**List of pharmacology oral exam questions for the general medicine program**

**General pharmacology questions**

1. Pharmacology and its subdivisions, origin and sources of drugs, names of drugs, pharmacopoeia
2. Legislation related to the management of drugs, regulatory bodies
3. Preclinical and clinical evaluation of drugs
4. Routes of drug administration, advantages and disadvantages
5. Dosage forms
6. Communication with the patient when prescribing drugs, adherence, compliance, placebo and nocebo effect
7. Mechanisms of drug permeation through biological membranes – passive and specialized
8. Basic pharmacokinetic parameters and processes
9. Pharmacokinetic processes of zero and first order, saturation kinetics
10. Drug absorption, Bateman's function, bioavailability and its measurement, AUC
11. Drug distribution, volume of distribution, redistribution, binding of drugs to plasma proteins, barriers in the body
12. Elimination, biological half-life, (phase α, β), elimination rate constant, clearance
13. Dosing regimen, continuous and intermittent drug administration, drug accumulation, accumulation index
14. Biotransformation of drugs, phases, examples
15. The role of the liver in drug elimination, first pass effects
16. Inhibition and induction of enzymes by drugs, clinical significance
17. Renal and extrarenal excretion of drugs
18. The effect of drugs in general, the mode of action at the molecular level
19. Specific mechanism of drug action - target structures, receptor theory - types of receptors
20. Dose-response relationship, therapeutic index, therapeutic range (window), therapeutic risk
21. Factors affecting drug kinetics and dynamics
22. Drug interactions
23. Pharmacogenetics, genetic polymorphism
24. Tolerance, tachyphylaxis, resistance
25. The influence of concomitant diseases on the effect of drugs, polypharmacy
26. Adverse drug reactions
27. Drug allergy, idiosyncrasy
28. Carcinogenic and mutagenic effects
29. Drugs in pregnancy and breastfeeding, teratogenic effect
30. Pharmacotherapy in childhood
31. Pharmacotherapy in old age, polypharmacy

**Questions from special pharmacology**

1. Cholinergic transmission
2. Direct parasympathomimetics
3. Indirect parasymathomimetics
4. Parasympatholytics
5. Adrenergic transmission
6. Non-selective sympathomimetics
7. Alpha sympathomimetics
8. Beta sympathomimetics
9. Indirect sympathomimetics
10. Alpha sympatholytics
11. Beta sympatholytics
12. Drugs in ophthalmology
13. Muscle relaxants
14. Local anesthetics
15. General anesthetics - inhalation
16. General anesthetics - intravenous
17. Hypnotics
18. Benzodiazepines
19. Ethyl alcohol, methyl alcohol
20. Antiepileptic drugs
21. Antiparkinson drugs
22. Antipsychotics
23. Antidepressants – tricyclic, MAO inhibitors
24. Antidepressants – SSRIs, SNRIs and atypical antidepressants
25. Anxiolytics, mood stabilizers
26. Pharmacotherapy of Alzheimer's disease. Nootropics
27. Drug addiction
28. Cannabis, cannabinoids
29. Hallucinogens
30. Nicotine
31. Opium and its alkaloids
32. Morphine derivatives and substitutes
33. Eicosanoids
34. Analgesics-antipyretics
35. Nonsteroidal anti-inflammatory drugs
36. Pharmacotherapy of migraine
37. Antirheumatic drugs
38. Pharmacotherapy of gout
39. Immunosuppressants, immunostimulants
40. Drugs with a positive inotropic effect, digoxin
41. Antiarrhythmics
42. Methylxanthines and their derivatives
43. ACE inhibitors and angiotensin receptor antagonists
44. Diuretics
45. Calcium channel blockers
46. Nitrites and nitrates
47. Pharmacotherapy of heart failure
48. Pharmacotherapy of ischemic heart disease
49. Antihypertensives
50. Pharmacotherapy of atherosclerosis, hyperlipidemia
51. Parenteral anticoagulants
52. Oral anticoagulants
53. Fibrinolytics, thrombolytics, antifibrinolytics
54. Antiplatelet drugs
55. Pharmacotherapy of anemia
56. Antitussives, mucolytics, expectorant drugs
57. Antihistamines
58. Laxatives, antidiarrheals
59. Pharmacotherapy of peptic ulcer disease
60. Prokinetics, antiemetics, emetics
61. Pharmacotherapy of inflammatory bowel disease
62. Antispasmodic drugs
63. Hepatoprotective agents, cholagogues
64. Hormones of the hypothalamus and the pituitary gland, their analogues
65. Pharmacotherapy of thyroid diseases
66. Glucocorticoids, mineralocorticoids
67. Insulin, insulin analogues and glucagon
68. Oral antidiabetic drugs
69. Pharmacotherapy of obesity
70. Androgens, anabolic steroids
71. Estrogens, progestogens
72. Contraceptives
73. Pharmacotherapy of benign prostatic hyperplasia
74. Principles of antibiotic therapy
75. Penicillins, beta-lactamase inhibitors
76. Cephalosporins, carbapenems, monobactams
77. Aminoglycosides, quinolones
78. Lincosamides, glycopeptides, polymyxins
79. Tetracyclines, amphenicols
80. Chemotherapy of urinary and intestinal infections
81. Antituberculotics and leprostatic agents
82. Antimycotics
83. Antiviral drugs
84. Antiretroviral drugs
85. Antiparasitic drugs
86. Anticancer drugs
87. Contrast agents
88. Drugs used for local effect on the skin and mucous membranes
89. Infusion therapy
90. Fat soluble vitamins
91. Water soluble vitamins
92. Pharmacotherapy of osteoporosis
93. Phytotherapy
94. Alternative medicine methods
95. General toxicology
96. Poisoning and overdose therapy
97. Toxicology of plants and fungi
98. Toxicology of animal poisons
99. Mercury, arsenic and lead poisoning