

**RAJIV GANDHI UNIVERSITY OF HEALTH SCIENCE  
KARNATAKA**

FACULTY: PHARMACY

COURSE: B.PHARM

SCHEME: RS4

YEAR: III B.PHARM.

SUBJECT: PHARMACOLOGY-I

**QUESTION BANK**

**LONG ESSAY**

1. Classify adrenergic agents. Write the pharmacology of adrenaline
2. Classify adrenergic agents. Write the pharmacology of adrenaline.
3. Classify anti-adrenergics with examples. Write the therapeutic uses and adverse effects of propranolol
4. Classify antianginal agents and write the pharmacological actions of nitrovasodilators
5. Classify Antiarrhythmics with examples and write the pharmacology of verapamil
6. Classify anti-asthmatic agents. Explain the pharmacology of sympathomimetics (salbutamol)
7. Classify anti-asthmatic agents. Explain the pharmacology of Xanthine derivatives
8. Classify anti-cholinergics with examples. Describe the pharmacological actions of Atropine.
9. Classify anticoagulants and discuss the pharmacology of Heparin.
10. Classify anti-histamines. Explain the pharmacology of H1 antagonists
11. Classify antihypertensive agents and write pharmacology of captopril
12. Classify antihypertensive agents with examples. Explain mechanism of action of any two categories of antihypertensives
13. Classify anti-hypertensive with examples. Write the Pharmacology of phenoxybenzamine.
14. Classify antithyroid drugs and explain the pharmacology of propylthiouracil
15. Classify bronchodilators. Explain the pharmacology of salbutamol

16. Classify cholinesterase inhibitors with example and write the difference between physostigmine and neostigmine.
17. Classify diuretics with examples & discuss the pharmacology of chlorthiazide.
18. Classify drug-drug interaction. Explain in detail the pharmacokinetic drug-drug interactions with examples.
19. Classify hypolipidemic agents with examples, write the pharmacology of Atorvastatin
20. Classify of anti-hypertensive drugs with examples. Write a note on ACE inhibitor
21. Classify oral contraceptive pills and explain their MOA
22. Classify oral hypoglycemic agents and explain the pharmacology of sulphonyl ureas
23. Classify skeletal muscle relaxants and write the pharmacological actions of succinylcholine
24. Classify sympathomimetics and write the pharmacological actions indirect acting sympathomimetics
25. Define absorption of drug Explain the factors affecting drug absorption
26. Describe in detail the process of drug absorption and factors affecting the absorption
27. Describe the biosynthesis of histamine, 5-HT and Prostaglandin derivatives
28. Describe the factors modifying drug effects.
29. Discuss the processes of Bio-transformation of drug with suitable examples
30. Discuss in detail the process of Bio-transformation with suitable examples.
31. Discuss the common characteristics of thrombolytic agents.
32. Discuss the commonly encountered causes of edema & give its treatment.
33. Discuss the pharmacology of acetazolamide.
34. Discuss the pharmacology of ADH
35. Discuss the pharmacology of warfarin.
36. Enumerate different routes of administration and write the merits and demerits of enteral and parenteral administration
37. Enumerate the different mechanisms by which the drugs produce their effect. Write a note on synergism
38. Explain different types of drug-drug interactions
39. Explain in detail neurohumoral transmission of adrenergic and cholinergic transmission
40. Explain the chemistry and synthesis of thyroid hormones

41. Explain the detail about neurohumoral transmission of adrenergic and cholinergic transmission
42. Explain the drug-receptor interactions. Add a note on G protein coupled receptors
43. Explain the metabolic role of insulin and regulation of its secretion
44. Explain the physiological action of thyroid hormones
45. Explain the regulation & actions of male sex hormones
46. Name three calcium channel blockers used in angina pectoris. Write the pharmacological actions of a
47. Pharmacology of Drugs acting on blood & blood forming agents
48. What are different routes of drug administration? Describe transdermal system.
49. What is congestive heart failure? Describe the pharmacology of Digoxin
50. Write about oral anti-cpoagulants
51. Write pharmacological actions and therapeutic uses of any two drugs with ACE inhibitory effect
52. Write signs, symptoms and treatment of organophosphorus poisoning
53. Write the pharmacological actions of beta blockers with membrane stabilizing effect. Mention their th

## SHORT ESSAYS

1. Biotransformation of drugs.
2. Briefly explain “Therapeutic Index” and give its significance.
3. Briefly explain first pass effect.
4. Briefly explain the important concepts of drug excretion.
5. Bring out the comparisons between heparin & warfarin.
6. Classify expectorants with examples
7. Classify  $\alpha$  - adrenergic receptor antagonists with examples.
8. Classify 5-HT receptor antagonists
9. Classify adrenergic drugs.
10. Classify anti-anginal drugs.
11. Classify antiarrhythmic agents with examples
12. Classify antiasthamitic agents
13. Classify anticholinestrases with examples and add note on organophosphorus poisoning
14. Classify anti-coagulants with examples. Write the mechanism of action of heparin
15. Classify antihypertensives with examples
16. Classify antithyroid agents with examples and write mechanism of action of propylthiouracil
17. Classify cholinergic receptors. Write the pharmacological effects due to stimulation of cholinceptors
18. Classify diuretics with examples and write therapeutic uses of Mannitol
19. Classify diuretics. Discuss the mechanism of actions and uses of thiazide diuretics
20. Classify H1 antagonists
21. Classify hyperlipidemic agents. Write the mechanism of action and uses of Atorvastatin
22. Classify Hypolipidemic drugs and write the mechanism of action and Uses of HMG-CoA reductase in

23. Classify Neuromuscular Blocker. Write a note on d- Tubocurarine
24. Classify oral contraceptive agents and write about of their adverse effects
25. Classify oral hypoglycemic agents with examples. Explain mechanism of action of glipizide
26. Classify oxytocics and write actions & physiological role of oxytocin
27. Classify skeletal muscle relaxants. Write a note on D-tubocurarine
28. Classify the antihistaminics with examples
29. Classify tocolytics
30. Compare the pharmacological actions of d-tubocurarine and succinylcholine.
31. Define a) Therapeutic index. b) Bio availability c) Bio equivalence d) Drug
32. Define absorption & write the factors affecting them
33. Define bioavailability. Explain the factors affecting bio availability
34. Define drug interaction. Add a note on mechanism of drug interaction
35. Define drug interaction. Add a note on mechanism of in-vivo drug –drug interaction
36. Define drug. Name the various sources of drug.
37. Define ganglionic blockers with suitable examples, explain their mechanism of action and therapeutic uses
38. Define Pharmacokinetics & Pharmacodynamics
39. Describe acute toxicity of iron preparations
40. Describe the actions & pathological role of Prostaglandin products in inflammation
41. Describe the actions of PG derived products
42. Describe the mechanism of action of coumarin derivative anticoagulants
43. Describe the Pharmacology of Captopril
44. Describe the therapeutic applications of diuretics.
45. Discuss adverse drug effects.
46. Discuss factors modifying drug effects.
47. Discuss the drugs used to treat bleeding.
48. Discuss the factors affecting drug distribution.

49. Discuss the importance of  $\beta_2$ -receptor antagonists with example.
50. Discuss the importance of phase II clinical trial.
51. Discuss the Mechanism of actions and uses of loop diuretics and Thiazide Diuretics
52. Discuss the mechanism of drug interaction involving alteration pharmacokinetic properties of drugs
53. Discuss the metabolism of catecholamines.
54. Discuss the pharmacological actions and uses of neostigmine
55. Discuss the pharmacology of Adrenaline.
56. Discuss the pharmacology of centrally acting anti hypertensive agent.
57. Discuss the pharmacology of diltiazem.
58. Discuss the SAR of catecholamines.
59. Discuss the treatment of megaloblastic anaemia
60. Discuss thrombolytics
61. Enlist Insulin preparations.
62. Explain additive effect
63. Explain drug-drug interactions with examples
64. Explain drugs used for different types Anaemia
65. Explain mechanism and pharmacological actions of spironolactone
66. Explain Pharmacology of any one ganglion blockers
67. Explain Tachyphylaxis with examples.
68. Explain the actions of adrenaline.
69. Explain the basis for combination therapy of vasodilators with  $\beta$ -blockers & diuretics.
70. Explain the biotransformation of drugs.
71. Explain the combined effect of drugs with examples
72. Explain the mechanism of action of streptokinase and urokinase
73. Explain the pharmacological actions of glucocorticoids
74. Explain the pharmacological actions of Insulin
75. Explain the pharmacological actions of insulin with preparations
76. Explain the regulation & actions of female sex hormones

77. Explain the role of second messengers in drug actions.
78. Explain the synergistic effects of drugs with examples
79. Explain the terms additive effect & synergism with examples.
80. Explain the therapeutic uses of acetazolamide.
81. Explain why aspirin is used in post-myocardial infraction patients.
82. Give an account of drug-receptor interactions
83. Give merits & demerits of I.V route.
84. Give two examples of haemopoietics
85. List iron preparations and write therapeutic uses of iron and vit B<sub>12</sub>
86. Mechanism of action of Folic acid
87. Mechanism of action of oral anticoagulants
88. Mechanism of action of Streptokinase
89. Mention agents causing drug abuse.
90. Mention different adrenergic receptors with their antagonists
91. Mention various sources of drugs with example
92. Name any two potassium-sparing diuretics & write the mechanism of action of spironolactone.
93. What are oxytocics? Classify them with examples
94. What are anticholinesterase drugs, classify & discuss the pharmacology isofluorophate.
95. What are uterine relaxants ? Classify with examples
96. What are uterine relaxants or tocolytics? Classify
97. What are uterine stimulants/ oxytocics/ abortifacients? Classify them
98. What do you mean by myasthenia gravis? Explain how cholinergic drugs are useful in myasthenia gravis
99. What is anaphylaxis? Explain with examples.
100. What is angina pectoris. Classify & give its causes.
101. Discuss the pharmacology of clofibrate.
102. What is Glaucoma? Give its treatment.
103. What is idiosyncrasy? Explain with examples.

104. What is iontophoresis. Explain.
105. What is myasthenia gravis? Explain how cholinergic drugs are useful in myasthenia gravis
106. What is myasthenia gravis? Give its treatment.
107. What is Pinocytosis? Explain
108. What is teratogenicity & carcinogenicity? Mention two causative drug for each.
109. What is volume of distribution? Give the significance.
110. Why dietary  $k^+$  supplements are required for patients treated with thiazide diuretics.
111. Why the use of ganglionic blockers are obsolete?
112. Write a note a ACE inhibitors
113. Write a note non-sedative anti-histamines
114. Write a note on drug intolerance.
115. Write a note on drug receptor interaction
116. Write a note on drug receptor interactions
117. Write a note on drug toxicity
118. Write a note on drugs used for Anaemia
119. Write a note on haematinic
120. Write a note on Haemopoietics
121. Write a note on Insulin preparations
122. Write a note on insulin preparations
123. Write a note on organophosphorus poisoning and its treatment
124. Write a note on osmotic diuretics
125. Write a note on oximes.
126. Write a note on second generation /non-sedative anti-histamines
127. Write a note on second messengers
128. Write a note on sublingual route of drug administration.
129. Write a note on tissue-type plasminogen activator.
130. Write a note Tachyphylaxis
131. Write about biosynthesis of catecholamines

132. Write ADRs of oral contraceptive pills
133. Write briefly on G-proteins.
134. Write mechanism of action of saralasin.
135. Write on Structure activity relationship of drugs.
136. Write pharmacological action of Atropine
137. Write the advantages and disadvantages of intra muscular route of drug administration
138. Write the advantages and disadvantages of parenteral route of drug administration
139. Write the adverse effects commonly observed with cholinergic antagonists.
140. Write the classification of hyperlipidemics. Explain the complication of dyslipidemia
141. Write the factors modifying the drug action
142. Write the importance of plasma-protein binding.
143. Write the mechanism of action ACE inhibitors
144. Write the Mechanism of action and uses of organic nitrates
145. Write the mechanism of action and uses of clonidine.
146. Write the mechanism of action of anyone of the adrenergic neuron blockers.
147. Write the mechanism of action of sulfonyl ureas and biguanides
148. Write the mechanism of action, adverse effects of Digoxin
149. Write the pharmacological action of Acetylcholine
150. Write the pharmacological action of  $\beta$  blocker
151. Write the pharmacological actions and adverse effects of calcium channel blockers
152. Write the pharmacological actions and therapeutic uses of Acetazolamide and furosemide
153. Write the pharmacological actions of Quinidine.
154. Write the pharmacology of Captopril
155. Write the role of G-protein coupled receptor
156. Write the role of platelet activating factor.

157. Write the therapeutic uses and adverse effects of skeletal muscle relaxants.
158. Write the therapeutic uses of atropine
159. Write the therapeutic uses of PG and derivatives

### SHORT ANSWERS

1. Advantages of oral route of drug administration
2. Adverse effects and contraindications of heparin
3. Adverse reaction of D-tubocurarine
4. Adverse reactions and therapeutic Reserpine.
5. Antiplatelet agents
6. Classify 5-HT receptor antagonists
7. Classify adrenergic drugs.
8. Classify anti tussives with examples
9. Classify anti-anginal drugs.

10. Classify ganglion blocking agents
11. Classify H1 antagonists
12. Classify hypotensive agents
13. Classify mucolytic agents with examples
14. Classify neuromuscular blocking agents.
15. Classify oral anticoagulants
16. Define adverse reactions of diuretics
17. Define and write the significance of half life of a drug
18. Define bioavailability
19. Define chronic toxicity
20. Define competitive and Non-competitive Antagonism
21. Define Drug dependence.
22. Define Drug tolerance.
23. Define LD<sub>50</sub>
24. Define mucolytics. Give two examples
25. Define phase I and Phase II biotransformation
26. Define receptor
27. Define Spare receptors
28. Define Tachyphylaxis
29. Define therapeutic index
30. Define Volume of distribution.
31. Define: prodrug and placebo

32. Describe the actions & pathological role of PG derived products in inflammation
33. Describe the actions of PG derived products
34. Drugs used in vertigo
35. Enlist adverse reactions of drugs.
36. Enlist drugs used in glaucoma
37. Enlist four nasal decongestants
38. Enlist insulin preparations
39. Enlist Low molecular weight heparins
40. Enlist the therapeutic uses of Alteplase.
41. Explain dales vasomotor phenomenon
42. Explain Drug tolerance
43. Explain the MOA of theophylline / xanthine derivatives
44. Give the advantage of calcium channel blockers over other antihypertensives
45. Give the uses of folic acid.
46. Haemopoetics
47. Idiosyncrasy
48. List adverse drug reactions of antihistaminics
49. MAO of acarbose / write a note on acarbose/ alpha glucosidase inhibitors
50. Mast cell stabilizer: sodium chromoglycate
51. Mechanism of action of potassium channel activators.
52. Mention the alternative therapies in heart failure.
53. Mention uterine relaxants

54. Name antihypertensive drugs used in pregnancy
55. Name any two drugs that are carcinogenic in nature.
56. Name any two drugs that cause teratogenic effect.
57. Name different catecholamines.
58. Name different types of 5-HT receptors and their antagonists
59. Name different types of prostaglandins
60. Name four muscarinic receptor blockers.
61. Name the drugs that lower serum lipoprotein concentration.
62. Name the drugs used in the treatment of organophosphate poisoning
63. Name two platelet aggregation inhibitors.
64. Role of second messengers in drug action
65. Therapeutic uses of Furosemide.
66. Therapeutic uses of atropine
67. Therapeutic uses of Cyanocobalamin
68. Therapeutic uses of histamine
69. Therapeutic uses of Losartan
70. Therapeutic uses of Procainamide
71. Therapeutic uses of pyridoxine
72. Therapeutic uses of Spiranolactone
73. Therapeutic uses of vasopressin.
74. What are adverse reactions of drugs.
75. What are expectorants / mucokinetics. Give four examples

76. What do you mean by cycloplegia?
77. What DRC of drug
78. What is Teratogenicity and carcinogenicity
79. Why pilocarpine is preferred over other miotic agents in the treatment of glaucoma.
80. Write a note on anabolic steroids
81. Write a note on Montelukast and zafirlukast
82. Write a note on radioiodide
83. Write a note on SAR.
84. Write a note on second generation /non-sedative anti-histamines
85. Write a note on side effects of Insulin preparations
86. Write a note on therapeutic index.
87. Write a note on tocolytics
88. Write Biosynthesis and degradation of 5-HT
89. Write brief note second messengers.
90. Write mechanism of action of Theophylline
91. Write note on biguanides and thiazolidinediones
92. Write significance of enterohepatic circulation.
93. Write significance of Protein binding
94. Write the adverse effects of heparin
95. Write the importance of SAR in drug discovery
96. Write the significance of entero hepatic circulation.
97. Write the significance of structural activity relationship.

98. Write the therapeutic use of colestipol.
99. Write the therapeutic use of Protamine sulphate
100. Write the therapeutic uses of carbachol.
101. Write the therapeutic uses of PG and derivatives
102. Write the therapeutic uses of scopolamine.
103. Write the toxicity of sodium nitroprusside.
104. Write the use of Protamine sulphate.
105. Write the used of vitamin k.
106. Write therapeutic uses of Trimethaphan.
107. Write therapeutic uses of Vitamin K

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