7. Drug addicts upon termination of action a drug have heavy psychological, neurological and somatic violations. What is the name of this symptom complex?
  - A\* Abstinente syndrome
  - B Tachyphylaxis

- C Sensitization
- D Cumulation
- E Tolerance

8. What does period of semiejection ( $T_{1/2}$ ) mean?
- A\* Interval of time for which the concentration of preparation in plasma of blood diminishes on 50%
  - B Volume of plasma of blood, which rids of preparation for time unit
  - C Time of complete leadingout of preparation is from an organism
  - D Speed of leadingout of preparation is through buds
  - E Betweenness by speed of leadingout of preparation and by his concentration in plasma of blood
9. From annotation on magnesium sulfate you know that this preparation is prescribed as a anticonvulsant drug. What rout of administration of injection should be chosen for getting of this pharmacological effect?
- A\* intramuscular injection
  - B sublingual
  - C peroral
  - D rectal
  - E inhalation
10. For rapid relief of symptoms of stenocardia a patient takes nitroglycerine in capsules. What is the most rational rout administration for this preparation?
- A\* Sublingual
  - B Oral
  - C Rectal
  - D Inhalation
  - E Hypodermic
11. A doctor prescribed bisacodyl to a patient with a chronic constipation. In 3 weeks of treatment a patient paid a regard to diminishing purgative effect. With what side effect is it related?
- A\* Adaptation (tolerance)
  - B Predilection
  - C Sensitizing
  - D Cumulation
  - E Dysbacteriosis
12. At poisoning by phosphoorganic compound an atropine sulfate was used. What phenomenon is underlaid in antidotal action?
- A\* Antagonism
  - B Synergism
  - C Adaptation
  - D Chemical incompatibility
  - E Potentiation
13. Answer to the doctor question, what is the name of the phenomenon, when at the prolonged using of preparation its efficiency goes down?
- A\* Adaptation (tolerance)
  - B Allergy
  - C Cumulation
  - D Addiction
  - E Tachyphylaxis
14. Decreased absorption of tetracyclines, if they are taken simultaneously with antacids, is an

example of their

- A. Functional antagonism
- B. **Pharmacokinetic incompatibility**
- C. Pharmaceutical incompatibility
- D. Synergism
- E. Pharmacodynamic incompatibility

**Droperidol**

15. Consult a doctor-interner concerning the meaning of term “elimination”:

- A\* Biotransformation + excretion
- B Biotransformation
- C Excretion
- D Accumulation
- E Absorption + distribution

16. Drug addicts after rapid stoppage of drug usage have severe psychical, neurological and somatic disorders. What is the name of this complex of symptoms?

- A\* Abstinence
- B Idiosyncrasy
- C Sensitizing
- D Cumulation
- E Tolerance

17. Which properties of drug determine the ability of drug to penetrate through the blood brain barrier?

- A\* lipids solubility
- B water solubility
- C strong protein bond
- D ionization state
- E long term of half- rearing

18. Pregnant woman used big doses of retinol during 1<sup>st</sup> trimester of pregnancy and got hypervitaminosis. This drug may induce abnormalities of fetus. Name this side effect.

- A\* Teratogenic action
- B Cumulation
- C Dysbacteriosis
- D Addiction
- E Cancerogenic action

19. A woman, who during the 5th-10th weeks of her pregnancy had been taking sodium valproate for treatment of epilepsy, gave birth to a child with pathology of the vertebral column (split spine). What side effect of the drug caused such malformation?

- A. Sensitizing
- B. Fetotoxic
- C. Mutagenic
- D. Embryotoxic
- E. **Teratogenic**

20. Imagine yourself as a pharmacist in interhospital pharmacy. Try to explain nurse what does tolerance mean?

- A\* Impairment of therapeutic efficacy after repetitive drug administration
- B Slowing-down metabolism of medicine in a liver
- C Increasing of therapeutic efficacy of drug
- D Slowing down of drug elimination
- E High absorption from gastrointestinal tract

21. Give the answer to nurse: what is the effective half-life medicine period?
- A\* It is time when medicine concentration in plasma gets down to 50%
  - B It is time when medicine can reach bloodstream
  - C It is time when medicine can spread all over organism
  - D It is time when medicine can get maximum concentration in plasma
  - E It is time when all dose of medicine can eliminated from organism
22. The amount of drug comes to the systemic bloodstream from the site of administration is determined as:
- A\* bioavailability
  - B period half- adsorption
  - C effective half-life
  - D volume of distribution
  - E period half - elimination
23. A patient with uncommon reaction to a medicine was delivered to an intensive care department. What is the name for sensivity enhancement and distorted reaction to medications caused by hereditary enzyme defects?
- a)\* idiosyncrasy
  - b) drug habituation
  - c) drug dependence
  - d) cumulation
  - e) summation
24. At maternity department a child with rudimentary handy was born. What is the name for action of drugs which provokes fetus's birth defects?
- a)\*teratogenic
  - b) allergic
  - c) cancerigenic
  - d) localize
  - e) resorptive
25. To contagion isolation ward a patient who had scarlatina was delivered. The doctor prescribed the medicine in dose which exceeds a medium therapeutic one in 2-3 times. What is the name for such a dose?
- a)\*loading dose
  - b) course dose
  - c) toxic dose
  - d) mortal dose
  - e) once a day dose
26. To narcological department a patient was delivered. His diagnosis was morphine dependence. The doctor noted decreasing of morphine pharmacological activity. What is the name for the phenomenon when the effectiveness of drug reduces after repeated introduction?
- a) \* get used to drug (tolerance)
  - b) material cumulation
  - c) functional cumulation
  - d) antagonism
  - e) summation
25. Technician addressed pharmacist: What pharmacokinetic parameter characterizes the time needed for absorption of half injected dose from injected point to general circulanion?

- a)\* half – absorption period
- b) half – elimination period
- c) constant association
- d) functional cumulation
- e) half – excretion period

26. To obtain a necessary effect a patient was prescribed paracetamol with dimedrol. What is the name for this drug interaction?

- a)\* potentiation
- b) summation
- c) symphysis
- d) antagonism
- e) antidote

27. Explain to a patient why old people should take medicine in reduced doses.

- a)\*because of slowing-down of drug metabolism
- b) because of acceleration of drug metabolism
- c) because of acceleration of drug elimination
- d) because of acceleration of drug distribution
- e) because of acceleration of drug absorption

28. Remind your colleague (pharmacist) what is the name for the phenomenon when one medicine reduces the action of another one?

- a)\* antagonism
- b) drug habituation
- c) sensitization
- d) potentiation
- e) tachyphylaxis

29. What is the most reasonable route of administration for sodium caffeine benzoate should one choose to treat a migraine? Select from the listed below.

- a)\* peroral
- b) intra-arterial
- c) inhalation
- d) transdermal
- e) rectal

30. After a long-term intake of isosorbide to prevent an anginal attack a patient noticed a significant decrease in its effect. What is the name for this phenomenon?

- a)\* tolerance
- b) cumulation
- c) physical dependence
- d) allergy
- e) potentiation

31. When a certain drug reduces the effect of another drug, such a phenomenon is called:

- A. \*Antagonism
- B. Habituation
- C. Potentiation
- D. Sensibilization
- E. Tachyphylaxis

a. The ability of drugs to accumulate in the patient's body is called:

- A. \*Cumulation
- B. Synergism
- C. Allergy
- D. Antagonism
- E. Habituation

33. A patient with moderately severe pneumonia has been administered ceftriaxone 1 time per day. The drug should be taken once a day due to the following properties:

- A. \*Slow excretion
- B. Cumulative ability
- C. Poor absorption from the injection site
- D. Wide range of action
- E. Presence of bactericidal action

34. Inhibitors of one of the amides metabolism enzymes are used to treat depression. What enzyme inhibition has such an effect?

- A. Flavin adenine dinucleotide (FAD)-containing monoamine oxidase (MAO)
- B. Lactate dehydrogenase
- C. Acetylcholinesterase
- D. Formylkynureninase (Arylformamidase)
- E. Kynurenine 3-hydroxylase

# Medicines

## Medicines affecting afferent innervations:

### Local anesthetics

#### 1. Lidocain

Tests
<p>1. As a result of cardiac infarction a patient had ventricle arrhythmia. A cardiac rhythm was normalized after injection of antiarrhythmic agent with local anaesthetic activity. What drug was injected?</p> <p><b>A Lidocain</b> B Novocaineamid C Verapamilum D Pananginum E Propranolol</p>
<p>2. Lidocaine was injected to a patient with disorders of cardiac rhythm. What pharmacological effect does this medicine have besides local anaesthetic activity?</p> <p><b>A Antiarrhythmic</b> B Somnolent C Febrifuge D Antidepressant E Nootropic</p>
<p>3. Tell doctor-enterner what drug from local anesthetics has antiarrhythmic actions?</p> <p><b>A Lidocaine</b> B Digoxin C Metoprolol D Propranolol E Chingamin</p>
<p>4. What medicine from local anesthetic group is used when a patient has cardiac rate abnormalities?</p> <p><b>a) lidocain</b> b) paracetamol c) morphine hydrochloride d) sodium caffeine – benzoate e) nitrazepam</p>
<p>5. What local anesthetic is it better to buy in a pharmacy for anaesthesia during extraction of tooth?</p> <p><b>A Lidocaine</b> B Dicaine C Anaesthesin D Sovkaine E Cocaine</p>
<p>6. A patient with a heart rhythm disorder has been given lidocaine. Apart from the local anesthetic effect, this drug has the following pharmacological effect:</p> <p><b>A Antiarrhythmic</b> B Hypnotic C Antipyretic D Antidepressant E Nootropic</p>
<p>7. What local anesthetic is given to patients with cardiac rhythm disturbance?</p> <p><b>A. Lidocaine</b> B. Paracetamol C. Morphine hydrochloride D. Caffeine and sodium benzoate E. Nitrazepam</p>

## 2. Novocaine

### Tests

1. During local anaesthetization novocaine solution is usually compounded with solution of adrenaline hydrochloride. What is the purpose of this action?

- a). **\*Vasoconstriction**
- b). Vasodilatation
- c). Decrease in smooth muscle tone
- d). Algesia reduction
- e). Increase in smooth muscle tone

2. A patient got an injection of 0.25% novocaine solution for the purpose of anaesthetization. Suddenly the patient has presented with red spots, intense sweating, tachycardia, bronchospasme, edema of nasal mucous membrane. What is the cause of this complication?

- a) **\* Immediate allergy**
- b) Abstinence syndrome
- c) Tachyphylaxis
- d) Delayed allergy
- e) Local irritation

## Medicines affecting efferent innervations:

### *Cholinergic medicines*

## 3. Atropine sulphate

### Tests

1. For research of internal bottom it is necessary to extend a pupil. What preparation is used for this purpose clinically?

- A Atropine sulfate**
- B Pillokarpine hydrochloride
- C Pirensepine
- D Proserin
- E Anaprilin

2. At poisoning by phosphoorganic compound an atropine sulfate was used. What phenomenon is underlain in antidotal action?

- A Antagonism**
- B Synergism
- C Adaptation
- D Chemical incompatibility
- E Potentiation

3. A patient who has renal colics was prescribed a spasmolytic from M-cholinergic antagonists. What medicine is it?

- a) atropine**
- b) proserin
- c) galanthamine
- d) dithylin
- e) benzogecson

4. When copying of instruction to clinic use of atropine sulfate in section «Side effects» student noted: tachycardia, increase of blood ocular pressure, temperature rise, reddening. What typical side effect was missed?

- a) dry mouth**
- b) drowse
- c) nausea
- d) vomiting
- e) excessive sweat

5. Name the most typical symptom of poisoning by atropine:

<p><b>A Dilation of pupils, which are irresponsible on light</b></p> <p>B Narrowing of pupils which are irresponsive on light</p> <p>C Perspiration enhances</p> <p>D Bradycardia</p> <p>E Decline of ophthalmotonus</p>
<p>6. A child has accidentally drunk a solution that was used by his grandmother for glaucoma treatment. The solution turned out to be pilocarpine hydrochloride. What drug can be used as an antidote?</p> <p><b>a)* Atropinum</b></p> <p>b) Carbacholinum</p> <p>c) Pentaminum</p> <p>d) Aceclidinum</p> <p>e) Benzohexonium</p>
<p>7. A 40-year-old patient suffers from bronchial asthma and cardiac rhythm disturbance in form of bradyarrhythmia. Drug of which pharmacological group should be administered for bronchospasm suppression?</p> <p><b>a). * M-cholinergic antagonists (M-anticholinergics)</b></p> <p>b). M-cholinomimetics</p> <p>c). Beta-blockers</p> <p>d).Cholinesterase inhibitors</p> <p>e). Muscle relaxant</p>
<p>8. During an operation a dentist needs to reduce salivation in a patient. The dentist has to use a drug of the following pharmacological group:</p> <p><b>a)* Muscarinic receptors blockers</b></p> <p>b) Muscarinic cholinomimetics</p> <p>c) Muscarinic and nicotinic cholinomimetics</p> <p>d) Adrenoceptor blocker</p> <p>e) Adrenomimetics</p>
<p>9. .A 40-year-old patient suffers from bronchial asthma and cardiac rhythm disturbance in form of bradyarrhythmia. Drug of which pharmacological group should be administered for bronchospasm suppression?</p> <p><b>a). * Muscarinic receptor blockers (M-cholinergic antagonist)</b></p> <p>b). Muscarinic cholinomimetics</p> <p>c). Beta-adrenoceptor blockers</p> <p>d).Anticholinesterase drugs</p> <p>e). Muscle relaxants</p>
<p>10. A patient has been administered a spasmolytic from the group of muscarinic receptor antagonists as a part of complex treatment for renal colics. Specify this drug:</p> <p><b>A. *Atropine</b></p> <p>B. Benzohexonium</p> <p>C. Neostigmine</p> <p>D. Galantamine</p> <p>E. Dithylinum</p>
<p>11. A 40-year-old patient has a history of bronchial asthma and bradyarrhythmia. In order to eliminate bronchospasm, the drugs of the following pharmacological group should be administered:</p> <p><b>A *M-anticholinergics</b></p> <p>B B-adrenergic blocking agents</p> <p>C M-cholinergic agents</p> <p>D Anticholinesterase agents</p> <p>E Muscle relaxants</p>
<p>12. The patient with hepatic colic has been prescribed spasmolytic of muscarinic receptor antagonists group as a part of his complex therapy. What drug is it?</p>

<p>A. <b>*Atropine</b></p> <p>B. Proserin</p> <p>C. Galantamine</p> <p>D. Dithylin</p> <p>E. Benzohexonium</p>
<p>13. A patient takes blocker of muscarinic cholinoreceptors of parasympathetic nerve organ synapses. What changes of heart activity will be observed?</p> <p>A. <b>Heart rate rise</b></p> <p>B. Heart rate and heart force fall</p> <p>C. Heart rate fall</p> <p>D. Heart force fall</p> <p>E. Prolongation of atrioventricular delay</p>
<p>14. A patient with renal colic has been administered a spasmolytic from the group of M-cholinergic antagonists as a part of the complex therapy. Specify this drug:</p> <p>A. <b>Atropine</b></p> <p>B. Proserin</p> <p>C. Galantamine</p> <p>D. Dithylinum</p> <p>E. Benzohexonium</p>

#### 4. Pilocarpine

Tests
<p>1. Recommend a patient with glaucoma a preparation from a group of M-cholinomimetics.</p> <p>A <b>Pilocarpine hydrochloride</b></p> <p>B Ephedrine hydrochloride</p> <p>C Sulfacilum Sodium</p> <p>D Atropine sulfate</p> <p>E Levomycetin</p>
<p>2. For treatment of glaucoma a doctor decided to prescribe cholinomimetic agent of direct action. What preparation is it?</p> <p>A <b>Pilocarpine hydrochloride</b></p> <p>B Zinc sulfate</p> <p>C Sodium sulfacyl</p> <p>D Platyphyllin</p> <p>E Atropine sulfate</p>
<p>3. Patient with glaucoma was prescribed pilocarpine hydrochloride to decrease pressure. What pharmacological group does the medicine belong to?</p> <p>A <b>M-cholinomimetics</b></p> <p>B Beta-adrenoceptor antagonists</p> <p>C Sympatholytics</p> <p>D Ganglionic blockers</p> <p>E Alfa- adrenoceptor antagonists</p>
<p>4. Pilocarpine was prescribed. What mechanism of action does this medicine have?</p> <p>a) <b>M – cholinergic receptor stimulation</b></p> <p>b) M – cholinergic receptor blockade</p> <p>c) <math>\alpha</math> – adrenoreceptors stimulation</p> <p>d) <math>\beta</math> – adrenoreceptors blockade</p> <p>e) <math>H_2</math> – histamine receptor blockade</p>
<p>5. What medicine from cholinotropic group is used for glaucoma treatment, because it reduces intraocular pressure?</p> <p>a) <b>pilocarpine</b></p> <p>b) atropine</p> <p>c) platyphyllin</p>

d) scopolamine e) methacin
6. Name the drug that causes miosis and lowers intraocular pressure <b>A. *Pilocarpine hydrochloride</b> B. Fenofibrate C. Nitrazepam D. Atropine sulphate E. Suxamethonium chloride
7. Specify the drug that constricts pupils and reduces intraocular pressure: <b>A. Pilocarpine hydrochloride</b> B. Fenofibrate C. Nitrazepamum D. Atropine sulfate E. Dithylinum

### 5. Proserin (Neostigmine methylsulphate)

Tests
1. For the patient of 53 years old glaucoma is diagnosed. For treatment a doctor prescribed anticholinesterase medicine as eye drops. Name this drug. <b>A Proserin</b> B Carbacholin C Pilocarpine hydrochlorid D Atropine sulfate E Aceclidin
2. A patient who has glaucoma was prescribed proserin as eye drops. To what pharmacological group does this medicine belong? <b>a) Anticholinesterase reversible acting agent</b> b) M – anticholinergic drug c) N – cholinomimetic d) Adrenergic blocker e) Adrenoceptor agonist
3. What should one prefer to suppress intestinal atony in a postoperative period? <b>a) proserin</b> b) atropine c) platyphyllin d) pirelin e) methacin
4. Old patient had postoperative atony of the intestine. What anticholinesterase medicine should be prescribed? <b>A Prozerin</b> B Dithylinum C Pilocarpin hydrochloride D Atropine sulfate E Metoprolol
5. A child was hospitalized with the symptoms of poisoning by the alkaloids of belladonna. What preparation should be used as an antidote? <b>A Prozerin</b> B Magnesium sulfate C Caffeine-sodium benzoate D Paracetamol E Sodium volpro
6. Find in your pharmacy reversible-acting anticholinesterase drug for treatment of infestine.

<p><b>A Prozerin</b>  B Phosphacol  C Benzohectsonium  D Atropine sulfate  E Dithylin</p>
<p>7. A hospital admitted a child with signs of poisoning with belladonna alkaloids. What drug should be applied as an antidote?  <b>a). * Proserin</b>  b). Magnesium sulfate  c). Sodium valproate  d). Sodium caffeine benzoate  e). Paracetamol</p>
<p>8. During a surgical operation the muscle relaxant tubocurarine chloride was used. What antagonist should be injected in order to allow the patient to breathe independently?  <b>a). *Neostigmine (Proserinum)</b>  b). Cytitonum  c). Dithylinum  d). Aethimizolum  e). Benzohexonium</p>
<p>9. A patient with dry mouth, photophobia and blurred vision has been delivered to the emergency department. Objectively: the skin is hyperemic, dry, mydriatic pupils and tachycardia are present. He has been diagnosed with belladonna alkaloids intoxication. Which of the drugs should be given as an antidote?  <b>A. Neostigmine</b>  B. Pilocarpine  C. Armin  D. Aceclidine  E. Dipiroxim</p>
<p>10. A patient complaining of dry mouth, photophobia, and visual impairment has been delivered into an admission room. The skin is hyperemic and dry; pupils are dilated; tachycardia is observed. The patient was diagnosed with belladonna alkaloids intoxication. What drug would be advisable?  A. Aceclidine  B. Pilocarpine  C. Armin  D. <b>Proserin</b>  E. Dipiroxim</p>
<p>11. From the pharmaceutical stock select an anticholinesterase drug to be administered to the patients with atony of the intestine and urinary bladder in the postoperative period:  <b>A. Dithylinum</b>  <b>B. Phosphacolum</b>  C. Atropine sulfate  D. Benzohexonium  <b>E. Proserin</b></p>
<p>12. A patient has been administered a competitive inhibitor of cholinesterase. Name it:  <b>A. Proserin</b>  B. Aspirin  C. Sodium diclophenac  D. Indometacin  E. Allopurinol</p>

### 6. Dithylinum

#### Tests

1. To the interhospital pharmacy an order from a surgical department on the medicine of the

<p>neuromuscular relaxant group with depolarizing type of action for the leadthrough of surgical interferences was made. What medicine was ordered?</p> <p><b>A Dithylin</b>  B Famotidine  C Atropine sulfate  D Methacine  E Hygronium.</p>
<p>2. An interhospital pharmacy got an order from a surgical department for a depolarizing muscle relaxant for surgical interventions. What drug was ordered?</p> <p><b>a). * Dithylinum</b>  b). Hydronium  c). Nicotine  d).Methacine  e). Atropine sulfate</p>
<p>3. A man got an injection of curarelike substance causing the relaxation of all skeletal muscles. What is its mechanism of action?</p> <p><b>A. Block of cholinergic receptors of postsynaptic membrane</b>  B. Disturbance of acetylcholine synthesis  C. Block of Ca<sup>2+</sup>-channels of presynaptic membrane  D. Disturbance of cholinesterase synthesis  E. Disturbance of acetylcholine secretion</p>

### 7. Benzohexonium

<p>Tests</p>
<p>1. A patient with hypertensive crisis received an injection of ganglionic blocker benzohexonium. What side effect might be expected after the drug injection?</p> <p><b>a). * Orthostatic hypotension</b>  b). Diarrhea  c). Central nervous system depression effect  d). Withdrawal (abstinence) syndrom  e). Taste violation</p>

### Adrenergic medicines

#### 8. Adrenaline hydrochloride (Epinephrine hydrochloride)

<p>Tests</p>
<p>1. A patient after bee's stings has angioedema (Quincke's edema). Which drug should be immed'ately inject to eliminate this c'ndition?</p> <p><b>A Epinephrine hydrochloride</b>  B Sodium chloride  C Platyphyllin hydrotartrat  D Atropine sulfate  E Anaprilin</p>
<p>2. For an extension and strengthening of local anesthetic activity of lidocaine also for diminishing of bleeding probability during the extraction of a tooth, a dentist used preparation from the group of adrenergic agonist. Name this preparation.</p> <p><b>A Adrenaline hydrochloride</b>  B Salbutamololum  C Isadrinum  D Prozerin  E Anaprilin</p>
<p>3. A patient has anaphylactic shock developed after a vaccination. Name the preparation of choice in such a case.</p> <p><b>A Adrenaline hydrochloride</b>  B Anaprilin</p>

<p>C Naphthizin D Salbutamol E Dithylin</p>
<p>4. Help student from medical university to choose adrenergic drug for treatment of anaphylactic shock. <b>A Adrenaline hydrochloride</b> B Clofelin C Galasoline D Fenoterol E Isadrin</p>
<p>5. During the reaction of sensibilisation to benzylpenicillin anaphylactic shock appeared. What medicine should be injected in the place of the antibiotic injection? <b>a) *adrenalin hydrochloride</b> b) norepinephrine hydrotartrate c) atropine sulfate d) mesaton e) cephtriaxon</p>
<p>6. During the sensitivity test for benzylpenicillin a patient developed anaphylactic shock. The following preparation must be injected around the spot of antibiotic injection: <b>a). * Adrenaline hydrochloride</b> b). Atropine sulfase c). Propranolol d). Noradrenaline hydrotartrate e). Ceftriaxon</p>
<p>7. During local anaesthetization novocaine solution is usually compounded with solution of adrenaline hydrochloride. What is the purpose of this action? <b>a). * Vasoconstriction</b> b). Vasodilatation c). Decrease in smooth muscle tone d). Algesia reduction e). Increase in smooth muscle tone</p>
<p>8. Epinephrine is used to prolong the effect of novocaine during infiltration anesthesia. What epinephrine action is this effect caused by? <b>A. *Vasoconstriction</b> B. Potentiation of novocaine action at CNS level C. Suppression of nerve endings and conductors functioning D. Vasodilatation E. Suppression of tissue esterases</p>

### 9. Ephedrine hydrochloride

<p>Tests</p>
<p>1. A patient after bee's stings has angioedema (Quincke's edema). Which drug should be immediately injected to eliminate this condition? <b>a). * Epinephrine hydrochloride</b> b). Atropine sulfate c). Sodium chloride d). Platyphyllini hydrotartras e). Anaprilinum</p>
<p>2. A patient suffering from allergic rhinitis was prescribed ephedrine in form of nasal drops. The patient has significantly benefited from nasal instillation, and this stimulated him to use the drug every 2 hours. But under these conditions the drug appeared to be ineffective. What is the most likely cause of this phenomenon? <b>a). * Tachyphylaxis</b></p>

- b). Allergy
- c). Idiosyncrasy
- d). Cumulation
- e). Drug dependence

### 10. Dobutamine

#### Tests

1. To the patient with acute cardiac insufficiency and intolerance to cardiac glycosides. Dobutamine was injected. What is the mechanism of action for this preparation?

- A Stimulation of beta<sub>1</sub>-adrenoreceptors**
- B Stimulation of alpha-adrenoreceptors
- C Blockade of K<sup>+</sup>, Na<sup>+</sup>-ATP-ase
- D Oppressing of activity of phosphodiesterase enzyme
- E Stimulation of M-cholinoreceptors

2. A patient with acute heart insufficiency and cardiac glycosides intolerance got an injection of dobutamine. What is the mechanism of its action?

- a). \*Stimulation of beta<sub>1</sub>-adrenoreceptors**
- b) Stimulation of alpha<sub>1</sub>-adrenoreceptors
- c) Blockade of K<sup>+</sup>, Na<sup>+</sup>-adenosine triphosphatase
- d) Inhibition of phosphodiesterase activity
- e) Stimulation of muscarinic cholinoreceptors

3. Dobutamine has been administered to the 49-year-old-patient with acute cardiac failure and cardiac glycoside intolerance. What is this drug's mechanism of action?

- A. Stimulation of beta<sub>1</sub>-adrenoreceptors**
- B. Stimulation of alpha<sub>1</sub>-adrenoreceptors
- C. Blockade of K<sup>+</sup>, Na<sup>+</sup>-adenosinetriphosphatase
- D. Suppression of phosphodiesterase activity
- E. Stimulation of M-cholinergic receptors

### 11. Clonidine

#### Tests

1. A patient with hypertensive crisis has been given an intravenous injection of **clonidine**. What mechanism underlies the antihypertensive effect of clonidine?

- A Stimulation of presynaptic central alpha<sub>2</sub>-adrenoceptors**
- B Blockade of peripheral alpha<sub>1</sub>-adrenoceptors
- C Blockade of beta-adrenoceptors
- D Blockade of N-cholinergic receptors
- E Direct myotropic effect on blood vessels

### 12. Salbutamol

#### Tests

1. A patient with bronchial asthma takes preparation from the group of beta-adrenergic agonists. Name this preparation.

- A Salbutamol**
- B Doxazozin
- C Aceclidin
- D Atropine sulfate
- E Metoprolol

2. To the patient with bronchial asthma for the removal of attack beta-adrenoceptor agonist was prescribed. Name this preparation.

- A Salbutamol**
- B Adrenaline hydrochloride
- C Droperidol
- D Clofelin
- E Isadrin

<p>3. A woman of 30 years old, with the threat of abortion was injected Salbutamol which reduced contractive activity of myometrium. What is the mechanism of action of this preparation?</p> <p><b>A Stimulation is a beta-2-adrenoreceptors</b></p> <p>B Stimulation of alfa-adrenoreceptors</p> <p>C Blockade is a beta-1- adrenoreceptors</p> <p>D Blockade of monoaminoksidases</p> <p>E Blockade of phosphodiesterases</p>
<p>4. A patient was prescribed a medicine from <math>\beta_2</math>-adrenoceptor agonist to treat bronchial asthma. Choose this medicine:</p> <p><b>a) Salbutamol</b></p> <p>b) Diazepam</p> <p>c) Doxycycline hydrochloride</p> <p>d) Nitroglycerin</p> <p>e) Digoxin</p>
<p>5. A patient who has a bronchial asthma was prescribed salbutamol after which signs of spasm have disappeared. It is connected with the stimulation of:</p> <p><b>a) *<math>\beta_2</math>-adrenoreceptors</b></p> <p>b) <math>\alpha_1</math> – adrenoreceptors</p> <p>c) M - cholinergic receptor</p> <p>d) acetylcholine synthesis</p> <p>e) <math>\beta_1</math> – adrenoreceptors</p>
<p>6. A patient with bronchial asthma was prescribed salbutamol that has led to relief of bronchospasm symptoms. This is associated with stimulation of:</p> <p>a). <math>\beta_1</math>- adrenoreceptors</p> <p><b>b). *<math>\beta_2</math>- adrenoreceptors</b></p> <p>c). <math>\alpha_1</math>- adrenoreceptors</p> <p>d). Acethylcholine synthesis</p> <p>e). Muscarinic cholinoreceptors</p>
<p>7. When fenoterolum for inhaletions is not available in a pharmacy, it can be substituted by the following drug from the group of bronchoselective beta-2-adrenomimetics:</p> <p><b>a)* Salbutamolum</b></p> <p>b) Ephedrinum</p> <p>c) Metacinum</p> <p>d) Euphyllinum</p> <p>e) Isadrinum</p>
<p>8. A patient with bronchial asthma has been administered a drug from the group of beta-adrenergic agonists. Specify this drug:</p> <p>A. Nitroglycerine</p> <p>B. Doxycycline hydrochloride</p> <p><b>C. *Salbutamol</b></p> <p>D. Digoxin</p> <p>E. Diazepam</p>
<p>9. A patient has been diagnosed with bronchial asthma. Specify a medicament that can be administered for asphyxiation:</p> <p><b>A. Salbutamol</b></p> <p>B. Diclofenac sodium</p> <p>C. Paracetamol</p> <p>D. Anapriline</p> <p>E. Acetylcysteine</p>

### 13. Propranolol (Anaprilin)

#### Tests

1. Give an advice to patient with bronchial asthma and diagnosis as hypertensive patient. Specify

<p>hypertonic preparation, which causes side effect to that patient.</p> <p><b>A Propranolol</b>  B Drotaverin  C Prasosin  D Magnesium sulfas  E Lysinopril</p>
<p>2. At the pharmacy a drugstore manager asks a pharmacist: which of the remedy are used for tachyarrhythmia treatment?</p> <p><b>a) Propranolol</b>  b) Enalapril  c) Adrenalin  d) Proserin  e) Atropine</p>
<p>3. To treat extrasystolia nonselective <math>\beta_1</math>, <math>\beta_2</math>-adrenoceptor antagonist was used. What is the name of this medicine?</p> <p><b>a) propranolol</b>  b) atenolol  c) phentolamine  d) prososin  e) reserpine</p>
<p>4. A patient with essential hypertension the drug from nonselective beta-adrenoceptor antagonists was prescribed. Name this preparation:</p> <p><b>A *Anaprilin</b>  B Prazozin  C Prozerin  D Adrenaline hydrochloride  E Labetalol</p>
<p>5. A 60-year-old patient has essential hypertension stage II, coronary disease, bronchial asthma. After pharmacotherapy correction the patient exhibited a bronchospastic attack, intensified dyspnea. What drug provoked this complication?</p> <p><b>a)* Propranolol</b>  b) Salbutamolum  c) Nifedipine  d) Euphyllinum  e) Mucaltinum</p>
<p>6. A 52-year-old patient complains on having increased arterial pressure for a month. She has a 5-year history of bronchial asthma. What group of hypotensive drugs should NOT be recommended to the patient?</p> <p><b>a). * Beta-adrenoreceptor blocade</b>  b). Angotensinic receptors blocade  c) Calcium channel blockers  d) Diuretics  e) Tranquilizers</p>
<p>7. It is required to diminish pump function of patient's heart. This can be done by means of blockers of the following membrane cytoreceptors:</p> <p><b>A. <math>\beta</math>-adrenoreceptors</b>  B. Nicotinic cholinoreceptors  C. Muscarinic cholinoreceptors  D. <math>\alpha</math>-adrenoreceptors  E. Dopamine receptors</p>

#### 14. Metoprolol

#### Tests

<p>1. To a patient with an angina pectoris Metoprolol was prescribed. What pharmacological effect of this preparation is used for treatment of angina pectoris?</p> <p><b>A Antianginal</b>  B Hypotensive  C Antiarhythmical  D Antiaggregatic  E Broncholytic</p>
<p>2. To the patient of 56 years old with ischemia of heart metoprolol was prescribed . What mechanism of beta-adrenoblockers actions used for treatment of on this disease?</p> <p><b>A Decrease of oxygen consumption by myocardium (or increase of oxygen supply to myocardium)</b>  B Increase the requirement of myocardium in oxygen  C Extend coronal vessels  D Diminish tone of peripheral vessels  E Narrow coronal vessels</p>
<p>3. To the patient with hypertension for decrease of blood pressure metoprolol was prescribed. What is mechanism of action of this preparation:</p> <p><b>A Blocking of beta-adrenoreceptors</b>  B Blocking of alfa-adrenoreceptors  C Indirect adrenomimetic action  D Spasmolytic action  E Blocking of angiotensin receptors</p>
<p>4. Hypertensive patient has been prescribed medicine from beta- adrenergic receptor blockers for decrease of blood pressure. Name that medicine/</p> <p><b>A Metoprolol</b>  B Magnesium sulfate  C Enalaprilum  D Potassium losortan  E Reserpine</p>
<p>5. A patient is prescribed metoprolol to treat 20asix2020insion blood pressure has singnificantly reduced. What mechanism of antihypertensive action does this medicine have?</p> <p><b>a) selective blockade of <math>\beta_1</math> – adrenoreceptors;</b>  b) selective blockade of <math>\alpha_1</math> – adrenoreceptors;  c) blockade of angiotensin converting enzyme;  d) suppression of angiotension receptors;  e) suppression of calcium channel</p>
<p>6. A patient with hypertension was administered metoprolol for the arterial pressure reduction. What is its mechanism of action?</p> <p><b>a). * Beta adrenoreceptor blocade</b>  b). Angotensinic receptors blocade  c). Inderect adrenomimetic action  d).Antispasmodic  e). Alfa adrenoreceptor blocade</p>

***Narcotic and Non-narcotic Analgesics, Non-steroidal anti-inflammatory drugs***

**15. Morphine**

<p>Tests</p>
<p>1. A patient has cancer to lungs, which is accompany to sharp pain and cough. What analgetic remedy is reasonable to use?</p> <p><b>a) Morphine hydrochloride</b>  b) Analgine  c) Glaucine  d) Libexin</p>

e) Paracetamol
2. To narcological department a patient was delivered. His diagnosis was morphine dependence. The doctor noted decreasing of morphine pharmacological activity. What is the name for the phenomenon when the effectiveness of drug reduces after repeated introduction? <b>a) get used to drug</b> b) material cumulation c) functional cumulation d) antagonism e) summation

### 16. Promedol (Trimeperidine)

Tests
1. Pregnant woman during childbirth has weak uterine contraction and strong pain symptom. Which drug is it necessary to prescribe in this case? <b>A Promedol</b> B Morphine hydrochloride C Analgin D Diclofenac Sodium E Fentanyl
2. Help a doctor to choose narcotic analgesic which can be used for anaesthetizing of births? <b>A Promedol</b> B Paracetamol C Codeine phosphate D Fentanyl E Analgin
3. Emergency was called to a patient of 45 who has renal colic. Which medicine of 5 narcotic analgesics should one prefer? <b>a) promedol</b> b) morphine c) tramadol d) pentalin e) oxeladin
4. Which one of the drugs listed below is potentially addictive? <b>A. Trimeperidine</b> B. Acetylsalicylic acid C. Naloxone D. Diclofenac sodium E. Paracetamol
5. A woman is to be prescribed a narcotic analgesic for labor pain relief. What drug is indicated in this case? <b>A. Promedol (Trimeperidine)</b> B. Morphine C. Fentanyl D. Papaveretum (Omnopon) E. Codeine

### 17. Naloxone

Tests
1. To emergency department a patient in the comatose state was hospitalized, who had a considerable hypotension, bradycardia, hypothermia, anury, Cheyne-Stokes breathing. A diagnosis is set: poisoning Morphinum. Recommend to a doctor some antagonist of morphinum for the leadthrough of antidotnoy therapy <b>A Naloxone</b> B Pentazocinum

<p>C Nalorfinu hydrochlorid D Kordiamine E Lobeline</p>
<p>2. A patient has acute poisoning by Morphine. What preparation is it needed to use as an antidote? <b>A Naloxone</b> B Lobeline C Bemegride D Atropine sulfate E Unithiol</p>
<p>3. A woman of 25 was injected naloxone to prevent an acute morphine intoxication. Naloxone fastly made her condition better. What is the mechanism of action of this medicine? <b>a) blockade of opioid receptors</b> b) blockade of GABA's receptors c) blockade of serotonin receptors d) blockade of dopamine receptors e) blockade of benzodiazepine receptors</p>
<p>4. What is remedy should be used in case of narcotic analgetic overdose as an antidote to stop respiratory center depression? <b>a) Naloxone</b> b) Cordiamin c) Etymisol d) Camphor e) Paracetamol</p>
<p>5. Explain to your pharmacist – colleague. What indications does naloxone have? <b>a) acute narcotic analgesic poisoning</b> b) heavy metal poisoning c) cardiac glycoside poisoning d) ergot alkaloid poisoning e) atropine sulfate poisoning</p>
<p>6. A 25-year-old woman presenting with acute morphine intoxication was given an injection of naloxone that caused rapid improvement of her condition. The mechanism of action of this preparation is based on the block of the following receptors: <b>a)* Opioid receptors</b> b) Serotonin receptors c) GABA- receptors d) Dopamine e) Benzodiazepine receptors</p>
<p>7. A patient presents with morphine intoxication. Which drug should be injected as an antidote? A. Unithiol <b>A. Naloxone</b> B. Lobeline hydrochloride C. Atropine sulphate D. Ibuprofen E. Bemegride</p>
<p>8. What naloxone indications are there? <b>A. *Narcotic analgetics acute poisoning</b> B. Heavy metals poisoning C. Cardiac glycosides poisoning D. Ergot alkaloids poisoning E. Atropine sulphate poisoning</p>
<p>9. What are the indications for the use of naloxone? <b>A. Acute intoxication with narcotic analgesics</b></p>

<p>B. Heavy metal intoxication  C. Intoxication with cardiac glycosides  D. Intoxication with ergot alkaloids  E. Atropine sulfate intoxication</p>
<p>10. A 25-years-old woman with signs of acute morphine intoxication was administered naloxone, which rapidly improved her condition. What is the mechanism of action of this drug?</p> <p>A. Dopamine receptor blockade  B. <b>Opioid receptor blockade</b>  C. GABA receptor blockade  D. Benzodiazepine receptor blockade  E. serotonin receptor blockade</p>

### 18. Paracetamol

Tests
<p>1. You are an employee of pharmacy storage. By entry into the list of new preparations in a computer database specify to what pharmacological group paracetamol belongs to.</p> <p>A <b>Nonnarcotic analgesic</b>  B Sleeping-pills  C Diuretic agents  D Hypotensors  E Antianginal drugs</p>
<p>2. The child of 10 years old with an acute respiratory viral disease was prescribed <b>paracetamol</b> for decrease of fever. What type of pharmacotherapy is it?</p> <p>A <b>Symptomatic</b>  B Etiotropic  C Nosotropic  D Adaptation  E Substitutive</p>
<p>3. Patient consulted a pharmacist. He had a gastric ulcer and headache. Which of analgetics is the best for the patient?</p> <p>a) <b>Paracetamol</b>  b) Acetylsalicylic acid  c) Indometacin  d) Diclofenac sodium  e) Ibuprofen</p>
<p>4. Majority of non-narcotic analgesics have also anti-inflammatory and antipyretic effects. Which of the remedy does not have anti-inflammation effect?</p> <p>a) <b>Paracetamol</b>  b) Diclofenac sodium  c) Acetylsalicylic acid  d) Indometacin  e) Celecoxib</p>
<p>5. A child who has a respiratory disease was prescribed paracetamol to reduce hyperthermia. What pharmacological group does this medicine belong to?</p> <p>a) <b>nonnarcotic analgetic</b>  b) antihypertensive drug  c) antiacid  d) diuretic agent  e) antitussive drug</p>
<p>6. You are pharmacist at a drugstore. Offer an equivalent for temporary unavailable paracetamol.</p> <p>a) <b>panadol</b>  b) aspirin  c) analgin</p>

d) pyroxicam e) celecoxib
7. You are employed in a pharmaceutical storehouse. When adding newly received preparations to the computerized database, specify the pharmacological group of paracetamol: <b>a). * Nonnarcotic analgetic</b> b). Antianginal drug c). Hypnotic d).Diuretic e). Hypotensive drug
8. A 26-year-old pregnant woman (III trimester of pregnancy) complains about body temperature rise up to 39 °C. What febrifuge may be recommended in this case? <b>a)* Paracetamol</b> b) Indometacin c) Diclofenac d) Aspirin e) Analgin
9. Mother of a 2-month-old child came to a pharmacy and asked for a febrifuge. What drug should be recommended for the child? <b>a)* Paracetamol</b> b) Acetylsalicylic acid c) Nimesulide d) Indometacinum e) Diclofenac sodium
10. A woman in the III trimester (pregnancy has an acute respiratory viral disease accompanied with body temprature rise up to 39. Which of the drugs should be recommended? A. Acetylsalicylic acid <b>B. Paracetamol</b> C. Indomethacin D. Diclofenac sodium K. Celecoxib
11. The student with cold has been prescribed antipyretic medicine. Name this medicine. <b>A. *Paracetamol</b> B. Ascorbic acid C. Oxytocin D. Famotidine E. Cyanocobalamin
12. Paracetamol belongs to the following pharmacological group A. Soporifics B. Antianginal group C. Diuretics D. Hypotensive drugs E. <b>Nonnarcotic analgetics</b>
13. A patient with headache consulted a pharmacist. The patient was prescribed a cyclooxygenase inhibitor-an aminophenol derivative. What drug was prescribed? A. Acetylsalicylic acid B. Ibuprofen C. Ketorolac D. Diclofenac E. <b>Paracetamol</b>

### 19. Diclofenac sodium

Tests
1. For a patient of 55 years old on the 4th day of treatment with diclofenac sodium there was the

gastric bleeding as a result of gastric ulceration. What is the ulcerogenic effect of preparation related to? <b>A Diminishing of formation of prostaglandin E<sub>2</sub></b> B Diminishing of formation of leucotriens C Blocking of of phosphodiesterase enzyme D Diminishing of formation of red blood cells E Diminishing of formation of leucocytes
2. Answer the patient's question, what contraindication Sodium diclofenac has? <b>A gastric ulceration</b> B bronchitis C angina pectoris D diabetes mellitus E high blood pressure
3. What is elementin mechanism of sodium diclofenac action? <b>A Blocks COX-2</b> B Activation of phosphodiesterases synthesis C Inhibition cholinesterase D Activation adenilatcyclases E Depression of phosphodiesterase
4. Patient's diagnosis is ankylosing spondylitis. The doctor prescribed him nonsteroid antiinflammatory medicine - diclofenac sodium. Point out the mechanism of analgesic action of th-ag-nt. <b>a) blockade of COX-1and2</b> b) blockade of COX - 2 c) blockade of phosfolipase A <sub>2</sub> d) blockade of opioid receptors e) -tim-lation of opio25asix2525ine25cy
<b>5. A patient has been taking diclofenac sodium for a long time. The family physician withdrew this drug and administered celecoxib. What disease was the reason for the drug substitution?</b> <b>A. Peptic ulcer</b> B. Bronchial asthma C. Urolithiasis D. Arterial hypertension E. Chronic hepatitis
23. A doctor has prescribed a nonsteroidal anti-inflammatory drug to relieve inflammatory and pain syndrome. Name this drug <b>A. Diclofenac sodium</b> B. Glibenclamide C. Loratadine D. Prednisolone E. Calcium chloride

## 20. Acetylsalicylic acid

Tests
1. Find in your pharmacy drug for treatment headache also hawing antiagregant effect. <b>A Acetylsalicylic acid</b> B Codeine phosphate C Promedol D Tramadol E Fentanyl
2. To a patient after the acute cardiac infarction a doctor recommend used acetylsalicylic acid during 3-4 months. What effect acetylsalicylic acid is used in such f case. <b>A Antiagregant</b>

<p>B Antipiretic C Analgesic D Antiinflammatory E Spasmolytic</p>
<p>3. It was prescribe acetylsalicylic acid for 100 mg one for day to patient who has got myocardial infarction. What kind of aspirin effect did doctor expect?</p> <p><b>A antiaggregant</b> B against inflammation C antipyretic action D analgesic E vasodilatory action</p>
<p>4. What effect expects a doctor, when prescribing Aspekard (acetylsalicylic acid) - to a patient who a) has CHD (coronary heart disease)</p> <p><b>b) antiaggregan–</b> c)–analgetic d) antipyretic e) anti – inflammation f) cholagogic</p>
<p>5. What a pharmacological effect of acetylsalicylic acid allows to use it for prevention of thromboses when one has coronary heart disease.</p> <p><b>a) antiaggregant</b> b) analgesic c) anti-fever d) ulcerogenic action e) antiinflammatory</p>
<p>6. To prevent thrombosis combineol to angina pectoris a medicine from nonsteroid anti – inflammatory group was prescribed.</p> <p><b>a) aspirin</b> b) ibuprofen c) pyroxicam d) mefenamic acid e) indometacin</p>
<p>7. Which of the below-listed drugs is used for thrombolytic therapy in case of myocardial infarction?</p> <p><b>a). * Acetylsalicylic acid</b> b). Ticlopidine c). Streptokinase d).Phenylinum e). Heparinum</p>
<p>8. A patient consults a pharmacist about taking acetylsalicylic acid as an antiaggregant. What is the daily dose that should be recommended for continuous use?</p> <p>A. 1,0-2,0 g B. 0,5-1,0 g C. Over 4,0 g D. 2,0-3,0 <b>E. 0,1-0,3 g .</b></p>
<p>9. A 52-years old patient had myocardial infarction and was discharged from the hospital after the stationery treatment. What daily dose of acetylsalicylic acid should be administered in order to prevent thrombosis?</p> <p><b>A. 100 mg</b> <b>B. 50 mg</b> <b>C. 1000 mg</b></p>

<p><b>D.</b> 200 mg <b>E.</b> 500 mg</p>
<p>10. A patient with stenocardia has been administered acetylsalicylic acid for: <b>A Antiplatelet effect</b> B Inhibition of blood fibrinolytic activity C Aggregate effect D Anti-inflammatory effect E Increase in blood fibrinolytic activity</p>
<p>11. A female patient asked a pharmacist to recommend her a drug for headache with antiplatelet effect. Specify this drug: <b>A. Acetylsalicylic acid</b> B. Codeine phosphate C. Promedol D. Tramadol E. Fentanyl</p>

### 21. Celecoxib

Tests
<p>1. A 40-year-old female patient was diagnosed with rheumatoid arthritis; She has also a history of stomach ulcer. What drug from the group of nonsteroid anti-inflammatory drug may be recommended this patient? <b>a)* Celecoxib</b> b) Aspirin c) Mefenamic acid d) Indometacin e) Diclofenac</p>
<p>2. It is necessary to prescribe non-steroid anti-inflammatory drug for patient with rheumatoid arthritis and concomitant duodenal ulcer. Which drug is the drug of choice in this case? <b>a)*celecoxib</b> b) acetylsalicylic acid c) paracetamol d) analgin e) diclofenac sodium</p>
<p>3. Which anti-inflammatory drug is the less harmful for the stomach and can be recommended to a patient with exacerbation of rheumatoid arthritis? <b>a). * Celecoxib</b> b). Diclofenac sodium c). Ibuprofenum d).Indometacinum e). Acetylsalicylic acid</p>
<p>4. A 57-year-old female patient was diagnosed with rheumatoid arthritis; she has also a history of stomach ulcer. What drug from the group of nonsteroid anti-inflammatory drugs may be recommended this patient? A. Indometacin B. Diclofenac <b>C. Celecoxib</b> D. Aspirin E. Mefenamic acid</p>
<p>5. The patient with rheumatoid arthritis and concomitant duodenal ulcer has to be prescribed nonsteroid antiinflammatory drug. Which one of the drugs listed below is a drug of choice in the given case? <b>A. Celecoxib</b> B. Acetylsalicylic acid</p>

- C. Paracetamol
- D. Metamizole
- E. Diclofenac sodium

## 22. Meloxicam

### Tests

1. A pharmacy received new generation nonsteroid anti-inflammatory drug "meloxicam" that mainly blocks cyclooxygenase-2. What advantages does this preparation have in comparison with other nonsteroid anti-inflammatory drug?
- a)\* **Minimal side effect on alimentary tract**
  - b) Evident myospasmolytic action
  - c) Interferonogenic properties
  - d) Significant inhibition of protease activity
  - e) Minimal side effect on hematogenesis

## 23. Piroxicam

### Tests

1. Which of the following non-steroid anti-inflammatory agents has the least harmful effect on the mucosa of the gastrointestinal tract?
- A. Acetylsalicylic acid
  - B. Piroxicam**
  - C. Indomethacin
  - D. Diclofenac
  - E. Nimesulide

## 24. Indometacine

### Tests

1. On the 4th day of treatment with indometacin a 55-year-old patient developed gastrorrhagia as a result of mucosa ulcer. Ulcerogenic effect of this drug is explained by the lowered activity of the following enzyme:
- a). **\*Cyclooxygenase-1 (COX-1)**
  - b). Prostacyclin sintetaza
  - c). Tromboxanetin sintetaza
  - d). Cyclooxygenase-2 (COX-2)
  - e). Lipooxygenase (LOG)

## 25. Nimesulide

### Tests

1. Which of the following non-steroid anti-inflammatory agents has the least harmful effect on the mucosa of the gastrointestinal tract?
- A. Nimesulide**
  - B. Indomethacin
  - C. Piroxicam
  - D. Diclofenac
  - E. Acetylsalicylic acid

## *Medicines suppressing and stimulating the central nervous system*

## 26. Diazepam

### Tests

1. To the patient who is suffering of a neurosis with anxiety and fear a doctor prescribed diazepam. What pharmacological effect of preparation allows to use it for treatment of this disease?
- A anxiolytic**
  - B antiarrhythmic
  - C antiinflammatory
  - D hypotensive
  - E antianginal

<p>2. To the patient with a neurosis a tranquilizer was prescribed, which is derivative of benzodiazepines. Name this preparation.</p> <p><b>A Diazepam</b>  B Atropine sulfate  C Pyroxicam  D Paracetamol  E Cyclodolol</p>
<p>3. Woman asked to doctor with high irritability, restlessness sensibility. Patient was prescribed medicine from tranquil29asix2929ine29c</p> <p><b>A Diazepam</b>  B Caffeine  C Aminazine  D Amitriptyline  E Tramadol</p>
<p>4. Due to what pharmacological effect is diazepam used to treat neurosis?</p> <p><b>a) anxiolytic effect</b>  b) analgesic effect  c) diuretic effect  d) antipyretic effect  e) antidepressant effect</p>
<p>5. Fear, psychic tension made it possible to select medicine which reduces these symptoms in patient who has neurosis.</p> <p><b>a) diazepam</b>  b) lithium carbonate  c) sydnocarb  d) nootropil  e) caffeine</p>
<p>6. A patient of 30 has somnopathy and disequilibrium psychoemotional sphere was prescribed diazepam. What is the cause of psychosedative effect of the medicine?</p> <p><b>a) activation of GABA's system</b>  b) limbic system inhibition  c) reticular formation inhibition  d) reduction number of noradrenaline in the CNS  e) opioid receptor inhibition</p>
<p>7. A patient suffering from neurosis accompanied by anxiety and fear was prescribed diazepam. What pharmacological effect makes it possible to apply the drug for this disease treatment?</p> <p><b>a). * Anxiolytic</b>  b). Hypotensive  c). Antiarrhythmic  d). Antianginal  e). Anti-inflammatory</p>
<p>8. A 30-year-old patient with a sleep disorder and psychoemotional disbalance had been administered diazepam. What is the mechanism of its psychosedative action?</p> <p><b>a) activation of GABAergic system</b>  b) inhibition of limbic system  c) inhibition of reticular formation  d) reduction of noradrenaline amount in the CNS  e) inhibition of opioid receptors</p>
<p>73. What group of drugs is characterized by development of drug addiction as a side effect?</p> <p>A. Diuretics  B. Cholinergic antagonists  C. Emetics</p>

D. Psychosedatives

E. Adrenergic drugs

### 27. Droperidol

#### Tests

1. A doctor-anaesthetist should perform an operation with using neuroleptanalgesia. What drug combinations should be used in this case?

**A Fentanil with droperidol**

B Droperidolum with prednisolone

C Fentanil with diazepam

D Diazepam with aminazine

E Promedol with amitriptilin

2. A patient is in special care ward because of myocardial infarction. Acute pain syndrome makes the doctor to use neuroleptanalgesia. What neuroleptic is used in this case of anaesthesia?

**a) droperidol**

b) corlicon

c) lozartan

d) tramadol

e) amitriptyline

3. An anaesthesiologist has to do an operation under neuroleptanalgesia. Which of the following drug combinations should be used in this case?

A. Diazepam with aminazine

B. Fentanyl with diazepam

C. Droperidol with prednisolone

**D. Fentanyl with droperidol**

E. Promedol with amitriptilin

4. Neuroleptanalgesia has been applied in the case of cardiac infarction. What neuroleptic is the most often applied along with fentanyl?

A. Perphenazine (Aethaperazinum)

B. Clozapine

C. Levomepromazine

**D. Droperidol**

E. Sulpiride

### 28. Nitrazepam

#### Tests

1. A woman suffering on a neurosis sleeps badly. What preparation is better to use for treatment of insomnia?

**A Nitrazepamum**

B Phenobarbital

C Sodium pentobarbital

D Bromisovalum

E Tincture of valerian

2. A man of 55 years old complains of insomnia, excitement, restless. What drug should be prescribed in this case?

**A Nitrazepam**

B Aminazine

C Triftazine

D Droperidol

E Amitriptilin

3. A woman after the carried stress sleeps badly. What hypnotic preparation is better to prescribe for treatment of insomnia?

**A Nitrazepam**

B Phenobarbital

<p>C Chloralhydrate D Aminazine E Barbitol</p>
<p>4. Choose a sleeping draught for a patient who has sleep disturbance caused by neurosis – like state, high petulance. <b>a) Nitrazepam</b> b) Phenobarbital c) Zopiclon d) Metaqvalon e) Zolpidem</p>
<p>5. A woman suffering from neurosis has disturbed sleep. What drug is optimal for insomnia treatment? A. Bromisoval B. Phenobarbital <b>C. Nitrazepam</b> D. Aethaminalum-natrium (Pentobarbital) E. Valerian tincture</p>

### 29. Phenazepam

<p>Tests</p>
<p>1. A patient who has been taking phenazepam for a month came to a pharmacy. He insisted on buying another two packs of this drug. According to the patient, he feels unwell without phenazepam. What is the mechanism of the developed side effect? <b>a)* Addiction (Drug dependence)</b> b) Absorption process reduction c) Idiosyncrasy d) Cumulation e) Aftereffect syndrom</p>

### 30. Phenobarbital

<p>Tests</p>
<p>1. A patient suffering from epilepsy has taken Phenobarbital for a long time and developed drug tolerance. What is the mechanism of this phenomenon development? <b>a)* Accelaration of biotransformation</b> b) Substances accumulation in the body c) Absorption process reduction d) Inhibition of biotransformation e) Receptor's sensitivity enhancement</p>
<p>2. A patient who has taken phenobarbital for a long time was prescribed diclofenac sodium. However the anti-inflammatory effect of diclofenac appeared to be less than expected due to the pharmacokinetic interaction of these drugs. Such interaction might be the result of the following processes: A. Change of receptor sensibility B. Delerated drug metabolism in liver <b>C. Accelerated drug metabolism in liver</b> D. Reduced protein concentration in plasma E. Increased drug dosage</p>
<p>3. Certain drugs can stimulate liver to synthesize enzyme systems taking part in drugs and toxines metabolism. What compound stimulates drug metabolism in liver 31asix31mes. <b>A. Phenobarbital</b> B. Heparin C. Aspirin D. Menadione sodium bisulfite E. Sulfanilamide</p>

4. Due to prolonged taking of phenobarbital the epileptic patient has developed tolerance for this drug. What is this phenomenon based on?

- A. **Biotransformation acceleration**
- B. Absorption process weakening
- C. Increase of receptor sensitivity
- D. Biotransformation suppression
- E. Substance accumulation in body

### 31. Sodium valproate

#### Tests

1. A child who has epilepsy takes sodium valproate. What mechanism of action has this medicine?

- a) **GABA accumulation**
- b) blockade of benzodiazepine receptors
- c) blockade of  $\text{Ca}^{2+}$  canals
- d) blockade of  $\text{K}^{+}$  canals
- e) reduction activity of GABA

2. A woman, who during the 5th-10th weeks of her pregnancy had been taking sodium valproate for treatment of epilepsy, gave birth to a child with pathology of the vertebral column (split spine). What side effect of the drug caused such malformation?

- A. Sensitizing
- B. Fetotoxic
- C. Mutagenic
- D. Embryotoxic
- E. **Teratogenic**

### 32. Levodopa

#### Tests

1. A patient with Parkinson's disease was prescribed preparation affecting the dopaminergic system. Name this preparation:

- A **Levodopa**
- B Zopiclon
- C Droperidol
- D Aminazine
- E Lorazepam

2. To a patient with parkinsonism for the removal of muscular rigidity the dopaminergic drug was prescribed. Name this preparation.

- A **Levodopa**
- B Aminazine
- C Paracetamol
- D Scopolamine hydrobromide
- E Atropine sulfate

3. What preparation should be prescribed to treat Parkinson's disease?

- A **Levodopa**
- B Nitrazepam
- C Aminazine
- D Proserin
- E Morphin

4. The patient with parkinsonism has been prescribed a drug – dopamine precursor - to relieve muscular rigidity. Name this drug.

- A. **Levodopa**
- B. Aminazine
- C. Paracetamol
- D. Scopolamine hydrobromide
- E. Atropine sulphate

### 33. Aminazine (Chlorpromazine)

#### Tests

<p>1. For a woman of 58 years old, that is on treatment in a psychiatric department after the injection of the prescribed preparation a blood pressure decreased very much. Which preparation may cause this reaction?</p> <p><b>A Aminazine</b> B Caffeine- Sodium benzoate C Imizinum D Amitriptilin E Adrenaline hydrochloride</p>
<p>2. To the patient with a psychosis, it was prescribed neuroleptic with a psychosedative effect. What preparation is it?</p> <p><b>A Aminazine</b> B Diazepam C Caffeine Sodium benzoate D Nitrazepam E Aethymizol</p>
<p>3. To stop the delirium and hallucinations in a schizophrenic patient a doctor used aminazine. What is the mechanism of antipsychotic action of this medicine?</p> <p><b>a) inhibition of dopaminergic processes in the CNS</b> b) stimulation of adrenergic and dopamine processes in CNS c) stimulation of cholinergic processes in CNS d) blockade of cholinergic processes in CNS e) inhibition of MAO</p>
<p>4. A patient who has schizophrenia is prescribed neuroleptic. Which of medicines listed belongs to this group?</p> <p><b>a) aminazine</b> b) celecoxib c) propranolol d) promedol e) pyracetam</p>
<p>5. You are the pharmacist taking an intership. When taking a test choose from pharmacological effect listed that allows to use aminazine to treat psychosis.</p> <p><b>a) antipsychotic</b> b) hypothermic c) antiinflammatory d) antiemetic e) spasmolytic</p>
<p>6. A patient that has d33asix3333ine33cy33orycribed an antipsychotic agent. What is the name for this medicine?</p> <p><b>a) aminazin</b> b) diazepam c) ciclodol d) caffeine e) phenobarbital</p>
<p>7. A patient with schizophrenia has been administered a neuroleptic. Which of the listed drugs fall into this group?</p> <p><b>a) Aminazine</b> b) Pyracetam c) Propranolol d) Celecoxib e) Morphine</p>

### 34. Caffeine sodium benzoate

#### Tests

1. A diagnosis is a migraine. Doctor prescribed preparation from the group of purines. What preparation was prescribed to a patient?

**A Caffeine-benzoate Sodium**

B Phenazepamum

C Theophyllum

D Pentocxyphyllin

E Dimedrol

2. What reasonable rout of administration for sodium caffeine benzoate should one choose to treat migraine? Select from the listed below.

**a) peroral**

b) intra-arterial

c) inhalation

d) transdermal

e) rectal

### 35. Amitriptyline

#### Tests

1. A patient with depression has been administered a drug from the group of tricyclic antidepressants. Specify this drug:

**A. Amitriptyline**

B. Phenazepam

C. Caffeine

D. Aminalonum

E. Droperidol

2. Antidepressants can increase the concentration of catecholamines in the synaptic cleft. What is the mechanism of action of these drugs?

**A. Inhibition of monoamine oxidase**

B. Activation of monoamine oxidase

C. Inhibition of xanthine oxidase

D. Activation of acetylcholinesterase

E. Inhibition of acetylcholinesterase

3. Inhibitors of one of the amides metabolism enzymes are used to treat depression. What enzyme inhibition has such an effect?

**A. Flavin adenine dinucleotide (FAD)-containing monoamine oxidase (MAO)**

B. Acetylcholinesterase

C. Formylkynureninase (Arylformamidase)

D. Kynurenine 3-hydroxylase

E. Lactate dehydrogenase

### 36. Pyracetam

#### Tests

1. After a craniocerebral trauma a patient was administered pyracetam. This drug related to the following pharmacological group:

**a). \* nootropic agent**

b). tranquilizers

c). nonnarcotic (nonopioid) analgetic

d). anesthetic agent

e). neuroleptic

### *Medicines affecting the respiratory system*

### 37. Acetylcysteine

#### Tests

<p>1. Advise to a patient with a acute bronchitis mucolytic preparation which relieves expectoration.</p> <p><b>A Acetylcysteinum</b>  B Glaucin  C Loratidin  D Diclofenac sodium  E Drotaverine hydrochloride</p>
<p>2. A mucolytic drug was prescribed for treatment patient with a acute bronchitis. Name this preparation.</p> <p><b>A Acetylcystein</b>  B Glaucin  C Codeine phosphate  D Aethimizol  E Bemegrade</p>
<p>3. A patient has chronic bronchitis and cardiovascular insufficiency, which need long term application of expectorant drugs and hearty glycosides. What artificial sulfur containing mucolytic should one choose for relief (prevention) of possible intoxication which could be caused by hearty glycosides?</p> <p><b>a) Acetylcysteine</b>  b) Bromheksin  c) Ambroksol  d) Lazolvam  e) Myckaltin</p>
<p>4. Recommend a patient with acute bronchitis a mucolytic drug that facilitates expectoration:</p> <p><b>A. Acetylcysteine</b>  B. Loratadine  C. Drotaverine hydrochloride  D. Diclofenac sodium  E. Glaucine</p>
<p>5. A patient with symptoms of chronic bronchitis has been administered acetylcysteine. What is the mechanism of its expectorant action?</p> <p><b>A. Depolymerization of sputum mucopolysaccharides</b>  B. Stimulation of adrenergic receptors  C. Inhibition of cough center  D. Stimulation of respiratory center  E. Anesthesia of respiratory mucosa</p>

### 38. Glaucin

Tests
<p>1. A 34-year-old patient suffering from bronchitis was prescribed an antitussive drug of central action. What drug is it?</p> <p><b>A *Glaucin</b>  B Corglycon  C Enalapril  D Furosemide  E Fercoven</p>
<p>2. A patient has acute laryngotracheitis and dry, unproductive cough which exhausts him much. An anticough is prescribed. Define this medicine.</p> <p><b>a) *Glaucin</b>  b) Ambroksol  c) Acetylcystain  d) Mycaltin  e) Infusion from grass Thermopside</p>
<p>3. Selling <b>glaucine hydrochloride</b> to a patient who has chronic bronchitis about what side effect</p>

<p>should you warn him?</p> <p>a) <b>*reduction of central blood pressure;</b></p> <p>b) stimulation of central nervous system;</p> <p>c) abnormalities of cardiac rate;</p> <p>d) increase of ocular pressure;</p> <p>e) allergic reactions</p>
<p>4. Advise family doctor what plant origin antitussive drug is better to prescribe to a patient who has dry cough, rised blood pressure.</p> <p>a) <b>*glaucine</b></p> <p>b) libexen</p> <p>c) bromhexine</p> <p>d) ambroxol</p> <p>e) oxeladin</p>
<p>5. A patient with chronic bronchitis wants to buy glaucine hydrochloride at a pharmacy. What typical side effect of the drug shoud the patient be warned about?</p> <p>A. <b>*Drop of arterial pressure</b></p> <p>B. Allergic skin rash</p> <p>C. Rise of intraocular pressure</p> <p>D. Irregular heartbeat</p> <p>E. Excitation of the central nervous system</p>
<p>6. A patient with chronic bronchitis gets glaucine hydrochloride at a pharmacy. The patient must be warned about the following typical side effect of this drug?</p> <p>A. <b>*Arterial pressure drop</b></p> <p>B. Increased intraocular pressure</p> <p>C. Irregular heartbeat</p> <p>D. Excitation of the central nervous system</p> <p>E. Allergic skin rash</p>
<p>7. A pharmacy dispenses glaucine hydrochloride to a patient with chronic bronchitis. The patient must be warned about the following typical side effect of the drug:</p> <p>A <b>*Blood pressure fall</b></p> <p>B Excitation of the central nervous system</p> <p>C Arrhythmia</p> <p>D Rise of intraocular pressure</p> <p>E Allergic skin rash</p>
<p>8. Pharmacy sells glaucine hydrochloride to the patient with chronic bronchitis. What common side effect should he be warned about?</p> <p>A. <b>*Decrease of arterial pressure</b></p> <p>B. Excitation of central nervous system</p> <p>C. Disruption of cardiac rate</p> <p>D. Increase of intraocular pressure</p> <p>E. Allergic skin rashes</p>
<p>9. What non-narcotic centrally-acting antitussive drug can be used for dry cough?</p> <p>A. <b>Glaucine</b></p> <p>B. Codeine</p> <p>C. Acetylcysteine</p> <p>D. Ambroxol</p> <p>E. Mucaltinum</p>

### 39. Ambroxol

#### Tests

<p>1. A 46-year-old patient suffering from chronic bronchitis came to a pharmacy. What expectorative drug may be recommended?</p> <p>a). <b>* Ambroxol</b></p>
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- b). Falimint
- c). Libexin
- d). Glauvent
- e). Salbutamol

#### 40. Theophylline

##### Tests

1. A 67-year-old patient who undergoes treatment for bronchial asthma presents with limb tremor, headache, insomnia, extrasystole. What drug might have caused such symptoms?

- a). \* **Theophylline**
- b). Tavegyl
- c). Acetylcysteine
- d). Prednisolone
- e). Intal

#### 41. Cromoline sodium

##### Tests

1. Which of the following is the drug of choice for bronchial asthma attacks prevention?

- a)\* Cromolyn sodium
- b) Dyphenhydramine hydrochloride
- c) Salbutamol
- d) Ambroxol
- e) Drotaverine

### *Cardiotonic medicines*

#### 42. Digoxin

##### Tests

1. A patient with stagnant chronic cardiac insufficiency a doctor prescribed cardiotonic agent from the group of foxglove containing drug, which is produced in ampoules and pills. What preparation is it?

- A Digoxin**
- B Strophanthin
- C Korglycon
- D Digitoxinum
- E Dobutaminum

2. A man of 60 that suffers on chronic cardiac insufficiency, with complaints about tahyarrhythmia came to the pharmacy. Name preparation for rhythm correction.

- A Digoxin**
- B Riboxin
- C Spironolactonum
- D Acetylsalicylic acid
- E Asparkam

3. To a patient with chronic cardiac insufficiency it was prescribed as cardiac glycoside from the group of foxglove containing drug. Name this preparation.

- A Digoxin**
- B Strophanthin
- C Cardiovalen
- D Korglykon
- E Cordiamin

4. Patient with chronic cardiac failure was prescribed digoxin. What kind of side effect this medicine has?

- A Bradyarrhythmia**
- B Hyperpotassemia
- C Ototoxicity

D Hydruria E Dermatitis
5. Pharmacy visitor by following his prescription to treat chronicle impaired cardial function has bought digoxin and asparkam. Explain visitor meaning of such kind of combination. <b>A For the prophylaxis of kaliopenia</b> B For the increase of content of ions of calcium C For warning of giponatriemii D For strengthening of cardioactive action of digoksin E For the acceleration of digitalization
6. A patient who has chronic heart failure was prescribed a cardiac glycoside from a foxglove medication group. What is the name of this medication? <b>a) digoxin</b> b) lysinopryl c) dobutamine d) furosemide e) phebophibrat
7. A patient with chronic heart failure was prescribed a cardiotonic with middle-term effect. <b>a) digoxin</b> b) athenolol c) strophanthine d) verapamil e) nitroglycerine
8. A patient suffering from chronic cardiac insufficiency was prescribed a cardiac glycoside from the group of foxglove (Digitalis) drug. What drug is it? <b>a). * Digoxin</b> b). Strophanthine c). Cardiovalen d). Corglycon e). Corvalol
9. A 67-year-old patient with chronic heart failure takes digoxin. In order to reduce its side effects the patient's doctor recommended to combine it with the followig drug: <b>A *Pan'ngin</b> B Calcium gluconate C Euphyllinum D Hydrochlorthiazide E Calcium chloride

#### 43. Digitoxin

Tests
1. During digitoxin therapy for chronic cardiac insufficiency, a patient developed signs of intoxication with this preparation. The patient was prescribed unithiol action on case of intoxication with cardiac glycosides? <b>a)* Reduction of K<sup>+</sup>, Na<sup>+</sup> - adenosine triphosphatase</b> b) Binding of glycoside into the complex compound c) Increase of sodium concentration in the cardiomyocytes d) Increased Iotalsium permeability in the cardiomyocytes e) Biding of calcium ions

#### 44. Corglycon

Tests
1. After extraction of tooth a patient had acute cardiac insufficiency. What preparation should be injected? <b>A Corglycon</b> B Bemegrade

<p>C Aethimizol D Cavinton E Pyracetam</p>
<p>2. To a holiatry of a patient who has cardiopulmonary decompensation and increasing symptoms of pulmanary edema was prescribed a powerful cardiotoxic agent of a short – term effect. <b>a) corglicon</b> b) propranolol c) dipiridamol d) athenolol e) nitroglycerine</p>
<p>3. A patient has an acute cardiovascular insufficiency. Choose a cardiac glycosides with the fastest cardiotoxic effect. <b>a) Corlicon</b> b) Digitoxin c) Digoxin d) Celanid e) Adonisid</p>
<p>4. Choose the most efficient way of convallariae glycoside administration for acute cardiac failure treatment. <b>A. Intravenous</b> B. Intramuscular C. Subcutaneous D. Internal E. Inhalational</p>
<p>5. What drug should be administered in case of acute cardiac insufficiency? A. Naloxone B. Pilocarpine hydrochloride C. <b>Corglycon</b> D. Heparin E. Salbutamol</p>

### **Anti-anginal, anti-arithmetic medicines**

#### **45. Nitroglycerine**

Tests
<p>1. For rapid relief of symptoms of stenocardia a patient takes nitroglycerine in capsules. What is the most rational rout administration for this preparation? <b>A Sublingual</b> B Oral C Rectal D Inhalation E Hypodermic</p>
<p>2. A patient who has ischemic heart disease was prescribed a sublingual medication to suppress a stenocardia attack. Point on this medication. <b>a) nitroglycerine</b> b) corglycon c) isosorbide mononitrate d) lysinopril e) amiodaron</p>
<p>3. Which of medicines listed below in case of sublingual usage up spress fastly anginal attack? <b>a) Nitroglycerine</b> b) Digoxin c) Amyodaron d) Lysinopro39asix39Corglycon</p>

<p>4. A man of 50 had anginal attack. A doctor advised him to put a nitroglycerine pill sublingually. Why is it recommended to use nitroglycerine sublingually?</p> <p><b>a) action starts much faster;</b>  b) activated by saliva;  c) ruined by gastric juice;  d) is badly absorbed in bowels;  e) is fastly biotransformed in liver</p>
<p>5. In order to arrest stenocardia attacks a patient takes nitroglycerin capsules. What is the rational way of the drug introduction?</p> <p><b>a)* Sublingual</b>  b) Hypodermic  c) Inhalation  d) Rectal  e) Peroral</p>
<p>6. After an emotional stress a 60-year-old patient presented with chest pain irradiating to the left arm. Specify a drug that relieves pain in this case:</p> <p><b>A. Nitroglycerine</b>  B. Propranolol  C. Metoprolol  D. Diltiazem  E. Nifedipine</p>
<p>7. Which of the drugs listed below quickly arrests angina pectoris attack when taken sublingually?</p> <p><b>A. Nitroglycerine</b>  B. Digoxin  C. Amiodarone  D. Lisinopril  E. Convallariae glycoside</p>

#### 46. Isosorbide mononitrate

Tests
<p>1. To the patient suffering on the attacks of stenocardia drug from group of nitrates prescribes. Name this preparation</p> <p><b>A Isosorbide mononitrate</b>  B Diazepam  C Aminazine  D Levodopa  E Prozerin</p>
<p>2. Advise a patient who comes at your drugstore a medication for anginal attack prevention.</p> <p><b>a) isosorbide mononitrate</b>  b) corglycon  c) diltiazem  d) diazepam  e) magnesium sulfate</p>
<p>3. After a long-term intake of isosorbide to prevent anginal attack a patient noticed significant effect of the drug. What is the name for this phenomenon.</p> <p><b>a) tolerance</b>  b) cumulation  c) physical dependence  d) allergy  e) potentiation</p>
<p>4. A patient has been taking isosorbide for stenocardia prevention for quite a long time. Now he notes a significant decrease in the effect of the drug. What is this phenomenon called?</p> <p><b>A. Allergy</b></p>

- B. Tolerance**
- C. Potentiation
- D. Cumulation**
- E. Physical dependence

**47. Amiodaron**

**Tests**

1. Tachiarhythmia emerged in patient's postinfarction period. Cardiologist prescribed **amiodaron**. Designate mechanism of action of the medicine.
- a) blockade potassium canals**
  - b) blockade calcium canals
  - c) blockade  $\beta_1$  – adrenoreceptors of heart
  - d) blockade magnesium canals
  - e) blockade sodium canals

**48. Paracetamol**

**Tests**

1. The 55-year-old patient had been diagnosed with angina pectoris. Calcium channel-blocking agent was prescribed for treatment. Name this agent.
- A. Amlodipine**
  - B. Atenolol
  - C. Guanethidine
  - D. Reserpine
  - E. Labetalol

**49. Molsidomine**

**Tests**

1. 6 month after treatment a patient with coronary heart disease developed tolerance to the nitrates with prolonged action. What drug with nitrate-similar effect should be recommended in this case?
- a). \* Molsidomine
  - b). Verapamil
  - c). Nifedipine
  - d). Metoprolol
  - e). Prasosine

**50. Panangin**

**Tests**

1. A 68-year-old female patient has been continuously taking furosemide for heart failure treatment. What drug should be administered?
- a). \* Panangin
  - b). Midronatum
  - c). Atp-long
  - d). Sustac forte
  - e). Trimetazidine
2. A 67-year-old patient with chronic heart failure takes digoxin. In order to reduce its side effects the patient's doctor recommended to combine it with the following drug:
- a). \* Panangin
  - b). Euphyllinum
  - c). Calcium gluconate
  - d). Calcium chloride
  - e). Hydrochlorthiazide

***Antihypertensive, Anti-atherosclerotic medicines***

**51. Verapamil**

**Tests**

1. What drug may cause constipation in a patient undergoing combine therapy for arterial hypertension?
- \* **Verapamil**
  - Furosemide
  - Acetylsalicylic acid in small doseges
  - Trimetazidine
  - Panangin

## 52. Lisinopril

### Tests

1. A patient was warned about hypotensive drug, which can provoke a cough as a side effect. Name this preparation.
- Lisinopril**
  - Clofelin
  - Phenihydine
  - Dichlotiazide
  - Metoprolol
2. A patient who has a renal hypertension was prescribed a hypotensive agent from the angiotensive converting enzyme blocker group.
- lysinopril**
  - anaprilin
  - nitroglycerine
  - papaverine
  - nifedipine
3. You are a pharmacist at a drugstore. Choose an angiotensinverting enzyme inhibitor.
- lysinopril**
  - lozartan
  - clonidine
  - propranolol
  - amlodipin
4. Advise a doctor of remedy are reasonable to be prescribed to a patient who has essential hypertension if he has bronchial asthma and hyperactivity of renin-angiotensin system.
- Lysinopril**
  - Reserpine
  - Dibasol
  - Papaverine
  - Nifedipine
5. A doctor prescribed **Lysinopril** to a patient with hypertension. What mechanism of action does this preparation have?
- Blocks ACE**
  - Blocks  $\alpha$ - adrenoceptors
  - Bloks  $\beta$ -adrenoceptors
  - $\beta$ -adrenoceptors stimulates
  - M-cholinoceptors blocks
6. To the patient with morbus hypertonicus it was prescribed **lizinoprilum**. What typical side effect does this drug have?
- Dry cough**
  - Constipation
  - Increase of appetite
  - Insomnia
  - Vomiting
7. A patient was warned that taking the prescribed preparation might cause cough. What drug is it?
- \* **Lisinopril**

b) Clonidine c) Phenihydine d) Dichlotiazide e) Metoprolol
8. A patient suffering from hypertension consulted a doctor about dry cough that was presumably provoked by antihypertensive therapy. What antihypertensive drug had she been taking? <b>a). * Lisinopril</b> b). Atenolol c). Nifedipine d). hydrochlorthiazide e). Furosemidum
9. A patient suffering from essential hypertension has increased concentration of renin in blood plasma. Which pharmacological group should be preferred for this patient treatment? <b>a). * ACE inhibitors</b> b). $\alpha$ -adrenoblockers c) Blockers of calcium channel d) Diuretics e) Sympatholytics

### 53. Enalapril

Tests
1. A patient with hypertension had a dry cough on a background the systematic reception of hypotension preparation. What preparation can cause such side action? <b>A Enalapril</b> B Magnesium sulfate C Anaprilin D Prazozin E Reserpine
2. A 24-year-old patient haws been suffering for diabetes mellitus type I for 8 year. Diabetic nephropathy provoked development of symptomatic arterial hypertension. Which of the following drugs is indicated for long-term therapy? <b>a). * Enalapril</b> b). Clonidin c). Dibazol d).Dichlothiazide e). Propranolol
3. A patient with hypertension has been administered one of antihypertensive drugs. Blood pressure dropped back to normal, but the patient has developed a persistent dry cough. Which of the following drugs has such a side effect? A. Propranolol B. Furosemide C. Nifedipine <b>D. Enalapril maleate</b> E. Clonidine
4. A 24-years old patient has been suffering from diabetes mellitus type I for 8 years. Diabetic nephropathy provoked development of symptomatic arterial hypertension. Which of the following drugs is indicated for long-term therapy? <b>A. Dichlothiazide</b> <b>B. Clonidin</b> <b>C. Propranolol</b> <b>D. Enalapril</b> <b>E. Dibazol</b>

## 54. Capopril

### Tests

1. What side effect is characteristic of captopril?

- A. **Dry cough**
- B. Increase of arterial pressure
- C. Hyperglycemia
- D. Cardiac rate disorder
- E. Hypokaliemia

## 55. Losartan

### Tests

1. A patient with hypertension has been prescribed a drug that blocks angiotensin receptors. Specify this drug:

- A **Losartan**
- B Nifedipine
- C Prazosin
- D Captopril
- E Apressin

## 56. Magnesium sulphate

### Tests

1. From annotation on **magnesium sulfate** you know that this preparation is prescribed as an anticonvulsant drug. What route of administration of injection should be chosen for getting of this pharmacological effect?

- A **intramuscular injection**
- B sublingual
- C peroral
- D rectal
- E inhalation

2. A patient suffers on a cholelithiasis. What preparation is it needed to prescribe for removal of hepatic colic?

- A **Magnesium sulfate**
- B Amalgel
- C Contrikal
- D Bisacodyl
- E Pancreatin

3. Patient was hospitalized with hypertensive syndrome. What kind of medicine should be prescribed decrease BP?

- A **Magnesium sulfate**
- B Digoxin
- C Nitroglycerine
- D Spironolactone
- E Promedol

4. A patient who has chronic cholecystitis was prescribed a cholagogue from cholecystokinetic group which has laxative, spasmolytic, antihypertensive, anticonvulsive, sedative effect.

- a) **magnesium sulfate**
- b) pituitrin
- c) sorbite
- d) atropine sulfate
- e) papaverine

5. Which preparation from group of laxative agents IS NOT to be administered in case of intoxication with CNS-inhibiting substances?

- a)\* **Magnesium sulfate**
- b) Sodium sulfate

- c) Vaseline oil
- d) Guttalax
- e) Bisacodyl

### 57. Doxazosine

#### Tests

1. A 70-year-old patient consulted a doctor about elevated arterial pressure. He has a history of benign hyperplasia of prostate. What drug should be administered in this case?
- a). \* **Doxazosine**
  - b). Propranolol
  - c). Analapril
  - d). Losartan
  - e). Diltiazem

### 58. Fenofibrate

#### Tests

1. For treatment of atherosclerosis a patient has bought hypolipemic preparation of the fibrates group. Name this preparation.
- A Fenofibrate**
  - B Drotaverine hydrochloride
  - C Bisacodil
  - D Spironolactone
  - E Silybor
2. To the patient with atherosclerosis an antiatherosclerotic preparation was prescribed. Find this preparation.
- A Fenofibrate**
  - B Ascorbic acid
  - C Pyracetamum
  - D Dexametasone
  - E Butadion
3. To treat atherosclerosis a patient bought hypolipidemic drug fenofibrate. What pharmacological group does this medicine belong to?
- a) **Fibrate**
  - b) Nitrofurantoin
  - c) Calcium channel-blocking agent
  - d)  $\alpha$  - adrenoceptor antagonist
  - e) M - cholinergic antagonist
4. What medication will you prescribe to treat hyperlipidemia?
- a) **fenofibrat**
  - b) asininetam
  - c) adrenalin
  - d) mesaton
  - e) cordiamin
5. You work at a pharmaceutical firm in the sales department. Explain to an intern pharmacist: what pharmacological group does **fenofibrate** belong to?
- a) **Hypolipidemic drug**
  - b) Fibrinolysis inhibitors
  - c) Soporific drug
  - d) Antihypertensive agents
  - e) Anticoagulant of indirect action
6. A patient with atherosclerosis has been administered an anti-atherosclerotic agent. Specify this drug:
- A. Fenofibrate**
  - B. Phenylbutazone

- C. Ascorbic acid
- D. Dexamethasone
- E. Pyracetam

## **Medicines affecting the gastro-intestinal tract**

### **59. Famotidin**

#### Tests

1. A patient who concerning ulcerous illness a doctor appointed **famotidin** appealed chemist's. Explain, what mechanism is underlain in 46asix4646ine this preparation'

- A' Blockade of H<sub>2</sub>-histamins receptors**
- B Blockade of H<sub>1</sub>-histamins receptors
- C Blockade of M-cholinoreceptors
- D Oppression of activity of N+K+ATP-ase
- E Blockade of cholinoreceptors of likable neuroganglions

2. A pharmacist advised a patient antiulcerous preparation which blocks the histamine receptors of stomach mucous membrane. Name this drug.

- A Famotidin**
- B Omeprazol
- C Almagel
- D Atropine sulfate
- E Pirenzepin

3. For treatment of peptic ulcer Famotidine was prescribed. Find the mechanism of action of preparation.

- A Blockade of H<sub>2</sub>- histamine receptors**
- B Blockade of H<sub>2</sub>-histamine receptors
- C Stimulation of  $\alpha$ - adrenoreceptors
- D Blockade of  $\beta$ - adrenoreceptors
- E Stimulation of M-cholinoreceptors

4. A patient suffering from ulcer disease was prescribed famotidine. What is the mechanism of its action?

- A. Block of H<sub>2</sub>-histamine receptors**
- B. Block of cholinoreceptors of sympathetic ganglions**
- C. Block of muscarinic cholinoreceptors
- D. Inblbition of adenosine triphosphatase activity
- E. Block of H<sub>1</sub>-histamine receptors

### **60. Ranitidine**

#### Tests

1. A patient suffering from peptic ulcer was administered ranitidine. Gastric juice acidity has reduced considerably. What mechanism underlies the action of this drug?

- a). \* H<sub>2</sub> –histamine receptors blockade
- b). M-cholinergic receptors blockade
- c). H<sub>1</sub> –histamine receptors blockade
- d). H,K-ATPase activity inhibition
- e). Autonomic ganglion H-cholinergic receptors blockade

### **61. Omeprazole**

#### Tests

1. A patient suffering from stomach ulcer was prescribed an antiulcer drug that also reduces secretion of hydrochloric acid and inhibits Chelicobacter pylori. What drug is it?

- a). \*Omeprazole**
- b). Almagel
- c). Maalox
- d). Famotidine
- e). Gastrocepine

<p>2. A patient with gastric ulcer has been administered omeprazole. What is its mechanism of action?</p> <p><b>A. Inhibition of H<sup>+</sup>,K<sup>+</sup>-ATPase</b></p> <p>B. Blockade of histamine H<sub>2</sub>-receptors</p> <p>C. *HCl neutralization</p> <p>D. Blockade of M-cholinergic receptors</p> <p>E. Stimulation of mucus production</p>
<p>3. A 45-year-old patient with a gastric ulcer needs the reduction of HCl secretion. Which drug provides this effect due to inhibition of the proton pump?</p> <p><b>A. Omeprazole</b></p> <p>B. Atropine</p> <p>C. Quamatel</p> <p>D. Benzo hexonium</p> <p>E. Proglumide</p>

### 62. Bismuth subcitrate

Tests
<p>1. A patient who has been undergoing combined drug therapy for peptic ulcer presents with black feces. Specify a drug that might have caused such change:</p> <p><b>a). * Bismuth subcitrate</b></p> <p>b). Metronidazole</p> <p>c). Actovegin</p> <p>d). Ranitidine</p> <p>e). Omeprazole</p>

### 63. Almagel

Tests
<p>1. A 54-year-old patient who has been suffering from hyperacidic gastritis for several years was prescribed almagel. What pharmacotherapeutical complications on the part of digestive organs may be expected in the first place?</p> <p><b>a). * Constipation</b></p> <p>b). Emesis</p> <p>c). Nausea</p> <p>d). Diarrhea</p> <p>e). Anorexia</p>
<p>2. A patient suffering from stomach ulcer was prescribed almagel. Which of its pharmacological properties is intended for treatment of this pathology?</p> <p><b>A HCl neutralization</b></p> <p>B Local anaesthetization</p> <p>C Blocking the H<sub>2</sub>-histamine receptors</p> <p>D Blocking the muscarinic cholinoreceptors</p> <p>E Anti-inflammatory action</p>

### 64. Bisacodyl

Tests
<p>1. A doctor prescribed <b>bisacodyl</b> to a patient with a chronic constipation. In 3 weeks of treatment a patient paid a regard to diminishing purgative effect. With what side effect is it related?</p> <p><b>A Adaptation (tolerance)</b></p> <p>B Predilection</p> <p>C Sensitizing</p> <p>D Cumulation</p> <p>E Dysbacteriosis</p>
<p>2. A patient bought at a drugstore a medicine to treat a habitual constipation. This agent reflexory stimulates intestinal peristalsis. Find this medicine.</p> <p><b>a) bisacodyl</b></p>

<p>b) calcium chloride  c) cyanocobalamin  d) heparin  e) furosemide</p>
<p>3. An elderly man who has chronic obstipation was prescribed laxative agent which has an effect upon large intestine.  <b>a) bisacodyl</b>  b) aliohol  c) smecta  d) maalox  e) cholenzim</p>
<p>4. An elderly patient has constipation caused by atonia of colon. What drug should be administered to the patient?  <b>A. Novocaine amide</b>  <b>B. Bisacodyl</b>  C. Atropine sulfate  D. Sodium sulfate  E. Castor oil</p>
<p>5. A patient with chronic constipation has been prescribed bisacodyl. After 3 weeks of treatment, the patient noticed a reduction of laxative effect. This is caused by the development of the following sideeffect:  <b>A. Habituation (Tolerance)</b>  B. Dependence  C. Sensibilization  D. Cumulation  E. Dysbacteriosis</p>
<p>6. The elderly patient suffers from constipation caused by large intestine hypotonia. What drug should be prescribed?  <b>A. Bisacodyl</b>  B. Sodium sulfate  C. Castor oil  D. Atropine sulphate  E. Procainamide</p>

### 65. Pancreatinum

Tests
<p>1. A patient has chronic pancreatitis with apparent presentations of pancreatic exocrine hypofunction. Which of the following drugs would be the most appropriate in this case?  a). * Pancreatinum  b). Drotaverine  c). Omeprazole  d). Acidin pepsinum  e). De-Nol</p>

### 66. Ursodeoxycholic acid

Tests
<p>1. A patient with cholelithiasis was prescribed the following drug for the purpose of cholesterol gallstone dissolution:  a). * <b>Ursodeoxycholic acid</b>  b). Citric acid  c). Gamma-amino-butyric acid  d). Acetylsalicylic acid  e). Mefenamic acid</p>

2. A patient with cholelithiasis should be administered the following drug for the dissolution of cholesterol gallstones:

- A. Acetylsalicylic acid
- B. Citric acid
- C. Mefenamic acid
- D. \*Ursodeoxycholic acid
- E. Gamma-aminobutyric acid

### **Medicines affecting the renal function and diuresis**

#### **67. Hydrochlorothiazide**

##### Tests

1. At drugstore a patient of 60 also bought for course of medicine treatment with other antihypertensive drugs **hydrochlorothiazide** to treat hypertension. What mechanism of antihypertensive action has this drug?

- a) **Reduction of volume of blood circulation, reduction of sensibility of vessels adrenoceptors to catecholamines;**
- b) Excitation of central adrenoceptors, relaxation of vasculomotor center;
- c) suppression of peripheral  $\alpha_1$  – adrenoceptors, reduction of peripheral resistance of vessels;
- d) suppression of cardiac  $\alpha_1$  – adrenoceptors, reduction of cardiac output;
- e) suppression of angiotensin converting enzyme, reduction of aldosterone secretion

#### **68. Furosemide**

##### Tests

1. Name a substitution for **furosemide**:

- a) **lasix**
- b) hydrochlorothiazide
- c) spironolactone
- d) acetazolamide
- e) clo49asix

2. A patient with hypertensive crisis should be administered a diuretic as a part of complex therapy. What drug should be given to the patient?

- A **Furosemide**
- B Diacarb
- C Spironolactone
- D Triamterene
- E Amiloride

3. It is necessary to conduct artificial diuresis to a patient with the acute poisoning. What preparation can be applied?

- A **Furosemide**
- B Caffeine-sodium benzoate
- C Galantamine hydrobromide
- D Enalapril
- E Pyracetam

4. To the patient with an acute poisoning for the forced diuresis loop diuretic was prescribed. What preparation is it.

- A **Furosemide**
- B Mannit
- C Hydrochlorothiazide
- D Triamteren
- E Spironolactone

5. A patient of 50 years old during 20 years has hypertension that is accompanied by edema and diminishing of diuresis. What preparation must be prescribed to a patient in such a case?

- A **Furosemide**
- B Reserpine

<p>C Enalapril D Prazozin E Methyldopa</p>
<p>6. You are a pharmacist in a drugstore. Choose a loop diuretic of urgent, powerful, short - lived effect.</p> <p><b>a) Furosemide</b> b) Clopamide c) Acetazolamide d) Spirono-act-ne e) Triamteren</p>
<p>7. A patient which took <b>furosemide</b> for a long time was observed to have reduction of swells, increase of diuresis. However, weakness in muscles, appetite loss, cardial pains. How can the development of above mentioned symptoms be explained?</p> <p><b>a) hypokaliemia</b> b) hypermagneseemia c) hypocalcemia d) hypercalcemia e) hyperkaliemia</p>
<p>8. A patient has a cardiopulmonary decompensation which is also attended with pulmonary edema. What medicine from diuretic group should one prescribe?</p> <p><b>a) furosemide</b> b) spironolactone c) dichlothiazide d) triamterin e) acetazolamide</p>
<p>9. Select a loop diuretic of strong, emergency and short-term action from the listed below:</p> <p>A. Triamterene B. Spironolactone C. Acetazolamide <b>D. Furosemide</b> E. Clopamide</p>
<p>10. A patient with hypertensive crisis should be administered a diuretic as a part of complex therapy. What drug should be given to the patient?</p> <p><b>A Furosemide</b> B Diacarb C Spironolactone D Triamterene E Amiloride</p>
<p>11. The patient with acute poisoning needs forced diuresis. What drug can be used for this purpose?</p> <p><b>A. Furosemide</b> B. Caffeine and sodium benzoate C. Galantamine hydrobromide D. Enalapril E. Piracetam</p>
<p>12. The combined use of furosemide with aminoglycoside antibiotics causes:</p> <p><b>A. Hearing impairment</b> B. Increased blood pressure C. Cramps D. Hyperhidrosis E. Increased intraocular pressure</p>
<p>13. Diuretic should be prescribed to treat cerebral edema. What drug is to be administered?</p> <p><b>A. Spironolactone</b></p>

- B. Hydrochlorothiazide
- C. Diacarb (Acetazolamide)
- D. Furosemide**
- E. Caffeine and sodium benzoate

### 69. Acetazolamide (Diacarb)

Tests
<p>A patient with epilepsy is prescribed a diuretic. Name this drug:</p> <ul style="list-style-type: none"> <li>A. Verospiron</li> <li>B. Furosemide</li> <li>C. Mannitol</li> <li>D. Hypothiazid (Hydrochlorothiazide)</li> <li>E. <b>Diacarb (Acetazolamide)</b></li> </ul>

### 70. Triamterene

Tests
<p>1. Treatment course of essential hypertension includes diuretics. Which diuretic DOES NOT NEED to be combined with potassium preparations?</p> <ul style="list-style-type: none"> <li>a)* <b>Triamteren</b></li> <li>b) Clopamide</li> <li>c) Dichlothiazide</li> <li>d) Furosemide</li> <li>e) Ethacrynic acid</li> </ul>

### 71. Oxytocin

Tests
<p>1. Pregnant woman with the weakness of childbirth a doctor decided to stimulate births. What hormonal preparation was used by a doctor?</p> <ul style="list-style-type: none"> <li><b>A Oxytocinum</b></li> <li>B Glibenclamidum</li> <li>C Prednizolon</li> <li>D Thyroxin</li> <li>E Insulin</li> </ul>
<p>2. As a result of the childbirth weakness a doctor prescribed to a pregnant woman hormonal preparation for labor induction. Name this preparation.</p> <ul style="list-style-type: none"> <li><b>A Oxytocin</b></li> <li>B Glybenclamide</li> <li>C Prednisolone</li> <li>D Insulin</li> <li>E Thyroxin</li> </ul>
<p>3. Woman needs labour induction. From the list below, choose the remedy which stimulates uterine contraction.</p> <ul style="list-style-type: none"> <li><b>a) Oxytocin</b></li> <li>b) Proserin</li> <li>c) Picharpin</li> <li>d) Progesterone</li> <li>e) Propranolol</li> </ul>
<p>4. During uterine inertia one prescribes:</p> <ul style="list-style-type: none"> <li><b>a) oxytocin</b></li> <li>b) no – spa</li> <li>c) progesterone</li> <li>d) vicasol</li> <li>e) phenotherol</li> </ul>
<p>5. A female has prolonged labour. Select a drug that stimulates labour activity due to its physiological effect from the listed below:</p>

<p>A. Pachycarpine  <b>B. Oxytocin</b>  C. Progesterone  D. Estrone  E. Neostigmine</p>
<p>6. What drug is administered in case of uterine inertia?  <b>A. Oxytocin</b>  B. No-spa  C. Progesterone  D. Vikasolum  E. Fenoterol</p>
<p>7. A parturient woman diagnosed with uterine inertia has been delivered to the maternity ward. The doctor gave her an injection of the drug that activates the contraction of smooth muscles of the uterus. What hormone is a component of this drug?  <b>A. Oxytocin</b>  B. Gastrin  C. Secretin  D. Angiotensin  E. Bradykinin</p>

### 72. Prostaglandine

Tests
<p>1. Eicosanoids, - hormone-like compounds, - are used to stimulate labor and for contraception. What substances have such an effect?  <b>A. Prostaglandines</b>  B. Interleukines  C. Endorphines  D. Angiotensines  E. Enkephalines</p>

### *Medicines affecting the blood system*

### 73. Cyanocobalamine

Tests
<p>1. A patient which has had a stomach disease for a long time is also detected to have hyperchromic anemia. Which medication listed is used to treat this pathology?  <b>a) cyanocobalamin</b>  b) ascorbic acid  c) unithiol  d) ferum lek  e) oxyferriscorbon</p>
<p>2. A patient who has been suffering from gastric diseases for long time is found to have hyperchromic anemia. Which of the following drugs is applied for this pathology treatment?  <b>a). * Cyanocobalamine</b>  b). Ascorbic acid  c). Unitiol  d). Oxyferriscorbone  e). Ferrum Lek</p>

### 74. Vicasol

Tests
<p>1. Advise a doctor the antagonist remedy to stop bleeding caused by long term application of neodicumarine.  <b>a) Vicasol</b>  b) Aminocapronic acid</p>

<p>c) Ethamsilat d) Fibrinogen e) Ascorbic acid</p>
<p>2. It was prescribed hemostatic to a child with a diathesis. Name this preparation? <b>A Vicasol</b> B Heparin C Neodikumarin D Cyanocobalamin E Magnesium sulfate</p>
<p>3. A 45-year-old patient has been taking neodicumarinum for thrombophlebitis for two weeks. The regular blood test revealed a decrease in prothrombin concentration, microhematuria. Which drug should be used as neodicumarinum antagonist? <b>A. Vicasol</b> B. Aminocaproic acid C. Heparin D. Protamine sulfate E. Sodium citrate</p>
<p>4. Which drug with antagonistic effect can be used to stop bleeding caused by prolonged use of neodicumarinum? <b>A Vicasol</b> B Aminocapronic acid C Etamsylate D Fibrinogen E Ascorbic acid</p>

### 75. Heparin

<p><b>Tests</b></p>
<p>1. For treatment of thrombosis a doctor prescribed of direct acting anticoagulants. Name this preparation. <b>A Heparin</b> B Phenilin C Syncumar D Neodikumarin E Vikasol</p>
<p>2. You are the pharmacist of regional clinic hospital. Consult interner doctor who works in department of vascular surgery about peculiarity of <b>heparin</b> pharmacokinetics after intravenous injection. <b>a) effect comes in 5 minutes and lasts 4 – 6 hours</b> b) effect comes in 30 minutes and lasts 8 – 12 hours c) becomes effective in 24 – 48 hours, cumulate in body d) effect comes in 12 – 30 hours and lasts 3 – 4 days e) effect comes in 30 minutes and lasts to 24 hours</p>
<p>3. A patient who has cardiac infarction was injected a direct anticoagulant intravenously. Name this medicine. <b>a) heparin</b> b) neodicoumarin c) vicasol d) thrombin e) calcium gluconate</p>
<p>4. For thrombosis treatment a patient was prescribed a drug from the group of direct anticoagulants. What drug is it? <b>a). *Heparin</b> b). Neodicumarin</p>

<p>c). Vikasol d).Syncumar e). Fenilin (phenylinum)</p>
<p>5. Which of the following drugs is used for thrombolytic therapy in case of myocardial infarction? A. Phenylinum <b>B. Heparin</b> C. Ticlopidine D. Streptokinase E. Acetylsalicylic acid</p>
<p>6. A patient with myocardial infraction has been given an intravenous injection of a direct-acting anticoagulant. Select it among the listed drugs: <b>A. Calcium gluconate</b> <b>B. Neodicumarinum</b> <b>C. Thrombin</b> <b>D. Heparin</b> <b>E. Vikasolum</b></p>
<p>7. Which drug is used for thrombolysis in case of acute myocardial infarction? <b>A. Alteplase</b> <b>B. Acetylsalicylic acid</b> <b>C. Pentoxifylline</b> <b>D. Fraxiparine</b> <b>E. Heparin</b></p>
<p>8. Heparin is the direct-acting anticoagulant that reduces blood coagulation and prevents thrombosis. Its action is based upon the following phenomenon: <b>A. Protective power of colloids</b> B. Syneresis C. Thixotropy D. Micelle formation E. Dialysis</p>
<p>9. A patient with myocardial infarction has been administered intravenously a direct anticoagulant, namely: <b>A. Heparin</b> B. Neodicumarinum C. Vikasol D. Thrombin E. Calcium gluconate</p>

### 76. Streptokinasa

<p>Tests</p>
<p>1. Which of the below-listed drugs is used for thrombolytic therapy in case of myocardial infarction? A. Phenylinum B. Acetylsalicylic acid C. Heparine <b>D. Streptokinase</b> E. Ticlopidine</p>

### 77. Dicumarol

<p>Tests</p>
<p>1. Antivitamins are substances of various structure that limit utilization of vitamins in an organism and have an opposite to them action. Name antivitamin of vitamin K: <b>A. Dicumarol</b> B. Sulfapyridasine C. Deoxyriodoxine</p>

- D. Aminopterin
- E. Isoniazid

### 78. Fibrinogen

#### Tests

1. Which drug with antagonistic effect can be used to stop bleeding caused by prolonged use of neocumarinum?
- A. Ascorbic acid
  - B. Aminocapronic acid
  - C. **Fibrinogen**
  - D. Vikasolum
  - E. Etamsylate

### Vitamin-containing medicines

#### 79. Retinol

#### Tests

1. As a result of uncontrolled use of vitamin preparation for treatment a child had anorexia, nausea, vomiting, diarrhea, hyperthermia. What preparation was used by a child?
- A Retinol**
  - B Nicotinamid
  - C Somatotropin
  - D Rutin
  - E Ergocalciferol
2. Pregnant woman used big doses of **retinol** during 1<sup>st</sup> trimester of pregnancy and got hypervitaminosis. This drug may induce a<sup>bn</sup>ormalities of fetus. Name this side effect.
- A Teratogenic action**
  - B Cumulation
  - C Dysbacteriosis
  - D Addiction
  - E Cancerogenic action
3. You are pharmacist at chemist's shop. Choose from medicines delivered to your chemist's shop that belongs to medicines liposoluble vitamins containing add.
- a) acetate retinol**
  - b) oxytocin
  - c) acyclovir
  - d) heparin
  - e) benadryl
4. A patient who has a day blindness deterioration (hemeralopy) was prescribed vitamin medicine by an ophthalmologist for holiatry of this pathology.
- a) retinol acetate**
  - b) ascorbic acid
  - c) pyridoxine
  - d) nicotinic acid
  - d) ergocalciferol
5. A patient consulted an ophthalmologist about scotopic vision impairment, cornea dryness. What drug was prescribed?
- a)\* Retinolum**
  - b) Pirydoxine
  - c) Tocopherol
  - d) Ascorbic acid
  - e) Cocarboxylasum
6. The patient has mucosal dryness and mesopic vision disorder. What vitamin deficiency causes these symptoms?
- A. A**

- B. P
- C. E
- D. C
- E. D

7. A patient consulted an ophthalmologist about deterioration of twilight vision and xerophthalmus. What drug should the doctor prescribe?

- A. **Retinol**
- B. Cocarboxylase
- C. Tocopherol
- D. Ascorbic acid
- E. Pyridoxine

### 80. Ascorutinum

#### Tests

1. A patient complains about gingival haemorrhage, petechial haemorrhages. What vitamin preparation should be recommended?

- A. **Ascorutinum**
- B. Thiamine hydrochloride
- C. Cyanocobalamin
- D. Nicotinic acid
- E. Pyridoxine hydrochloride

2. A patient with low immunity, frequent colds is recommended to take ascorutin as a more effective drug than ascorbic acid. What constituent substance of this preparation intensifies action of vitamin C?

- A. **Vitamin P**
- B. Vitamin A
- C. Glucose
- D. Lactose
- E. Vitamin D

### 81. Pyridoxine

#### Tests

1. A 30 year-old patient suffering from pulmonary tuberculosis has been prescribed isoniazid. Continuous taking of this drug may lead to the deficiency of the following vitamin:

- A. **Pyridoxine**
- B. Tocopherol
- C. Cobalamin
- D. Ergocalciferol
- E. Retinol

### 82. Nicotinic acid

#### Tests

1. Diet of an individual must contain vitamins. What vitamin is usually prescribed for treatment and prevention of pellagra?

- A. **Vitamin PP**
- B. Vitamin D
- C. Vitamin B<sub>1</sub>
- D. Vitamin A
- E. Vitamin C

### *Hormonal and antihormonal medicines*

### 83. L-thyroxin

#### Tests

1. To treat hypofunction of thyroid gland (myxedema) a doctor prescribed a hormonal agent of thyroid gland. Name this agent.

- a) L-thyroxin
- b) insulin
- c) prednisolone
- d) glibenclamid
- e) vicasol

### 84. Prednisolone

#### Tests

1. Patient with an allergodermia asked a doctor. What preparation is it necessary to prescribe as antiinflammatory and antiallergic action?  
**A Prednisolone**  
 B Aethamidum  
 C Oxytocin  
 D Insulin  
 E Thyroxin
2. To a patient with rheumatism doctor prescribed preparation that has such side effects: development of „steroid diabetes“, edema, osteoporosis, steroid ulcer. Name this preparation.  
**A Prednisolone**  
 B Dichlotiazide  
 C Mesatone  
 D Butadion  
 E Strophanthin
3. Patient with renal insufficiency, has been prescribed medicine for substitutability therapy. Name this medicine.  
**A Prednisolone**  
 B Glibenclamide  
 C Retabolil  
 D Sodium Diclofenac  
 E L- thyroxin
4. A patient was given an intravenous injection of **prednisolone** solution to relieve severe attack of bronchial asthma. To which group of hormonal agents does prednisolone belong?  
**a) Glucocorticoids**  
 b) Gestagenic drugs  
 c) Estrogenic drugs  
 d) Mineralocorticoids  
 e) Anabolic steroids
5. A patient intook **prednisolon** for a long time. After the medicine was canceled acute condition of disease, blood pressure reduction, inertia appeared. Why do these symptoms occur?  
**a) Adrenal insufficiency appearing**  
 b) medication sensitization  
 c) drug addiction  
 d) ACTH hyperproduction  
 e) drug cumulation
6. A 48-year-old patient was given an intravenous injection of prednisolone in order to arrest a severe attack of bronchial asthma. Prednisolone relates to the following group of hormonal drugs:  
**a). \*Glucocorticoids**  
 b). Estrogens  
 c) Gestagenic drug  
 d) Anabolic steroids  
 e) Mineral corticoids
7. A 33-year-old woman who has been treated for chronic polyarthritis for a long time complains about arterial pressure rise, change of adipose tissue distribution, menstrual cycle disorder. What preparation has she taken?

<p>a). * <b>Prednisolone</b></p> <p>b). Synaflan</p> <p>c). Butadion</p> <p>d). Diclofenac sodium</p> <p>e). Indometacin</p>
<p>8. A patient with atopic dermatitis presented at the hospital. Which drug with anti-inflammatory and anti-llergic effect should be administered to this patient?</p> <p><b>A. Prednisolone</b></p> <p><b>B. Oxytocin</b></p> <p><b>C. Aethamidum</b></p> <p><b>D. Retabolil</b></p> <p><b>E. Insulin</b></p>
<p>9. The 33-year-old female patient, who undergoes long-term treatment due to her chronic polyarthritis, complains of increased arterial pressure, adipose tissue redistribution and menstrual irregularities. What drug does the patient take?</p> <p><b>A. Prednisolone</b></p> <p><b>B. Indometacin</b></p> <p><b>C. Phenylbutazone</b></p> <p><b>D. Fluocinolone acetonide</b></p> <p><b>E. Diclofenac sodium</b></p>

### 85. Insulin

Tests
<p>1. A patient who has pancreatic diabetes was prescribed <b>insulin</b>. What injection regimen does has this medicine have.</p> <p><b>a) 20 minutes before food intake</b></p> <p>b) before going to sleep</p> <p>c) 40 minutes after meal</p> <p>d) when eating</p> <p>e) 1,5 hours before food intake</p>
<p>2. A 15-years old patient has been first diagnosed with type I diabetes mellitus. Which antihyperglycemic drug should be administered in this case?</p> <p><b>A. Diabetone</b></p> <p><b>B. Metformin</b></p> <p><b>C. Glibenclamide</b></p> <p><b>D. Glurenorm</b></p> <p><b>E. Insulin</b></p>

### 86. Glibenclamide

Tests
<p>1. Insulin dependent patient with diabetes mellitus was also prescribed synthetic antidiabetic medicine. Name this medicine.</p> <p><b>A Glibenclamide</b></p> <p>B Insulin</p> <p>C Cholosas</p> <p>D Prednisolone</p> <p>E Hydrochlorthyazide</p>
<p>2. A patient has pancreatic diabetes of 1 type (insulin – dependent). To reduce daily draught his endocrinologist has prescribed an artificial hypoglycemic agent. Name it.</p> <p><b>a) Glibenclamid</b></p> <p>b) Hydrochlorothiazide</p> <p>c) Lipamidum</p> <p>d) Glucagon</p> <p>e) Hydrocortisone</p>

3. To the patient with insulin-dependent diabetes mellitus synthetic antidiabetic preparation from the group of sulfanylurea derivatives was prescribed. Name this preparation.

- A **Glybenclamid**
- B Insulin
- C Anaprilin
- D Prednisolone
- E Furosemide

### 87. Dexametazone

#### Tests

1. Examination of a patient who has been treated for rheumatoid arthritis for a long time revealed hyperglycemia. It might have been caused by the following drugs:

- a)\* **Dexamethasone**
- b) Delagil
- c) Diclofenac sodium
- d) Ibuprofen
- e) Levamisole

2. Examination of a patient who has been treated for rheumatoid arthritis for long time revealed hyperglycemia. What drug might have caused it?

- a)\* **Dexamethasone**
- b) Chloroquine
- c) Levamisole
- d) Ibuprofen
- e) Diclofenac sodium

### 88. Glucagone

#### Tests

1. A patient has been receiving Theophylline (inhibitor of cyclic adenosine monophosphate phosphodiesterase) for a week. What hormone can increase its action due to such treatment and cause hyperglycemia?

- A. Testosterone
- B. Aldosterone
- C. **Glucagone**
- D. Insulin
- E. Estradiol

### 89. Mercazolilum

#### Tests

1. A patient with hyperproduction of thyroid hormones has been prescribed Mercazolilum. This drug inhibits the following enzyme participating in iodothyronine synthesis

- A. Aromatase
- B. Reductase
- C. **Iodide peroxidase**
- D. Decarboxylase
- E. Aminotransferase

### Anti-allergic medicines

### 90. Calcium chloride

#### Tests

1. After an intravenous injection of magnesium sulfate respiratory impairment began, arterial pressure decreased. What antidote should one inject?

- a) **Calcium chloride**
- b) Potassium chloride
- c) Camphor
- d) Caffeine

e) Unithiol

### 91. Dimedrol

#### Tests

1. Selling dimedrol to patient for him to relieve contact dermatitis about what typical drug side effect should you warn him?
- a) **Dry mouth, sleepiness**
  - b) Short cough, closeness
  - c) Disposition to sweating; improvement to appetite
  - d) Stimylation of CNS, palpitation
  - e) Arterial pressure decrease

### 92. Loratadine

#### Tests

1. A pharmacist was asked by patient who had neurodermatitis to recommend an antihistaminic drug of 2 generation without inhibitory action on CNS. What is this drug?
- a) **Loratadine**
  - b) Dimedrol
  - c) Diazolin
  - d) Tavegil
  - e) Phenkarol
2. A student asked a pharmacist to advise him a medication to suppress signs of allergic rhinitis which appear during time blossom. What medication could be used?
- a) **loratadine**
  - b) adrenaline, epinephrine
  - c) propranolol
  - d) ambroxol
  - e) lozartan
3. A patient who is a driver addresses a doctor. He has rhinitis, hacking, lacrimation which has appeared during ambrosia blossom. What antiallergenic drug should be prescribed?
- a) **loratadine**
  - b) benadryl
  - c) prednisolone
  - d) calcium chloride
  - e) amoxicilin
4. A patient with a contact allergic dermatitis after bee stings was prescribed loratadine. Itching and painfulness disappeared. What mechanism of antiallergic action has this medicine?
- a) **suppression of H<sub>1</sub> – histamine receptors;**
  - b) suppression of H<sub>2</sub> – histamine receptors;
  - c) blockade of D<sub>4</sub> – leukotriene receptors;
  - d) reduction of leukotriene release;
  - e) antiserotonin activity
5. Recommend for a patient a drug for allergy treatment.
- A **Loratadin**
  - B Naphthyzin
  - C Levamisole
  - D Glybenclamide
  - E Ascorutin
6. A man came to a pharmacy and asked to recommend him a drug for treatment of allergic rhinitis that occurs in the period when lime tree is in bloom. What drug may be applied?
- a)\* **Loratadine**
  - b) Adrenaline
  - c) Anapriline
  - d) Ambroxol

e) Lozartan
7. Consult a patient on which antihistamine drug DOES NOT have sedative and hypnotic effect: <b>A Loradatine</b> B Diphenhydramine C Promethazine D Suprastinum E Tavegil (Clemastine)
8. The student asks the pharmacist to recommend him the drug to relieve allergic rhinitis symptoms he suffers from when lime tree is in bloom. What drug can be recommended in this case? <b>A. Loratadine</b> B. Epinephrine C. Propranolol D. Ambroxol E. Losartan

**Medicines that used in poisonings. Nitrofurans. Disinfectants. Antiseptics**

**93. Kalii permanganas**

Tests
1. What anti-infective agent could show his bactericidal action by creating atomic oxygen. <b>A Kalii permanganas</b> B Chloramin C Furacyllin D Aethonium E Argentii nitras
2. A bedridden patient suffers bedsores, festers. What antiseptic from oxidizing agents group with deodorant effect should one use to debride wound? <b>a) Permanganate potassium</b> b) hydrogen peroxide c) brilliant green d) ioddicerine e) phenol solution
3. Which antiseptic preparation has bactericidal effect due to the formation of atomic oxygen? <b>a)* Potassium permanganate</b> b) Silver nitrate c) Furacilinum d) Aethonium e) Chloraminum

**94. Nifuroxazid**

Tests
1. An internship doctor prescribed his patient nifuroxazid from the group of nictofurans for treatment of urinary tracts infection. The doctor made a mistake because: <b>a)* It can not be absorbed from the digestive tract</b> b) It has bacteriostatic effect c) It is excreted from the organism very slowly d) It has nephrotoxic effect e) It is excreted with urine in the inactive state
2. An internship doctor prescribed his patient nifuroxazid from the group of nitrofurans for the treatment of urinary tracts infection. The doctor made a mistake because: A. It has bacteriostatic effect B. It has nephrotoxic effect <b>C. It cannot be absorbed from the digestive tract</b> D. It is excreted from the organism very slowly E. It is excreted with urine in the inactive state

### 95. Alcoholic iodine solution

#### Tests

1. Choose an antiseptic from the group of halogen containing drugs that can be included into the first-aid kit for a child going to a summer camp:

- A **Alcoholic iodine solution**
- B Brilliant green solution
- C Copper sulfate solution
- D Methylene blue solution
- E Formaldehyde solution

2. Select the halogenated antiseptic that would be preferable for a child to pack in the first aid kit, when going to a summer camp

- A. Brilliant green
- B. **Iodine alcoholic solution**
- C. Methylene blue
- D. Copper sulfate
- E. Formaldehyde solution

### 96. Hydrogen peroxide

#### Tests

1. When hydrogen peroxide solution is administered to bleeding wounds, it is broken up by one of the blood enzymes. Point out this enzyme.

- A. **Catalase**
- B. Monoamine oxidase
- C. Cytochrome oxidase
- D. Aspartate aminotransferase
- E. Lactate dehydrogenase

### *Antibiotics. Sulphonamide medicines*

#### 97. Benzylpenicillin

#### Tests

1. To treat bacterial pneumonia benzylpenicillin was prescribed. What mechanism of antimicrobial action has this medicine?

- a) **suppression of microorganism cell wall synthesis**
- b) suppression of intracellular synthesis of protein
- c) abnormality of cytoplasmic membrane penetration
- d) suppression of SH-groups microorganism enzymes
- e) antagonism with paraaminobenzoic acid

2. Select antibiotic for syphilis treatment:

- a) **benzylpenicillin**
- b) streptomycin
- c) kanamycin
- d) amphotericin
- e) nystatin

3. Why benzylpenicillin sodium is not used orally?

- a) **it is inactivated by HCl in stomach**
- b) is badly absorbed in bowels
- c) irritates stomach mucous membrane
- d) reduce production of HCl in bowels
- e) is ruined by penicillinase

4. You work in a drugstore which is located on the territory of the dermatovenerologic dispensary. Consult the internist doctor, what antibiotic is the drug for the syphilis treatment.

- a) **Benzylpenicillin sodium salt**
- b) Lincomycin hydrochloride
- c) Levorinum sodium salt

d) Streptomycin sulfate e) Polymyxin M sulfate
5. What mechanism of action deferment bactericidal effects of benzylpenicillin? <b>A Stoppage of synthesis of microorganisms cell wall</b> B Oppressing of synthesis of albumins C Damages of permeability of citoplazmatic membrane D Activating of the immune system of macroorganism E Increases of phagocytic activity of leucocytes
6. Benzylpenicillin sodium is not used per os, because this drug: <b>a). *Destroys gastric HCl</b> b). Poorly absorbed in the intestine c). Reduces formation of gastric HCl d). Irritates gastric mucosa e). Is destroyed by penicillinase
7. A gravida in her 20th week of gestation got ill with pneumonia. What chemotherapeutical drug may be administered with no risk for the fetus development? <b>A. Benzylpenicillinum</b> B. Gentamycin C. Sulfalenum D. Laevomycetinum E. Ofloxacinum
8. Benzathine benzylpenicillin is the drug of choice for treating the following disease: <b>A. Furunculosis</b> <b>B. Intestinal infections</b> <b>C. Syphilis</b> D. Pneumonia E. Angina
9. Bacteria eventually become resistant to antibacterial agents. What enables grampositive bacteria's resistance to penicillin antibiotics? <b>Beta-lactamases production</b> Cell wall permeability Active transport of antibiotics Proteun synthesis Active synthesis of peptidoglycane

### 98. Amoxicillin

Tests
1. A man with a long history of chronic hepatitis has been diagnosed with pneumonia. Which of the foolowing antibacterial drugs can be applied in this clinical situation? A. Biseptol B. Rifampicin <b>C. Amoxicillin</b> D. Tetracycline E. Vancomycin
2. A female patient in the first trimester of pregnancy has been diagnosed with acute pyelonephritis. What is the antibiotic drug of choice for treating this patient? A. Norfloxacin B. Gentamicine <b>C. Amoxicillin</b> D. Amikacin E. Chloramphenicol

### 99. Doxycycline hydrochloride

Tests
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<p>1. Name the medicine from tetracycline group which was prescribed to treat acute bronchitis.</p> <p><b>a) doxycycline hydrochloride</b></p> <p>b) benzylpenicillin</p> <p>c) acyclovir</p> <p>d) isoniazid</p> <p>e) chingamin</p>
<p>2. In a city N. when analyzing of drinking water a cholera bacillus was detected. What medicine should one prescribe to patients in case of cholera symptoms?</p> <p><b>a) doxycycline</b></p> <p>b) erythromycin</p> <p>c) bicylin – 5</p> <p>d) benzylpenicillin sodium</p> <p>e) benzylpenicillin potassium</p>
<p>3. To the patient doxycycline hydrochloride was prescribed in pills. Explain to the patient, how correctly should he use this preparation?</p> <p><b>A To swallow a whole pill, washing down water</b></p> <p>B To chew a pill, accepting during a meal</p> <p>C To use to the meal, washing down milk</p> <p>D To accept together with an antacid</p> <p>E To hold in an oral cavity to resolution</p>
<p>4. To a patient for treatment pneumonia doxycycline hydrochloride was prescribed. What group of antibiotics does this preparation belong to?</p> <p><b>A Tetracyclins</b></p> <p>B Aminoglykosides</p> <p>C Macrolides</p> <p>D Cephalosporins</p> <p>E Penicillins</p>
<p>5. During treatment of bronchitis a patient had dyspepsia disorders, photodermatitis, disorders of liver function. What preparation induced these phenomena?</p> <p><b>A Doxycycline</b></p> <p>B Paracetamol</p> <p>C Ascorbinic acid</p> <p>D Acetylcystein</p> <p>E Codeine phosphate</p>
<p>6. In course of pharmacotherapy of bronchitis a patient was found to have dyspeptic disorders, photodermatitis, liver dysfunction. Which of prescribed drugs might have caused these manifestations?</p> <p><b>a). * Doxycyclin</b></p> <p>b). Acetylcysteinum</p> <p>c). Ascorbic acid</p> <p>d).Codeine phosphate</p> <p>e). Paracetamolum</p>
<p>7. In course of pharmacotherapy of bronchitis a patient was found to have dyspeptic disorders, photodermatitis, and liver dysfunction. Which of the prescribed drugs might have caused these manifestations?</p> <p><b>A. Codeine phosphate</b></p> <p><b>B. Acetylcysteinum</b></p> <p><b>C. *Doxycyclin</b></p> <p><b>D. Ascorbic acid</b></p> <p><b>E. Paracetamolum</b></p>
<p><b>8. In the course of bronchitis pharmacotherapy, the patient has developed dyspeptic disorders, photodermatitis and hepatic failure. What drug can cause such disorders?</b></p>

- A. Doxycycline
- B. Paracetamol
- C. Ascorbic acid
- D. Acetylcysteine
- E. Codeine phosphate

### 100. Tetracycline

#### Tests

1. A doctor at a recreation center when suspecting cholera subscribed to a patient doxycycline hydrochloride. To what group of antibiotic does this medicine belong?
  - a) **tetracycline**
  - b) penicillin
  - c) cephalosporin
  - d) cyclic polypeptides
  - e) macrolides
2. Absorption of tetracycline preparations will be reduced when they are administered simultaneously with antacids. This is an example for:
  - A **Pharmacokinetic incompatibility**
  - B Pharmaceutical incompatibility
  - C Pharmacodynamic incompatibility
  - D Drugs synergism
  - E Functional drugs antagonism
3. A pharmaceutical enterprise offers wide range of antimicrobial agents. Select the broad spectrum antimicrobial agent
  - A. Griseofulvin
  - B. Rimantadine
  - C. **Tetracycline**
  - D. Phthalazolum
  - E. Nystatin

### 101. Cefotaxime

#### Tests

1. A pregnant woman fell ill with severe pneumonia. What antibacterial drug may be prescribed?
  - a). \* **Cefotaxime**
  - b). Co-trimoxazolum
  - c). Gentamycin sulfate
  - d). Ofloxacinum
  - e). Tetracycline hydrochloride
2. Antibiotics can be classified according to various principles. According to the action mechanism cephalosporins relate to the following group:
  - A. **Inhibitors of cell wall synthesis**
  - B. Inhibitors of protein synthesis
  - C. Inhibitors of respiratory processes
  - D. Inhibitors of oxidative phosphorylation
  - E. Inhibitors of cytoplasmic membrane synthesis

### 102. Ceftriaxon

#### Tests

1. A patient fell ill with severe pneumonia was prescribed ceftriaxonum once a day. Prescription of ceftriaxonum once a day connected with the fact that drug :
  - a). \***Slowly eliminated from the body**
  - b). Has bactericidal effect
  - c). Accumulates in the lungs
  - d). Pluripotential
  - e). Poorly absorbed from the injection site

### 103. Gramicidin

#### Tests

1. Antibiotics are classified by sources of production. Name an antibiotic of bacterial origin:

- A. **Gramicidin**
- B. Penicillin
- C. Tetracycline
- D. Lysozyme
- E. Gentamycin

### 104. Phthalazol

#### Tests

1. A patient being treated in infection disease ward for dysentery is administered phthalazol. What is the reason for phthalazol being used only for treatment of enteric infections?

- a). **The drug is not absorbed from the gastrointestinal tract**
- b). The high degree of reabsorption in the kidney
- c). Rapidly excreted in unchanged form
- d). Slowly eliminated from the body
- e). Poorly absorbed in the gastrointestinal tract

2. Sulfanilamides inhibit the growth and development of bacteria. The mechanism of their action is based on the impairment of the following acid synthesis:

- A. **Folic**
- B. Lipoic
- C. Nicotinic
- D. Pantothenic
- E. Pangamic

3. Sulfanilamides are widely used as bacteriostatic agents. The mechanism of antimicrobial action of sulfanilamides is based on their structural similarity to:

- A. **Para-aminobenzoic acid**
- B. Glutamic acid
- C. Folic acid
- D. Nucleic acid
- E. Antibiotics

### 105. Co-trimoxazole

#### Tests

1. Which of the listed antibacterial drugs should NOT be administered to a patient with diabetes mellitus type II being treated with glibenclamide?

- a). \* **Co-trimoxazole**
- b). Doxycycline
- c). Benzylpenicillin
- d). Midecamycin
- e). Gentamicin

2. A pharmacy has sulfonamide bisepitol on sale. What chemical compounds are the main components of this drug?

- a). \* Sulfamethoxazole, trimetoprim
- b). Phthalazolum, sulfadimezin
- c). Sulgin, norsulfazol
- d). Urosulfan, sulfapiridazin
- e). Sulfazin, salazodimethoxinum

3. Which of the listed antibacterial drugs **should NOT be administered** to a patient with diabetes mellitus type II being treated with glibenclamide?

- A. **Co-trimoxazole**
- B. Benzylpenicillin
- C. Doxycycline

- D. Gentamycinum
- E. Midecamycin

## *Antituberculous medicines*

### 106. Isoniazid

#### Tests

1. Studying about the antituberculosis drugs do not forget about the most effective artificial drug which is used different localization of tubercular process.

- a) **Isoniazid**
- b) Ethambutol
- c) Streptomycin
- d) Thiocetason
- e) Lomefloxacin

2. A patient has consumption. While anticonsumption treatment, eye - neuritis has appeared. Choose the medicine which has provoked this complication.

- a) **isoniazid**
- b) rimphampicin
- c) kanamycin
- d) ethambutol
- e) sodium para-aminosalicylate

3. To treat pulmonary tuberculosis a patient was prescribed antituberculosis medicine, inactivation speed of it by means of acetylation in liver is genetically conditioned and differs in different individuals. Define this medicine.

- a) **isoniazid**
- b) azitromicin
- c) amoxicilin
- d) amicacin
- e) cyprofloxacin

4. A 67-year-old patient was diagnosed with disseminated pulmonary tuberculosis. What drug will provide etiotropic pharmacotherapy?

- a). \* **Isoniazid**
- b). Lincomicin
- c). Thrimethoprim
- d). Metronidazole
- e). Benzylpenicillin sodium salt

5. The patient has been prescribed drug with antibacterial effect on tuberculosis mycobacteria. What drug is used in tuberculosis treatment and pyridoxine antivitamin?

- Isoniazide**
- Sulfanilamide
- Heparine
- Trimetoprim/sulfamethoxazol (Co-trimoxazole)
- Streptomycin

6. A 30 year-old patient suffering from pulmonary tuberculosis has been prescribed isoniazid. Continuous taking of this drug may lead to the deficiency of the following vitamin:

- A. Pyridoxine**
- B. Tocopherol
- C. Cobalamin
- D. Ergocalciferol
- E. Retinol

7. Patients ill with tuberculosis take a drug that is an antivitamin of nicotinic acid. Name this substance:

- A. Isoniazid**
- B. Sulfanilamide

- C. Acrichine
- D. Isoriboflavin
- E. Oxythiamine

### 107. Rifampicine

#### Tests

1. Patient with pulmonary form of tuberculosis was prescribed as an combined therapy antituberculous antibiotic. Name this medicine.

- A Rifampicine**
- B Benzylpenicyllin
- C Doxycycline
- D Cephtriaxon
- E Azytromicyn

2. Patient has tuberculosis. What preparation is used to treatment this disease?

- A Rifampicin**
- B Tetracyclin
- C Gentamycin
- D Ampicillin
- E Levomycetin

3. A 32-year-old patient takes antituberculous drugs. Some time later he has noticed that his urine turned orange. What preparation is the most likely cause of this phenomenon?

- a)\* Rifampicin**
- b) Streptomycin sulfate
- c) Ethambutol
- d) Pyrazinamide
- e) Isoniazid

### 108. Rovamycine

#### Tests

1. Choose a optimal antibacterial drug for the mycoplasmal pneumonia treatment:

- a). \* Rovamycine**
- b). Amoksiklav
- c). Penicillin
- d).Gentamycinum
- e). Ampicillin

A 26-year-old patient was diagnosed with community-acquired pneumonia provoked by mycoplasma. Choose the appropriate antimicrobial preparation for the patient treatment:

- a). \* Rovamycine**
- b). Amoksiklav
- c). Benzylpenicillinum
- d).Gentamycinum
- e). Amoxicillin

### 109. Streptomycine

#### Tests

1. A woman who has been treated for infiltrative local tuberculosis for a long time complains of acute hearing impairment. Which of the following preparations might be the cause of such side effect?

- a)\* Streptomycin**
- b) Isoniazid
- c) Etambutol
- d)Ethionamide
- e) Rifampicin

### 110. Ftivazide

#### Tests

1. A patient with tuberculosis has been prescribed some anti-TB preparations. Which of the following chemotherapeutic drugs has an effect on the tuberculosis pathogen?

- A. **Ftivazide**
- B. Furacilinum
- C. Methisazonum
- D. Sulfadimezinum
- E. Phthalylsulfathiazole

### 111. Oligomycin

#### Tests

1. Oligomycin antibiotic is prescribed to the patient with tuberculosis. What mitochondrial process is slowed down by this medicine?

- A. **Oxidative phosphorylation**
- B. Substrate-linked phosphorylation
- C. Microsomal oxidation
- D. Lipid peroxidation
- E. Oxidative decarboxylation

### *Antitumor medicines*

### 112. Actinomycin

#### Tests

1. A patient was prescribed with an antitumoral antibiotic that inhibits synthesis of nucleic acids in the cells. What of the following antibiotics has such a mechanism of action?

- A. **Actinomycin**
- B. Tetracycline
- C. Nystatin
- D. Lincomycin
- E. Erythromycin

### 113. Methotrexate

#### Tests

1. The anti-tumor preparation Methotrexate is a structural analogue of folic acid. The mechanism of its action is based on the inhibition of the following enzyme:

- A. **Dihydrofolate reductase**
- B. Xanthine oxidase
- C. Hexokinase
- D. Creatine kinase
- E. Lactate dehydrogenase

### *Antiviral medicines*

### 114. Acyclovir

#### Tests

1. A patient has herpetic appearance of skin rash. What medicine should one prescribe?

- a) **acyclovir**
- b) gentamycin
- c) clotrimazol
- d) benzylpenicillin
- e) biseptol

2. A patient after supercooling has herpes infection on lips. What preparation can be recommended to a patient?

- A **Acyclovir**
- B Itraconazol
- C Amoxycillin

D Prednisolone E Azidotimidine
3. A patient infected with herpes is prescribed a viricide. Choose it. <b>a) acyclovir</b> b) gancyclovir c) zidovudine d) remantadin e) lamivudin
4. Help a young doctor to choose chemotherapeutic agent available at your chemist's shop for treatment herpes. <b>a) Acyclovir</b> b) Rimphampicin c) Doxycycline hydrochloride d) Chingamin e) Zidovudine
5. What chemotherapeutic agent is a drug of choice for treatment of herpes? <b>A. Acyclovir</b> B. Rifampicin C. Doxycycline hydrochloride D. Chingamin E. Metronidazole
6. It is known that infectious type B hepatitis is a systemic disease caused by the type B hepatitis virus and characterized by a predominant liver affection. Choose from the below given list the drugs for the etiotropic therapy of this infection: <b>A. Acyclovir</b> B. Penicillin C. Tetracycline D. Sulfanilamides E. Fluoroquinolones

### 115. Interferon

Tests
1. A drugstore received a supply of a drug that is widely used for treatment of many virus diseases since it is not virus specific. What drug is it? <b>A. Interferon</b> B. Remantadin C. Metisazone D. Immunoglobulin E. Vaccine

### 116. Rimantadine

Tests
1. Pharmacy has received viricides. Choose the viricide used for influenza treatment from the list given below. <b>A. Rimantadine</b> B Acyclovir C Levamisole D Azidothimidine E Metisazone
2. A patient fell ill the day before, the disease is acute with a predominance of general toxic symptoms. With an account for the epidemic situation in the city, the doctor diagnosed the patient with influenza A. What emergency etiotropic treatment must be administered to this patient? <b>A. Rimantadine</b> B. Oxolinic ointment

- C. Gentamicin
- D. Inactivated influenza vaccine
- E. Human gamma globulin

### 117. Antigrippal immunoglobulin

#### Tests

1. A person has been in contact with influenza patient. What drug should be administered for specific passive influenza prophylaxis?
- A. Antigrippal immunoglobulin**
  - B. Vaccine influenza virus inactivated
  - C. Leukocytic interferon
  - D. Amizon
  - E. Anaferon

### *Antiprotozoal medicines. Antihelminthic medicines. Antifungal medicines*

### 118. Chingamin

#### Tests

1. For individual prevention of malaria a medicine was prescribed. Find it
- a) chingamin**
  - b) riphampicyn
  - c) ampicillin
  - d) gentamycin
  - e) biseptol
2. What drug should be administered for individual prevention of malaria?
- A. Chingamin**
  - B. Rifampicin
  - C. Ampicillin
  - D. Gentamicin
  - E. Biseptol (Co-Trimoxazole)

### 119. Metronidazole

#### Tests

1. A pharmacist told to a patient about the effects and mechanism of metronidazole action. Find the elements mechanism of this drug action:
- A Blocking of of alcohol dehydrogenase enzyme**
  - B Activating of alcohol dehydrogenase enzyme
  - C Blocking of acetylcholinesterase enzyme
  - D Activating of acetilkholinesterase enzyme
  - E Activating of glucose -6- phosphodehydrogenase enzyme
2. Which of anti - protozoal remedy is used in combination to medical triatment gastric ulcer?
- a) Metronidazole**
  - b) Famatidin
  - c) Omeprasol
  - d) Sucralfat
  - e) Allumag
3. To treat trichomoniasis one should use:
- a) metronidazole**
  - b) oletetrin
  - c) norphloxacin
  - d) nystatin
  - e) klaphoran
4. To treatment gastric ulcer, a doctor to recommend an antihelicobacter drug. What is this drug?
- a) metronidazole**
  - b) omeprazon
  - c) phamotidin

d) gastrocepin e) phestal
5. Trichomoniasis is identified. What antimicrobial medicine should one prescribe? <b>a) metronidazole</b> b) ampicillin c) kanamycin d) amphotericyn e) nystatin
6. A doctor-interner asked, what preparation it is better to prescribe to a patient with a diagnosis: amoeb dysentery. <b>A Metronidazol</b> B Pyrantel C Levomizole D Bicillin E Benzilpenicillin
7. A 56-year-old patient was diagnosed with systemic amebiasis accompanied by bowels, liver and lungs affection. What preparation should be administered? <b>a)*Metronidazole</b> b) Chiniofon c) Tetracycline d) Chingamin e) Phthalazol
8. A consulting pharmacist informed a patient about possible side effect of metronidazole that is normally provoked by alcohol intake. What is the mechanism of this phenomenon? <b>a). * Enzyme alcohol dehydrogenase blocking</b> b). Enzyme glucose 6-phosphaterase blocking c). Enzyme acethylcholinesterasa blocking d). Enzyme acethylcholinesterasa activation e). Enzyme alcohol dehydrogenase activation
9. A 52-year-old patient was diagnosed with systemic amebiasis accompanied by bowels, liver and lungs affection. What preparation should be administered? <b>A. *Metronidazole</b> B. Phthalazol C. Chingamin D. Chiniofon E. Tetracycline
10. What drug is more advisable for the patient with amebic dysentery? <b>A. *Metronidazole</b> B. Pyrantel C. Levamisole D. Bicillin-5 E. Benzylpenicillin sodium salt (Penicillin G sodium salt)

### ***Antidotes.***

#### **120. Deferoxamine**

##### **Tests**

1. Which preparation is the specific antidote in case of intoxication with iron preparation? a). * Deferoxamin b). Penicillamin c). Atropinum d). Bemegridum e). Protamine sulfate
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## 121. Unithiolum

### Tests

<p>1. Which of the listed preparations should be used as antidote and included into the first-aid kit required at factories where acute intoxications with arsenic, mercury, chrome and bismuth compounds are possible?</p> <p><b>a)* Unithiolum</b>  b) Adrenalinum  c) Droperidolum  d) Morphinum  e) Atropinum</p>
<p>2. During the treatment of chronic heart failure with digoxin in a patient having bradycardia, nausea, vomiting, blurred vision. Which drug is the antidote in this case?</p> <p>A. Atropine sulphate  B. Tetacinum calcium  C. Dipiroximum  D. Amyl nitrite  <b>E. Unithiol</b></p>
<p>3. During digitoxin therapy for chronic cardiac insufficiency, a patient developed signs of intoxication with this preparation. The patient was prescribed unithiol. What is the mechanism of unithiol action in case of intoxication with cardiac glycosides?</p> <p><b>A Reduction of K<sup>+</sup>-Na<sup>+</sup>-adenosine triphosphatase</b>  B Binding of calcium ions  C Increase of sodium concentration in the cardiomyocytes  D Increased potassium permeability in the cardiomyocytes  E Binding of glycoside into the complex compound</p>
<p>4. Treatment of poisonings with inorganic compounds includes the use of the following antidote:</p> <p>A. <b>Unithiol</b>  B. Dexamethasone  C. Desferal  D. Tetacinum-calcium  E. Naloxone</p>
<p>5. A patient with signs of mercury poisoning has been delivered into an admission room. What antidote should be prescribed in this case?</p> <p>A. Naloxone  B. Calcium chloride  C. Atropine sulfate  <b>D. Unithiol</b>  E. Proserin</p>
<p>6. A patient with signs of cardiac glycosides intoxication was prescribed Unithiol. What is the mechanism of drug action in this case?</p> <p><b>A. Reactivation of membrane K<sup>+</sup>, Na<sup>+</sup> - adenosine triphosphatase</b>  B. Induction of cardiac glycoside metabolism  C. Increased Na<sup>+</sup> content in myocardium  D. Binding of ionized Ca<sup>2+</sup>  E. Increased permeability of K<sup>+</sup> into myocardiocytes</p>