

QUESTIONNAIRE
Pharmacology 2016/2017

GENERAL PRINCIPLES

1. Basics of pharmacology. Definition of a drug. Drug names – types. Essential drugs.
2. Development of a drug – stages and phases.
3. Passive transport of drugs – types and characterization.
4. Active transport of drugs. Transporters – types.
5. Routes of drug administration. Absorption – definition and characterization. Bioavailability.
6. Drug distribution. Factors affecting drug distribution. Volume of distribution.
7. Metabolism (biotransformation) of drugs. Phase I reactions. Significance.
8. Metabolism (biotransformation) of drugs. Phase II reactions. Significance.
9. Renal excretion of drugs and their metabolites.
10. Extrarenal excretion of drugs.
11. Drug action and drug effect. Types of drug effects. Non-specific action of drugs.
12. Specific action of drugs – drug targets. Receptor superfamilies according to the mechanism of transmembrane signaling.
13. Drug-receptor interaction. Characteristics of receptor-acting drugs.
14. Dose-response relationship – types. Criteria for drug safety.
15. Factors modifying drug action – gender, age and weight.
16. Factors modifying drug action – genetic polymorphism, diseases, biorhythms.
17. Repeated administration of drugs.
18. Drug combinations. Levels and mechanisms of drug interactions.
19. Drug toxicology.

**PHARMACOLOGY OF THE NERVOUS SYSTEM AND MAJOR ORGAN SYSTEMS,
CHEMOTHERAPEUTIC DRUGS**

20. Cholinergic transmission. Classification of drugs affecting cholinergic transmission.
21. Cholinomimetic drugs – anticholinesterase drugs, muscarinic agonists and nicotinic agonists.
22. Muscarinic antagonists. Nicotinic antagonists (neuromuscular-blocking drugs).
23. Adrenergic transmission. Classification of drugs affecting adrenergic transmission.
24. Alpha-adrenomimetics. Alpha-adrenoreceptor antagonists (alpha blockers).
25. Beta-adrenoreceptor agonists and antagonists.

26. Non-adrenergic non-cholinergic neurotransmission.
27. Eicosanoids: prostanoids and leucotrienes. Clinical uses.
28. Non-opioid analgesics.
29. Non-steroidal anti-inflammatory drugs.
30. Disease-modifying anti-rheumatoid drugs. Drugs used in gout.
31. Pharmacology of histamine. H₁ and H₂ receptor antagonists.
32. Pharmacology of serotonin (5-hydroxytryptamine). Drugs affecting serotonergic transmission.
33. Local anesthetics.
34. Pharmacological aspects of CNS structure and functioning.
35. Opioid analgesics and antagonists.
36. General anesthetics.
37. Sedative-hypnotic drugs.
38. Antiepileptic drugs. Anticonvulsants.
39. Pharmacologic management of parkinsonism.
40. Antipsychotic drugs (neuroleptics).
41. Antidepressants. Mood stabilizers.
42. Psychostimulants. Drugs of abuse.
43. Drugs affecting renin-angiotensin-aldosterone system.
44. Cardioinotropic drugs.
45. Peripheral vasoactive drugs. Antihypertensive drugs.
46. Diuretics.
47. Calcium channel blockers.
48. Antihypertensive drugs.
49. Antianginal drugs.
50. Antidysrhythmic drugs.
51. Lipid-lowering drugs.
52. Drugs affecting erythropoiesis.
53. Antithrombotic drugs – anticoagulants.
54. Antithrombotic drugs – fibrinolytics and antiplatelet drugs.
55. Drugs used in bleeding – vitamin K, inhibitors of fibrinolysis, local haemostatics.
56. Beta-lactam antibiotics – penicillins.
57. Beta-lactam antibiotics – cephalosporins, carbapenems.
58. Aminoglycosides. Glycopeptides.
59. Flouroquinolones.

60. Tetracyclines. Chloramphenicol.
61. Macrolides. Lincosamides..
62. Sulfonamides. Oxazolidinones.
63. Antianaerobic drugs. Uroantiseptics. Antiseptics.
64. Antimycobacterial drugs.
65. Antifungal drugs.
66. Antiviral drugs.
67. Antiulcer drugs.
68. Antiemetic drugs. Appetite stimulating drugs. Drugs used in obesity.
69. Drugs affecting gastro-intestinal motility – prokinetics, laxatives, antidiarrhoeal drugs, spasmolytics.
70. Carminative drugs. Pancreatic enzymes. Hepatoprotectors.
71. Drugs affecting the respiratory system.
72. Drugs affecting the uterus.
73. Drugs with activity of hypothalamic hormones and antagonists.
74. Drugs with activity of pituitary hormones and antagonists.
75. Drugs with activity of gonadal hormones and antagonists.
76. Oral contraceptive drugs. Drugs for hormone replacement therapy. Drugs used in infertility.
77. Drugs acting on bone mineral homeostasis.
78. Glucocorticosteroid and mineralcorticoid drugs.
79. Antidiabetic and antihypoglycaemic drugs.
80. Thyroid and antithyroid drugs.
81. Cancer chemotherapy.
82. Immunopharmacology.

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