

PHARMACOLOGY ORAL EXAM QUESTIONS

1. Drug permeation through biological barriers
2. Ionization of drugs, "ionic trap"
3. Distribution of drugs in the human body, volume of distribution
4. Drug biotransformation
5. Drug half-life of elimination
6. Clearance
7. Drug elimination kinetics
8. Drug bioavailability
9. Drug accumulation
10. Drug-receptor binding (the equilibrium dissociation constant K_d , binding affinity)
11. Drug-receptor regulation: desensitization, tolerance and spare receptors
12. Types of agonists
13. Types of antagonists
14. Types of receptors
15. Drugs with effects on ion channels
16. Dose-effect relationship: efficacy, potency, therapeutic index
17. Factors that modify action of drugs
18. Pharmacokinetic and pharmacodynamic drug interactions
19. Adverse effects of drugs
20. Pharmacogenetics: Clinical importance and typical examples
21. Development of new drugs, innovative and generic drugs
22. Direct-acting cholinomimetics
23. Indirect-acting cholinomimetics
24. Cholinoreceptor-blocking drugs
25. Neuromuscular junction blocking drugs
26. Sympathomimetics
27. Endogenous catecholamines
28. Sympatholytics
29. Alfa-receptor blocking drugs
30. Beta-receptor blocking drugs
31. Basic principles of antihypertensive treatment
32. Diuretics in antihypertensive treatment
33. Sympatholytics in antihypertensive treatment
34. Vasodilators
35. Inhibitors of rennin-angiotensin-aldosteron system
36. Calcium channel blockers
37. Antianginal drugs
38. Drugs for erectile dysfunction treatment
39. Drugs used in cardiac failure
40. Cardioactive glycosides
41. Drugs used in cardiac arrhythmia
42. Sodium channel blockers
43. Proximal tubule diuretics and osmotic diuretics
44. Loop diuretics
45. Thiazides and potassium sparing diuretics
46. Histamine and antihistaminic drugs
47. Ergot alkaloids
48. Pharmacology of serotonin
49. Drugs used in asthma
50. Anxiolytics and hypnotics
51. Antiseizure drugs
52. General anesthetics
53. Local anesthetics
54. Skeletal muscle relaxants
55. Antiparkinsonics
56. Antipsychotics
57. Lithium, mood stabilizers and drugs for bipolar disorders
58. Antidepressants
59. Opioid analgesics
60. Pharmacology of drugs of abuse
61. Iron in treatment of anemia
62. Vitamin B12 and folic acid in treatment of anemia
63. Hematopoietic growth factors
64. Indirect thrombin inhibitors
65. Direct thrombin inhibitors
66. Warfarin and coumarin anticoagulants
67. Fibrinolytic drugs
68. Antiplatelet drugs
69. Drugs used in dyslipidemia
70. Nonsteroidal anti-inflammatory drugs
71. Disease-modifying anti-rheumatic drugs
72. Paracetamol (acetaminophen) and metamizole
73. Drugs for treatment of gout
74. Pituitary hormones: growth hormone, antagonist octreotide, oxytocin, antagonists of prolactin, vasopressin
75. Thyroid hormones and antithyroid drugs
76. Glucocorticoids
77. Estrogens and progestins
78. Hormone contraception
79. Inhibitors and antagonists of estrogens and progestins
80. Androgens and anabolic steroids
81. Anti-androgens
82. Insulin
83. Oral antidiabetic drugs
84. Drugs used in treatment of osteoporosis
85. Beta-lactam antibiotics
86. Penicillins
87. Cephalosporins
88. Non beta-lactam inhibitors of bacterial cell wall or membrane synthesis
89. Chloramphenicol and tetracyclines
90. Macrolides and clindamycin
91. Streptogramins and oxazolidinones
92. Aminoglycosides
93. Sulfonamides
94. Fluoroquinolones
95. Antimycobacterial drugs
96. Antifungal drugs
97. Drugs for treatment of Herpes simplex, Varicella zoster and Cytomegalovirus infections
98. Antiretroviral drugs
99. Anti-influenza agents and anti-viral drugs for hepatitis treatment
100. Other antimicrobial agents: Metronidazole, nitrofurantoin, mupirocin
101. Anthelmintic drugs
102. Cancer chemotherapeutic drugs
103. Pharmacology of antimetabolite drugs
104. Immunosuppressive agents
105. Immunologic reactions to drugs and drug allergy
106. Drugs used in acid-peptic diseases
107. Antacids and mucosal protective agents
108. Antiemetic agents
109. Laxatives
110. Drugs used in inflammatory bowel disease treatment