



East Point Campus, Jnana Prabha, Virgo Nagar Post,
Bengaluru – 560049, Karnataka

QUESTION BANK

B Pharmacy

Semester-V



East Point Campus, Jnana Prabha, Virgo Nagar Post,
Bengaluru – 560049, Karnataka

Medicinal Chemistry-2

LONG ESSAY 10 MARKS

- 1 What are antineoplastic agents? Classify them with example? Discuss the mechanism of action of alkylating agents. Outline the synthesis of Mechlorethamine.
- 2 Define and Classify antihypertensive agents? Explain the MOA of Angiotensin Receptor Blockers. Write the synthesis of Methyl Dopa.
- 3 Define and classify local anaesthetic agents with examples. Explain the SAR of local anaesthetic agents.
- 4 Define and classify antihistaminic agents with suitable examples and explain the synthesis of diphenhydramine HCl
- 5 Define and classify diuretics with examples. Explain the mechanism of action of loop diuretics and write the synthesis of furosemide
- 6 Define and classify local anaesthetics with suitable examples and write the SAR of benzoic acid derivatives
- 7 What are H1 receptor antagonists? Explain their mechanism of action? Outline the synthesis of Diphenhydramine HCl and Promethazine HCl.
- 8 Define and classify diuretics with suitable examples. Explain the Mechanism of action of Carbonic anhydrase inhibitors and write the synthesis of Acetazolamide.
- 9 Define and Classify Local anesthetics with suitable examples and write the SAR of lidocaine derivatives.
- 10 Define and Classify Antihistaminic agents with examples. Outline the method for synthesis of Diphenhydramine and Promethazine.
- 11 Define and classify Diuretics with examples? Explain the mechanism of action of Loop diuretics and give the synthesis of Furosemide.
- 12 Classify local anaesthetic agents and explain their mechanism of action. Write the synthesis and uses of procaine and Dibucaine.
- 13 Classify antineoplastic agents with example. Outline the synthesis of Mercaptopurine and Methotrexate.

- 14 Classify antihypertensive agents with examples? Write the MOA of Calcium channels blockers and give the synthesis of Isosorbide dinitrite.
- 15 Classify local anaesthetic agents and discuss SAR of Benzoic acid and Anilide class of local anaesthetic agents with suitable examples.
- 16 Define and classify local anaesthetic agent with examples. Outline the synthesis of Benzocaine and Dibucaine.
- 17 Define and classify Diuretics with examples? Explain the mechanism of action of carbonic anhydrase inhibitors and give the synthesis of acetazolamide.
- 18 Define antihistaminic agents, classify them with examples. Give the synthesis of promethazine and Triprolidine.
- 19 Define and Classify antineoplastic agents with suitable examples. Explain the synthesis and uses of Methotrexate?
- 20 Define and classify diuretics with examples. Explain the mechanism of action of thiazide diuretics and write the synthesis of chlorthiazide.
- 21 Define and Classify antidiabetic agents with suitable examples. Write the synthesis of tolbutamide.
- 22 Define and Classify H1 receptor antagonists with suitable examples. Outline the synthesis of promethazine and triprolidine HCl.
- 23 Define and classify diuretics with examples. Explain the mechanism of action of carbonic anhydrase inhibitors and explain the synthesis of acetazolamide.
- 24 Define and Classify local anaesthetic agents with suitable examples. Add a note on SAR of lidocaine derivatives.
- 25 What are H1 receptor antagonists? Explain the mechanism of action and synthesis of promethazine HCl
- 26 What are antihypertensive agents? Classify with examples and explain the mechanism of action of clonidine

- 27 Define and classify antidiabetic agents with examples. Write the synthesis and mechanism of action of tolbutamide
- 28 Define and Classify H1 receptor antagonists with suitable examples. Outline the synthesis of Diphenhydramine and promethazine
- 29 Define and classify diuretics with examples. Explain the mechanism of action of loop diuretics? Outline the synthesis of furosemide.
- 30 Define and Classify local anesthetics agents with suitable examples. Add a note on SAR of benzoic acid derivatives.

SHORT ESSAY 05 MARKS

- 1 Define and classify antihistaminic agents with examples and give the synthesis of diphenhydramine HCl.
- 2 Write a note on antianginal agents. Explain the synthesis of Isosorbide dinitrite.
- 3 What are antiarrhythmic drugs? Write the structure and uses of procainamide HCl, phenytoin sodium, lidocaine HCl and amiodarone.
- 4 Define antihyperlipidemic agents? Write the structure and uses of clofibrate, lovastatin, cholesteramine and cholestipol.
- 5 Define coagulants and anticoagulants? Write the structure and uses of warfarin, menadione, acetomenadione and anisindione.
- 6 Write a note on thyroid and antithyroid drugs.
- 7 Write the structure and uses of cortisone, hydrocortisone, prednisolone and dexamethasone, Betamethasone
- 8 Explain the metabolism of steroids.
- 9 Define and classify local anaesthetics with suitable examples.
- 10 Define and Classify antihistaminic agents with examples? Give the synthesis and uses of promethazine.
- 11 Explain the role of alkylating agents as anti cancer drugs.
- 12 What are calcium channel blockers? Explain the mechanism of action of nifedipine

- 13 What are coagulant and anticoagulant agents? Write the synthesis of warfarin
- 14 Explain the chemistry of cardiac glycosides used in CHF.
- 15 What are antihyperlipidemic agents? Explain the mechanism of action of clofibrate
- 16 Explain the stereochemistry of steroids.
- 17 Write the structure and uses of a) Norgestril b) Betamethasone c) Testosterone d) Sildenafil e) Nandralone
- 18 Write a note on thyroid and antithyroid drugs
- 19 What are glucosidase inhibitors? Give examples and explain their mechanism of action
- 20 Classify alkylating agents with examples and outline the synthesis of mechlorethamine
- 21 Write a note on antianginal agents and explain the synthesis of nitroglycerin
- 22 What are antiarrhythmic drugs? Write the structure and uses of quinidine, procainamide HCl, phenytoin sodium and amiodarone
- 23 Write a note on antihyperlipidemic agents
- 24 What are coagulants and anticoagulants? Write the synthesis of warfarin
- 25 Write the structure and uses of testosterone, diethyl stilbestrol, estrone, prednisolone and dexamethasone
- 26 Write a note on thyroid and antithyroid drugs
- 27 Discuss the metabolism of steroids
- 28 Define and classify oral hypoglycaemic agents with examples and write the synthesis of tolbutamide
- 29 What are carbonic anhydrase inhibitors? Outline the synthesis and medicinal uses of acetazolamide.
- 30 Define and Classify antiarrhythmic agents with examples? Give their Medicinal uses.
- 31 What are antihyperlipidemic agents? Explain their mechanism of action. Write the structure and uses of Clofibrate and Lovastatin.
- 32 What are anticoagulants? Give the mechanism of action and synthesis of Warfarin
- 33 Write a note on metabolism of Steroids.
- 34 Discuss about the drugs used for erectile dysfunction.

- 35 What are estrogens? Discuss about synthetic estrogens.
- 36 Define the term hypoglycemic agents. Give the structure of any two sulfonylureas and outline the synthesis of Tolbutamide.
- 37 Write a note on H₂ receptor antagonists. Give the synthesis of Cimetidine.
- 38 Outline the synthesis of mercaptopurine and meclorethamine.
- 39 Explain a note on antianginal agents. Outline the synthesis of nitroglycerine.
- 40 Define antiarrhythmic drugs? Write the structure and uses of quinidine sulphate, phenytoin sodium, tocainamide HCl and mexiletin HCl.
- 41 Discuss about antithyroid drugs with suitable examples?
- 42 Write a note on antihyperlipidemic agents.
- 43 Outline the synthesis of warfarin and give its mechanism of action
- 44 Describe the nomenclature and stereochemistry of steroids.
- 45 Write a note on sex hormones.
- 46 Define antidiabetic drugs. Write the structure and uses of metformin, pioglitazone, glipizide and acarbose.
- 47 Classify antiarrhythmic agents with examples? Give the synthesis of Disopyramide.
- 48 Discuss about the medicinal importance of Corticosteroids and give the structures and uses of any two Corticosteroids.
- 49 Describe the chemistry of oral contraceptives.
- 50 Write a note on antithyroid drugs and give the structure and uses of any two.
- 51 What are hypoglycemic agents? Discuss about Glucosidase inhibitors as antidiabetic agents.
- 52 Write a note on cardiac glycosides used in the treatment of Congestive Heart Failure.
- 53 Classify antiarrhythmic agents with examples? Give the synthesis of Disopyramide.
- 54 Write the structure and specific uses of i) Methyl Dopa. ii) Verapamil iii) Hydralazine iv) Captopril v) Clonidine
- 55 Define antineoplastic agents? Outline the synthesis of Mercaptopurine and Methotrexate

- 56 Define the term hypoglycemic agents. Give the structure of any two sulfonylureas and outline the synthesis of Tolbutamide.
- 57 Define angina pectoris? Write the MOA of Antianginal agents? Write the structure and uses of nitroglycerine and Benazepril.
- 58 Write a note on drugs used in Congestive Heart Failure.
- 59 Classify antiarrhythmic agents with examples? Outline the synthesis of Disopyramide.
- 60 Write a note on anticoagulants and outline the synthesis of Warfarin.
- 61 Discuss about the medicinal importance of Corticosteroids and give the structures of any two Corticosteroids.
- 62 Discuss the chemistry of oral contraceptives.
- 63 Write a note on antithyroid drugs and give the structure and uses of any two.
- 64 Define Diabetes? Classify antidiabetic agents with examples. Give the mechanism of action and synthesis of Tolbutamide.
- 65 Explain in detail about histamine receptors and their biological importance.
- 66 What are potassium sparing diuretics? Outline the synthesis and medicinal uses of Chlorthiazide.
- 67 Write a note on cardiac glycosides used in the treatment of Congestive Heart Failure.
- 68 What are lipid lowering agents? Give the structure and uses of Lovastatin, Clofibrate and Cholesteramine.
- 69 Discuss the chemistry of female sex hormones.
- 70 What are Corticosteroids? Give the structure and uses of Cortisone, Prednisolone, Betamethasone and Dexamethasone.
- 71 Discuss the Mechanism of action and medicinal uses of Oral contraceptives.
- 72 What are anticoagulants? Give the mechanism of action and synthesis of Warfarin.
- 73 Describe the drugs used in the treatment of CHF
- 74 Describe the structure and uses of testosterone, progesterone, oestrone and oestrone, diethyl stilbestrol
- 75 Write the structure and uses of L-thyroxin, L-thyronin, propylthiouracil, and methimazole

- 76 Write a note on antimetabolites. Explain the synthesis of mercaptopurine.
- 77 Discuss in brief about vasodilators and outline the synthesis of Nitroglycerine
- 78 Define antiarrhythmic drugs? Mention the structure and uses of quinidine sulphate, phenytoin sodium, tocainamide, HCl and mexiletin HCl.
- 79 Define antihyperlipidemic agents? Write the structure and uses of clofibrate, lovastatin, cholesteramine and cholestipol.
- 80 Discuss the drugs used in Congestive Heart Failure
- 81 What are coagulants and anticoagulants? Write the synthesis of Warfarin.
- 82 Write the structure and uses of Testosterone, Nandralone, Progesterones, Oestrione and Diethyl stilbestrol
- 83 Write a note on thyroid and antithyroid drugs.
- 84 Explain the metabolism of steroids
- 85 Define and classify antidiabetic drugs with examples and write the synthesis of Tolbutamide.
- 86 Explain the metabolism of steroids.
- 87 Define and classify antidiabetic drugs with suitable examples.
- 88 Classify alkylating agents with examples. Outline the synthesis of Mercaptopurine.
- 89 Discuss a note on Antianginal agents and outline the synthesis of Nitroglycerin.
- 90 Define and Classify Anti-arrhythmic agents? Give the synthesis disopyramide.

SHORT ANSWERS 02 MARKS

- 1 Write the structure of any two calcium channel blocking agents
- 2 Write the structure and uses of minoxidil and hydralazine HCl
- 3 Outline the synthesis of disopyramide phosphate
- 4 Write the structure and uses of drugs used in congestive heart failure
- 5 Write the structure and uses sildenafil
- 6 Outline the synthesis of procaine
- 7 Write the synthesis and uses of any one H₂ antagonists.

- 8 What are gastric proton pump inhibitors? Write the structure of omeprazole.
- 9 Discuss the importance of histamine receptor
- 10 Mention the structures and uses of amlodipine and nicardipine.
- 11 List out the uses of captopril and methyldopate HCl.
- 12 Explain the mechanism of action of loop diuretics.
- 13 Explain the mechanism of action of antihyperlipidemic agents.
- 14 Enumerate the structure and uses of any one drug used in CHF.
- 15 Enumerate the structure and uses of tadalafil.
- 16 Explain the synthesis of procaine.
- 17 Write a note on Insulin and its derivatives.
- 18 What are gastric proton pump inhibitors? Give the structure of any one example.
- 19 Outline the synthesis and uses of mechlorethamine.
- 20 Write the mechanism of action of antimetabolites.
- 21 Enumerate the synthesis of methyldopate HCl.
- 22 Write the structure of any two calcium channel blockers.
- 23 Give the structure and uses of minoxidil and diazoxide.
- 24 Outline the synthesis of disopyramide phosphate.
- 25 Write the structure and uses of lovastatin and clofibrate.
- 26 Outline the synthesis of triprolidine HCl
- 27 Define H₂ receptor antagonist with examples.
- 28 Name any two natural products used as anticancer agents
- 29 What are loop diuretics? Write the structure of furosemide and ethacrynic acid
- 30 Define potassium sparing diuretics with examples
- 31 Write the structure any two antianginal drugs.
- 32 Give the structure of any two antiarrhythmic agents
- 33 Write the uses of sotalol and menadione
- 34 Give the structure and uses of diethyl stilbestrol
- 35 Write the structure and uses of any two anilide class of local anaesthetics

- 36 Define proton pump inhibitors? Give the structure of any one example
- 37 Write the synthesis and uses of mercaptopurine
- 38 Write the mechanism of action of alkylating agents
- 39 Write the structure and uses of any two H₂ antagonists
- 40 Outline the synthesis of Warfarin.
- 41 Write the structure and uses of synthetic estrogens.
- 42 Write the structure and uses of Meglitinide and chlorpropamide.
- 43 Write the structure of meclizethamine and cyclophosphamide.
- 44 Define gastric proton pump inhibitors and write the structure of rabeprazole.
- 45 Write the structure and uses of triprolidine and chlorpheniramine
- 46 What are potassium sparing diuretics? Give the structure of triamterene.
- 47 Write briefly about nitro vasodilators.
- 48 Outline the synthesis of cimetidine.
- 49 Write the structure and uses of lansoprazole and pantoprazole.
- 50 Explain the mechanism of action of antimetabolites.
- 51 Write the structures and uses of lisinopril and benazepril.
- 52 Write the structures and uses of verapamil and nifedipine.
- 53 Explain the mechanism Enumerate the synthesis of methyl dopa HCl
- 54 Write the structure and uses of Tadalafil.
- 55 Write the synthesis of Dibucaine. Give the structure of any two antithyroid drugs.
- 56 Give the structure and uses of Lovastatin and Menadione.
- 57 Give the structure and uses of Clofibrate and Cholesteramine
- 58 Outline the synthesis of furosemide.
- 59 Explain about Calcium channel blockers.
- 60 Write briefly about nitro vasodilators.
- 61 What are gastric proton pump inhibitors? Give examples.
- 62 What are H₂receptor antagonists? Give examples.
- 63 Give the structure and uses of Azathioprine and Fluorouracil.

- 64 of action of potassium sparing diuretics.
- 65 Write the structure and uses of menadione and clopidogrel.
- 66 Illustrate the importance of Histamine receptors.
- 67 Write the structures and uses of timolol and quinapril HCl.
- 68 Write the mechanism of action of thiazide diuretics.
- 69 Write the structures of diltiazem HCl and nifedipine HCl.
- 70 Explain the mechanism of action of anticoagulants.
- 71 Explain the synthesis of Disopyramide phosphate.
- 72 Write the structure and uses of dexamethasone.
- 73 Outline the synthesis of benzocaine.
- 74 Give the structure and uses of Azathioprine and Cisplatin
- 75 Write the structure and uses of disopyramide.
- 76 Discuss the mechanism of action of cortisone .
- 77 Write the structure and uses of chlpropamide and tolbutamide.
- 78 Write the structure and use of minoxidil.and guanethidine.
- 79 What are gastric proton pump inhibitors? Give examples
- 80 Discuss the mechanism of action of osmotic diuretics.
- 81 What are Calcium channel blockers? Give Examples.
- 82 Write the structure and use of Nifedipine.and Guanethidine.
- 83 Write the structure of any two anti hyperlipidemic agents.
- 84 Write the structure and uses of Amiodarone and Sotalol
- 85 Write the structures and uses of synthetic estrogens.
- 86 write a note on Insulin and its derivatives
- 87 Write the structure and uses of any two aminoalkyl ether derivatives as antihistaminic agents.
- 88 Write the structure and uses of any two H₂ antagonists
- 89 Explain mechanism of action of gastric proton pump Write a note on drugs used in Congestive Heart Failure.

- 90 Write the structure and use of Menadione and Cholesteramine
- 91 Give the structure and uses of thyroid hormones.
- 92 Write the structure and uses of Pioglitazone and Metformin.
- 93 Discuss the mechanism of action of anticancer alkylating agents.
- 94 List the names and uses of anticancer antibiotics.
- 95 Write briefly about nitro vasodilators.
- 96 Discuss the mechanism of action of Acetazolamide.
- 97 Outline the synthesis of furosemide.
- 98 Write the structure and uses of any two anticoagulants



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Industrial Pharmacy -1

LONG ESSAY 10 MARKS

1. With a neat labeled diagram, explain rotary compression process of tablet manufacturing.
2. Discuss the defects in film coating process.
3. Define tablet coating, write the types of coating and explain the film coating composition.
4. Discuss the tablet compression cycle by multistation rotary press.
5. Write the reasons and remedies for capping and lamination.
6. Explain preformulation studies involved in development of tablet dosage forms
7. Explain importance of solubility, dissociation constant and partition co-efficient of drug in development of solid dosage forms.
8. Discuss dry granulation technique and list out advantages and disadvantages
9. Classify granulation techniques. Discuss the wet granulation method along with equipment's used in the each step.
10. Give a detailed account of the different excipients and their functions used in the tablets
11. Describe quality control tests for the parenterals dosage forms.
12. Discuss in detail the production facilities for parenterals
13. Write the elaborate discussion on primary packaging materials of parenteral dosage forms.
14. Define pharmaceutical aerosols with their merits and demerits. Add a note on foam type aerosols. (6+4).

SHORT ESSAY 5 MARKS

1. Describe the importance of partition co-efficient in the drug design with suitable examples.
2. Describe quality control tests for tablets
3. Define the term preformulation and explain the parameters to be considered in preformulation studies.
4. Describe formulation of chewable and sublingual tablets
5. Discuss the steps involved in sugar coating with suitable examples of ingredients used in each step.

6. Discuss diluents and disintegrants used in tablet preparation
7. Emphasize on different stages involved in sugar coating of a compressed tablets
8. Enlist the methods of enhancing the solubility of drugs.
9. Explain the steps involved in manufacturing of hard gelatin capsules shells
10. Discuss any two quality control tests for capsules
11. Explain nature of soft gelatin capsule content.
12. Explain the steps involved in manufacturing of hard gelatin capsules shells
13. Discuss the production of empty hard gelatin capsules
14. Explain the rotary die process for manufacturing of soft gelatin capsules
15. Explain the filling process of hard gelatin capsules
16. Explain the quality control tests of capsules.
17. Write a note on environmental control during the manufacture of parenteral products
18. What are the sources of contamination in parenteral production and write methods to overcome
19. Write the specifications and methods of preparation of WFI.
20. Discuss in detail the formulation of parenterals
21. Discuss maintenance of environment in parenteral production in detail along with cleaning and sterilization techniques.
22. Discuss the merits and demerits of glass as a packaging material for parenterals
23. Write a note on formulations of small volume parenterals.
24. Write a note on containers for ophthalmic preparations
25. Discuss the formulation of an eye ointment.
26. Write a note on evaluation of an eye ointment.
27. Write a note on evaluation of eye drops.
28. Describe formulation of ophthalmic gels.
29. Describe formulation of ophthalmic suspensions.
30. Explain the formulation of eye drops
31. Explain the manufacturing of ophthalmic ointment
32. Explain the requirements for the ophthalmic preparations
33. Give a note on stabilization of liquid orals
34. List out approved colorants and flavourants in liquid orals. Differentiate dyes from lakes.

35. How do you solve solubility and stability problems in the development of liquid orals.
36. Discuss the formulation of reconstitutable suspension with a suitable formula.
37. Explain filling and packing of liquid orals.
38. Classify liquid oral. What are its ideal characteristics?
39. Explain the challenges faced in the development of oral suspension
40. Enumerate the manufacturing considerations for liquid orals
41. Describe the methods of filling liquid oral dosage forms
42. Explain in detail formulation of liquid oral dosage forms
43. Write an elaborate note on three phase systems of aerosols with examples.
44. Discuss components of aerosols formulation.
45. Write a detailed note on propellants
46. Describe the stability testing methods for pharmaceutical aerosols
47. Explain in details containers used for aerosols
48. Discuss and differentiate the pressure filling and cold filling of aerosols
49. Discuss in brief the formulation of aerosols.
50. Explain two filling methods in manufacturing of pharmaceutical aerosols
51. Write the formulation and preparation clear liquid shampoo.
52. Name formulation ingredients in vanishing cream.
53. Define cream write the formulation of foundation cream.
54. Formulation and preparation of moisturizing cream
55. Write the principle involved in the formation of creams. Discuss various alkalies used in cream formulation
56. Classify face and talcum powders. Give method of preparation of compact powders.
57. What are solid components used in lipsticks preparation, write any one method of preparation of lipsticks.
58. What are the factors to be considered for formulation of eye lotion
59. Emphasize on formulation of lipstick.
60. Write a note on nail lacquers

SHORT ANSWERS 2 Marks

1. What is intrinsic solubility of drugs? Give its significance
2. What are hydrates and solvates give examples?
3. Differentiate disintegrants and super disintegrants with examples.
4. Significance of bland excipient in buccal tablets
5. Differentiate diluents and directly compressible vehicles by giving examples.
6. Define true and pseudo polymorphs
7. What are disintegrants and give two examples.
8. List the advantages and disadvantages of amorphous solid forms.
9. What are chewable tablets? Give its advantages
10. What are enteric coating polymers? Name any two examples
11. What tablet troches and lozenges
12. List out the lubricants used in tablets
13. List the quality control tests for tablet
14. Write a note on chewable tablets
15. List out the manufacturing defects of tablets.
16. Storage conditions for capsules.
17. Types of gelatin in capsules.
18. Name plasticizers used in capsules.
19. Measurement of bloom strength of gelatin.
20. Define minimum per gram factors by giving formula
21. Give the methods for polishing of hard gelatin capsules
22. Define bloom strength.
23. Write on different sizes of hard gelatin capsules
24. Write on nature of soft gelatin capsule shell.
25. List out non-aqueous vehicles used in parenterals.
26. Define pyrogens
27. What are depot injections?
28. Leakage test for parenterals.
29. Requirements of oily vehicles in parenterals.
30. Advantage of pull sealing over tip sealing of ampoules.
31. Write a short note on sterile powders for injection.

32. Write different methods of sealing of ampoules.
33. What do you mean by 'class 100' clean area
34. Give two examples of antioxidants used in parenterals
35. Write in vitro method for testing of pyrogens
36. Name the methods of adjustment of isotonicity
37. Significance of isotonicity and name the methods of adjustment.
38. What is LAL test?
39. Significance of isotonicity in parenterals.
40. Write the ideal requirements of ophthalmic suspension
41. Advantages of ophthalmics
42. Role of viscosity modifiers in ophthalmics
43. Importance of sterilization for ophthalmic dosage forms.
44. Stabilizing agents used in eye drops
45. Name the any four preservatives used in ophthalmics.
46. Name any four preservatives used in ophthalmic preparations
47. Name sterilization methods for eye ointment
48. Merits and demerits of volumetric filling.
49. Name the filling techniques of liquid orals.
50. Significance of viscosity in liquid orals.
51. Organoleptic additives of liquid orals.
52. Name the type of ingredients used in oral suspensions.
53. What do you mean by gravimetric and volumetric filling of liquid orals
54. Name any two approved flavors and colorants in liquid orals.
55. Write the merits of constant level filling technique of liquid orals
56. Importance of overages in vitamin formulation.
57. Test for combustibility of aerosols.
58. Write a note on quick breaking foam aerosols.
59. Types of actuators used in aerosols.
60. Write particle size analysis in aerosols
61. What are two phase systems of aerosols
62. Types of actuators in aerosols
63. Write the advantages of metered dose inhalers.

64. List evaluation test for aerosols
65. Discuss the formulation of toothpaste
66. Classify the propellants with suitable examples
67. Write the valve system of aerosol
68. What are metered dose inhalers
69. List out different containers used in aerosol formulations.
70. Film forming agents in nail lacquers.
71. Anti-caring agents in dentifrices.
72. Write a formula to prepare tooth paste.
73. Ideal properties of shampoos
74. What are conditioning agents used in shampoos give two examples.
75. Explain the procedure to prepare hair dye with suitable formula
76. What are abrasives? Give two examples.
77. Write the formulation of face powder
78. write a formula of cold cream
79. Write a formula for sunscreen lotion



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Pharmacology II

LONG ESSAYS (10 Marks)

1. Classify antihypertensive drugs with examples. Describe the pharmacology of ACE Inhibitors.
2. Classify Non steroidal anti-inflammatory drugs with examples. Describe the pharmacology of Aspirin.
3. Write the applications of Bioassay. Explain the bioassay of histamine.
4. Classify antihypertensive drugs with examples. Describe the pharmacology of calcium channel blockers.
5. Classify Antihistamines with examples. Describe pharmacological actions of Histamine.
6. Write the applications of bioassay. Explain the bioassay of Insulin.
7. Classify antihypertensive drugs with examples. Describe the pharmacology of Clonidine.
8. Classify Antihistamines with examples. Describe pharmacological actions of Histamine.
9. Write the applications of Bioassay. Explain the Bioassay of Digitalis.

SHORT ESSAYS (5 Marks)

1. Classify Antihypertensive drugs. Describe the pharmacology of Propranolol
2. Define bioassay. Explain the Bioassay of oxytocin
3. What are autacoids? Write the pharmacology of Histamine.
4. Classify antihypertensive drugs with examples. Describe the pharmacology of Nifedipine
5. Describe the general methods of bioassay and explain the bioassay of insulin
6. Write the mechanism, pharmacological actions therapeutic uses and adverse effects of salicylates
7. Describe the pharmacology of digitalis.
8. Classify Non steroidal anti-inflammatory drugs with examples. Describe pharmacology of Aspirin.
9. Define Bioassay. Explain the Bioassay of Insulin.
10. Explain the pharmacological actions, adverse reactions and clinical uses of digitalis.
11. Classify the non-steroidal anti-inflammatory drugs. Discuss the mechanism of action and adverse effects of Aspirin.

12. Discuss the principle of bioassays. Explain the bioassay of Insulin.
13. Classify anti-hypertensive agents. Explain the mechanism of action and therapeutic uses of propranolol.
14. Explain the Pharmacological actions of prostaglandins
15. Define bioassay. Explain the principles and applications of bioassays
16. What are cardiac glycosides? Discuss pharmacology of digitalis.
17. Describe the different types of bioassay and explain the bioassay of Oxytocin
18. Write the mechanism and pharmacological actions of prostaglandins
19. Classify Antihyperlipidemic drugs with examples. Describe the pharmacology of atorvastatin
20. Write the merits, demerits and applications of bioassay. Explain the bioassay of d-tubocurarine
21. Describe the pharmacology of histamine.
22. Describe the Pharmacology of Digoxin.
23. Classify anti anginal drugs with examples. Write the pharmacology of Nitrates.
24. Describe the Pharmacological actions of heparin
25. Classify diuretics with examples.
26. Describe the pharmacology of sulfasalazine
27. Describe the pharmacology of propyl thiouracil
28. Describe the Pharmacological actions of Insulin.
29. Describe the pharmacology of hydrocortisone
30. Describe the mechanism of action and adverse effects of sod.warfarin.
31. Describe the Pharmacology of Quinidine.
32. Explain the mechanism of action and adverse effects of Acetazolamide.
33. Describe the Pharmacology of Heparin.
34. Classify oral hypoglycaemic agents with examples.
35. Describe the pharmacological actions & adverse effects of Aspirin
36. Explain the Pharmacology of Prostaglandins.
37. Describe the Pharmacological actions of Glucocorticoids.
38. Explain the mechanism of action and therapeutic uses of Propyl thiouracil.

39. Classify Antihyperlipidemic drugs with examples. Write the mechanism of action of statins.
40. Describe the Pharmacology of Statins
41. Explain the mechanism of action and adverse effects of Aspirin.
42. Describe the Pharmacology of Furosemide.
43. Classify oral hypoglycaemic agents with examples.
44. Describe the Pharmacology of heparin.
45. Explain the Pharmacology of methotrexate
46. Describe the pharmacological actions of Insulin
47. Describe the pharmacology of hydrocortisone
48. Classify Antithyroid drugs with examples. Describe the pharmacology of Propyl thiouracil
49. Explain the mechanism of action and therapeutic uses of digitalis
50. What is angina pectoris? Write the pharmacology of Nitrates.
51. Describe the pharmacological actions of prostaglandins
52. Classify antirheumatic drugs with examples. Describe the Pharmacology of Methotrexate.
53. Describe the Pharmacology of Aspirin.
54. Explain the pharmacology of Sulfonylureas.
55. Explain the role of hormones in regulation of plasma calcium level
56. Classify Diuretics with examples.
57. Describe the pharmacological actions of Insulin.
58. Write the mechanism of action and toxicities of digitalis
59. Describe the mechanism of action and adverse effects of propranolol
60. Mode of actions and uses of folic acid
61. Mode of action and uses of Sodium warfarin
62. Write the pharmacology of cortisone
63. Write down the Insulin preparations
64. Describe the pharmacology of sulfanyl urea
65. Explain the mode of action and uses of Quinidine.
66. Classify antirheumatic drugs with examples. Write the pharmacology of methotrexate
67. Write the mechanism of action and therapeutic uses of lidocaine as an anti-arrhythmic drug
68. Write the pharmacology of Nitrates.

69. Write the pharmacology of Furosemide
70. Describe the mechanism of action and adverse effects of Heparin
71. Describe the pharmacological actions of Histamine.
72. Classify anti rheumatoid drugs with examples. Write the pharmacology of methotrexate.
73. Classify oral Hypoglycemic agents with examples
74. Classify Antithyroid drugs with examples. Describe the pharmacology of Propyl thiouracil
75. Explain the role of hormones in regulation of plasma calcium level
76. Explain the mechanism of action and uses of Furosemide.
77. Describe the pharmacology of Heparin
78. Describe the pharmacology of prostaglandin
79. Classify antihistamines with examples
80. Explain the mechanism of action and adverse effects of Quinidine ?
81. Describe pharmacology glucocorticosteroids
82. Explain pharmacology propylthiouracil
83. Explain the mechanism of action and adverse effects of gilbenclamide
84. Classify antihypertensive agents with examples
85. Explain the mechanism of HMG-CoA reductase inhibitors and their uses
86. Discuss the pharmacological actions of heparin
87. Classify anti rheumatic drugs with examples. Write the pharmacology of methotrexate
88. Explain the mechanism of action and uses of chlorthiazide
89. Discuss the action of Gonadotropins hormones
90. Explain the mechanism of action and clinical uses of Nitroglycerine
91. Classify non-steroidal anti-inflammatory agents with examples.
92. Classify oral hypoglycemic agents and adverse effects of any two drugs
93. Discuss the mechanism of action of prednisolone.
94. Describe the pharmacology of Calcium channel blockers
95. Describe the mechanism of action and adverse effects of loop diuretics
96. Describe the pharmacological actions of methotrexate
97. Mode of action and adverse effects of Insulin
98. Write the mechanism of action and adverse effects of Prednisolone
99. Mode of action and adverse effects of oral contraceptives

100. Describe the pharmacology of warfarin
101. Explain the pharmacology of histamine
102. Write the pharmacology of propylthiouracil
103. Write the pharmacology of Captopril
104. Describe the mechanism of action and uses of nitroglycerine
105. Describe the pharmacological actions of potassium sparing diuretics
106. Mode of action and adverse effects of Insulin
107. Write the mechanism of action and side effects of hydrocortisone
108. Describe the mechanism of action and therapeutic uses of diclofenac sodium
109. Write the differences between Heparin and Sod warfarin
110. Classify antidiabetic agents with suitable examples
111. Write the pharmacology of carbimazole

SHORT ANSWERS 02 Marks

1. Explain the mechanism of action of statins
2. Classify Anti rheumatoid drugs with examples
3. Therapeutic uses of fibrinolytics
4. Therapeutic uses of 5HT antagonists.
5. Classify parenteral anticoagulants with examples.
6. Adverse effects of Sulfonyl ureas.
7. Name three Hormones regulating plasma calcium level
8. Name any four H₂ receptor antagonists.
9. Mention the different types of bioassays.
10. Mention any four names of anabolic steroids
11. Write the adverse effects of Digoxin.
12. Mention the drugs used in the treatment of Anaemia.
13. Mechanism of action of Clopidogrel.
14. Therapeutic uses of fibrinolytic agents.
15. Classify anti rheumatoid drugs with examples.
16. Mention the drugs used in the treatment of Gout.
17. Enlist the different types of Insulin Preparations.
18. Mechanism of action of Glucagon.

19. Enlist four Uterine stimulants.
20. Mention different types of Bioassays.
21. Write the mechanism of action of Digitalis.
22. Mechanism of action of Vasopressin
23. Mechanism of action of Heparin.
24. Therapeutic uses of fibrinolytic agents.
25. Classify Non-steroidal anti-inflammatory drugs with examples.
26. Mention the drugs used in the treatment of Gout.
27. Write the mechanism of action of Pioglitazone.
28. Mechanism of action of Glucagon.
29. Enlist four Uterine stimulants.
30. Adverse effects of oral contraceptives.
31. Adverse effects of Captopril.
32. Name any four antigout drugs.
33. Write the therapeutic uses of antihistaminic drugs
34. Enumerate the types of bioassays
35. Name the animal species and reagents required for bioassay of ACTH
36. Write different insulin preparations
37. Enlist the drugs used in treatment of anemia
38. Write the mechanism of action of streptokinase
39. Write the mechanism of action of vasopressin.
40. Therapeutic uses of 5-HT Antagonist
41. Write the mechanism of action of captopril
42. Enlist the oral anti coagulants
43. Name different types of 5HT receptors and their antagonist
44. Mode of action of glucagon
45. Name the different types of bioassay.
46. Mode of action of vasopressin
47. Name the drugs used in the treatment of shock.
48. Mention different types of insulin preparations
49. Mode of action of streptokinase.

50. Classify anti rheumatic drugs with examples
51. Explain the mechanism of action of statins
52. Write the different types of shock.
53. Write the therapeutic uses of acatazlamide
54. Write the therapeutic uses of Fibrinolytics.
55. Write Histamine induced triple response
56. Define Gout. Mention the drugs used in the treatment of Gout.
57. Enlist different types of Insulin Preparations
58. Write the mechanism of action of sulphonyl ureas
59. Mention different types of Bioassays.
60. Enlist four Uterine stimulants.
61. Name antihypertensive agents to be avoid during pregnancy
62. What is the difference between anticoagulant and antiplatelet drugs?
63. Therapeutic uses of fibrinolytics
64. Name the antidiuretics agents
65. What is the action histamine on blood vessels?
66. Therapeutic uses of 5-HT antagonistic
67. Write different types Insulin preparation
68. Write the mechanism of action of glucagon
69. Name oral contraceptives
70. List the merits of bioassays
71. What is the treatment for megaloblastic anaemia
72. Mode of action of Insulin
73. Adverse effects of Digitalis
74. What is chronic gout? Name the drugs used in chronic gout
75. Name COX-2 inhibitors .
76. Write the role of estrogens in hormone replacement therapy.
77. Name any two fibrinolytics and their uses.
78. What are the merits and demerits of bioassay.
79. List the clinical uses of vasopressin.
80. Clinical uses and adverse effects of glibenclamide.

81. Write the mechanism of action of clofibrate
82. Mode of action of Heparin
83. Name leukotriene receptors
84. Mode of action of sulfonyl ureas
85. Write the therapeutic use of fibrinolytics
86. Mode of action of anti-diuretic hormone
87. What are advantages and disadvantages of bioassays
88. Mention different types of insulin preparations
89. What are anabolic steroids?
90. Classify anti- rheumatic drugs with examples
91. What are cardiotonics? Give examples
92. Enlist the oral anti coagulants
93. Clinical uses of ondansetron
94. Adverse effects and clinical uses of sulfonylureas
95. Clinical uses and adverse effects of propylthiouracil
96. Mode of action of vasopressin
97. Outline the mode of action of Tocolytics
98. What is triple response of histamine
99. Write the mode of action of urokinase.
100. Write types of prostaglandins



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Pharmacognosy and Phytochemistry – II



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LONG ESSAY 10 MARKS

1. Explain different methods for elucidation of biosynthetic pathways
2. What are cardiac glycosides? Give the Pharmacognosy of Digitalis in detail
3. Write Pharmacognosy of Liquorice
4. Write the Pharmacognostical study of Senna
5. Write the biological source, morphology, microscopy , chemical constituents, uses , adulterants and substitutes of Rauwolfia
6. Write the biological source, morphology, microscopy , chemical constituents, uses , adulterants and substitutes of Belladonna
7. Write Pharmacognosy of Liquorice
8. Write Pharmacognosy of Cinnamon
9. Pharmacognosy of Dioscorea
10. Discuss the industrial production and estimation of Forskolin and Diosgenin
11. Explain industrial method of production and estimation of Vincristine and Atropine.
12. Describe industrial production and estimation of Diosgenin and sennoside.
13. Explain industrial production and estimation of Sennosides and vinblastine
14. Describe the Industrial production and estimation of Caffeine and Digoxin
15. Explain industrial method of production and estimation of Sennoside and Caffeine
16. Describe in detail about industrial production, estimation and uses of Diosgenin
17. Describe the Industrial production and estimation of Caffeine and Digoxin
18. Explain industrial production and estimation of Atropine and Diosgenin
19. Describe industrial production and estimation of Diosgenin and sennoside
20. Explain industrial production and estimation of Sennosides and vinblastine
21. Enumerate the various modern methods of extraction and explain in detail about SFE
22. Explain in detail about Super critical fluid extraction and solid phase extraction
23. What is Microwave assisted extraction; describe its process, applications, advantages and disadvantages.
24. Describe the Solid phase extraction
25. Explain in detail about Super critical fluid extraction

SHORT ESSAY 5 MARKS

1. Write a note on Shikimic acid pathway and its significance
2. Write a note on radio isotopes and their applications in biogenetic studies
3. Explain the steps involved in acetate pathway
4. Explain Tracer technology and its significance in biogenetic studies
5. Mention different methods for biogenetic investigations and explain tracer technology
6. Explain Grafting and Mutant strain methods of biogenetic studies
7. Write a note on radio isotopes and their applications in biogenetic studies
8. Describe Autoradiography and competitive feeding
9. Write a note on tracer technique and its significances.
10. Give the biological source, Chemical constituents and uses of any two volatile oil drugs
11. Give the biological source, Chemical tests and uses Benzoin
12. Describe the microscopy of Clove with a neat labeled diagram
13. Give the biological source, Chemical constituents and uses of any two alkaloid drugs
14. Describe the Pharmacognosy of Guggul
15. Describe macroscopy and microscopy of Licorice
16. Give macroscopy and microscopy fennel
17. Give macroscopy and microscopy fennel
18. Give the biological source, Chemical constituents and uses of Cinnamon and Opium
19. Give biosources, chemical constituents and uses of Coriander and Belladonna
20. Give the biological source, chemical constituents and uses of Clove and Coriander
21. Give the Pharmacognosy of Vinca
22. Explain biosources, chemical constituents of Liquorice and Vinca
23. Describe microscopic method of fennel with neat labeled diagram
24. Give biosources and chemical constituents of Gentian and Ruta
25. Adulterants of Senna and Digitalis
26. Give biosources, chemical constituents and uses of Coriander and Belladonna
27. Give the chemical constituents and therapeutic uses of Mentha and Fennel
28. Give the identification tests for Benzoin and Colophony.
29. Explain with a neat labeled microscopic diagram of Clove

30. Explain microscopy of Ginger with neat labeled diagram
31. Give biological source and active constituents of Podophyllum and Vinca
32. Explain with a neat labeled microscopic diagram of Fennel
33. Differentiate between Pale Catechu and Black Catechu
34. Give biological source and active constituents of Opium and Belladonna
35. Give biosources, chemical constituents and uses of Coriander and Belladonna
36. Give the chemical constituents and therapeutic uses of Mentha and Fennel
37. Give botanical source and chemical constituents of Aloes and Tea
38. Give chemical test for Benzoin and Colophony
39. Give the biological source and Chemical constituents of Cinnamon and Gentian
40. Explain microscopy of Ginger with neat labeled diagram
41. Write a note on Carotenoids Write the isolation and estimation of Glycyrrhetic acid
42. Explain the method of isolation and estimation of Curcumin
43. Describe the method of isolation and identification of Atropine
44. Write the isolation and identification of Quinine
45. Describe the isolation and identification of Rutin
46. Write the isolation and identification of Curcumin.
47. Describe the isolation and identification of Citral
48. Describe different methods of extraction and identification of Glycyrrhizin
49. Write industrial production and methods of estimation of vincristine
50. Write the method of isolation and estimation of Curcumin
51. Write isolation and analysis of Glycyrrhizin
52. Write methods of estimation of Artemisinin and Quinine
53. Write identification test and estimation of Digoxin
54. Explain in detail method of isolation and identification of Rutin Explain the industrial production and uses of Artemisinin
55. Describe the estimation of vincristine and caffeine
56. Discuss the industrial production and uses of Vincristine
57. Explain the industrial production of digoxin
58. Discuss the industrial production and estimation of forskolin
59. Explain the industrial production and estimation of Digoxin

60. Industrial production and utilization of Atropine
61. Discuss the industrial production and estimation of forskolin
62. Discuss the industrial production and identification of Sennosides.
63. Write the method of production and identification for Atropine
64. biological source and active constituents of Podophyllum and Vinca
65. Write a note on column chromatography
66. Describe microwave assisted extraction
67. Write applications of GC and TLC
68. Applications of GC and HPLC
69. Describe HPTLC with its advantages and applications
70. Explain the role of column chromatography in isolation and purification of phytoconstituents
71. Describe HPTLC with its advantages and applications
72. Give the applications of HPTLC and GC.

SHORT ANSWERS 2 MARKS

1. Define secondary plant metabolite with suitable examples
2. Give the significance of acetate pathway
3. Write a note on autoradiography
4. Write a note on Amino Acid Pathway
5. Autoradiography
6. Liquid scintillation counter
7. Competitive feeding experiments
8. Define radioisotopes and give their uses in biogenetic studies
9. Give botanical source and Chemical Constituent of Tea
10. Write botanical source and uses of Digitalis
11. Write Vitalimorin test
12. Explain Combined umbelliferone test.
13. Write the botanical source and chemical nature of Taxus
14. Write a note on umbelliferous fruits
15. Write botanical source and chemical constituents of Senna
16. Name two unorganized drugs with their botanical source and uses
17. Give the source and uses of eugenol containing crude drug

18. Explain modified brontrager's test
19. Write a short notes on Pterocarpus
20. Write botanical source and uses of any one drug belonging to the family Liliaceae.
21. Write the chemical structure of Caffeine and Reserpine
22. Give the chemical structure Quinine and Caffeine
23. Write botanical source and chemical constituents of Gentian
24. Classification and uses of Carotenoids
25. Name any two resinous drugs and give their uses
26. Write a note on taxol
27. Give the adulterants of Clove bud
28. Botanical source and chemical constituents of Ruta
29. Explain Murexide test
30. Identification test for Aloes
31. Write a note on lignans
32. Write the chemical tests for pale catechu
33. Chemical tests for Myrrh
34. Write the chemical structures of Eugenol and Quinine
35. Write biological sources and uses of Vincristine and Taxol.
36. Write biosource and Chemical constituents of Fennel
37. Write identification test for Sennoside
38. Write chemical structures of Diosgenin and Eugenol
39. Write chemical tests of Benzoin
40. Give adulterants and uses of Clove
41. Define chromatography and its principles
42. Give chemical constituents and uses of Opium.
43. Give chemical constituents and uses for Liquorice
44. Write chemical constituent and uses of Mentha
45. Write the chemical tests for Reserpine
46. Give the identification test for Atropine.
47. Describe biological sources and Uses of Coleus
48. Write chemical structures of Caffeine and Eugenol
49. Give chemical constituents and uses of Aloes

50. Give chemical constituents and uses for Tea
51. Write adulterants of Clove
52. Write chemical test for Digitalis.
53. Define Resins with examples
54. Give the chemical structure of Reserpine and Quinine
55. Write chemical constituents and uses of Taxus
56. Classification and uses of Carotenoids
57. Write the chemical tests for pale catechu
58. Write a note on Balsams
59. Explain Keller Killani Test
60. Give biological source of Mentha and Rauwolfia
61. Define Tannins and Carotenoids
62. Give biological sources and Uses of Coleus
63. Give the source and uses of Citral
64. Write Source and uses of Podophyllotoxin
65. Utilization of Vinca alkaloids
66. Write the applications of Microwave assisted extraction
67. Write the applications of HPTLC
68. Write the applications of HPLC and HPTLC
69. Give applications of electrophoresis
70. Write applications of Super critical fluid extraction
71. Applications of Microwave assisted extraction
72. Define Electrophoresis and give its applications
73. Define Chromatography and Electrophoresis
74. Give application of gas chromatography
75. Write a note on UV and visible spectroscopy
76. Write a Note on Spectroscopy



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Pharmaceutical Jurisprudence

UNIT-I : Drugs and Cosmetics Act, 1940 and its rules 1945

LONG ESSAYS 10 MARKS

1. Explain the conditions to grant license for manufacture of drugs specified in schedule C, C1 and X.
2. Explain the conditions to grant license for manufacture of drugs specified other than schedule H and X.
3. What are the precedents and subsequent conditions for grant of license to manufacture of drugs and cosmetics specified in schedule C, C1 and X?
4. Write the conditions to grant license for manufacture of:
 - a) Drugs for purpose of examination, test and analysis.
 - b) Loan licenses.
5. Explain in detail about manufacture of new drug, loan license and repacking license.
6. Explain the various licenses issued under Drug and Cosmetics Act 1940.
7. Describe the classes of drugs and cosmetics which are prohibited from import and import under License.
8. Explain in detail about schedule M.
9. Discuss the penalties for manufacturing and sale of drugs in contravention of Drugs and Cosmetics Act 1940.
10. Explain in detail about prohibition of manufacture and sale of certain drugs under Drugs and Cosmetics Act 1940.

SHORT ESSAYS 05 MARKS

1. What are the classes of drugs prohibited to import into India?
2. Discuss in detail about loan licenses.
3. Discuss in detail about repacking licenses.
4. Describe the classes of drugs to import under license or permit
5. Write a note on list of permitted colors as per Drugs and Cosmetics Act 1940.



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SHORT ANSWERS 02 MARKS

1. Give offences and penalties about import of drugs.
2. Write about import of drugs for personal use.
3. Write about import of new drugs.
4. Give two examples of permitted colors as per Drugs and Cosmetics Act 1940.
5. Write places from which drugs are imported in India.
6. Define drugs and cosmetics as per Drugs and Cosmetics Act
7. Write about manufacturing of new drugs.
8. Define spurious drugs as under Drugs and Cosmetics Act
9. Define misbranded and adulterated drugs
10. Mention the rules for drugs and cosmetics.

UNIT – II : Drugs and Cosmetics Act, 1940 and its rules 1945

LONG ESSAYS 10 MARKS

1. Explain briefly about schedule Y.
2. Explain in detail about schedule M.
3. Discuss briefly about clinical trials as per schedule Y.
4. Write the constitution and functions of Drug Technical Advisory Board (DTAB).

SHORT ESSAYS 05 MARKS

1. Write a note on retail sale.
2. Write a note on schedule M.
3. Write a note on Central Drug Laboratory (CDL).
4. Define and write the qualifications and duties of government analyst.
5. Write a note on general labelling requirements and give the specimen labels for schedule X drugs.
6. Describe about restricted license.
7. What are qualifications and duties of Drug Inspector?
8. Describe the general requirements of labelling under Drugs and Cosmetics Act 1940.
9. Describe schedule P, U & V under Drugs and Cosmetics Act 1940.
10. Explain in brief about wholesale and retail sale under D&C Act
11. Give the specimen label for schedule H with suitable example.
12. Explain in brief about controlling authority as per D&C Act.
13. Write a short note on schedule F.
14. Write the labelling requirements of medicines for internal use with a model labelling.

SHORT ANSWERS 02 MARKS

1. Write any two offences and penalties for sale of drugs.
2. Enumerate two functions of PCI Inspector.
3. Give the labelling requirements and write specimen label for schedule G.
4. What is Drug Consultative Committee (DCC)?
5. Write a note on repacking license.
6. Enumerate schedule B.



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7. Write the types of retail sale of drugs. Give two examples of schedule J.
8. Write a short note on Drug Control Laboratory.
9. What is schedule G & N.?
10. Write the labelling requirements for ophthalmic preparation.



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UNIT – III : (a) Pharmacy Act – 1948

LONG ESSAYS 10 MARKS

1. Write the constitution and functions of PCI.
2. Explain in detail about Education Regulation (ER) 1991.
3. Write in detail about Education Regulation of State and Joint State Pharmacy Councils.
4. Define Education Regulation. Mention the standards, regulations prescribed for Education Regulation.
5. What are subsequent registers? Mention the qualifications required for entry into first and subsequent registers.

SHORT ESSAYS 05 MARKS

1. Write in detail on first register, subsequent register and removal of name from register as per Pharmacy Act.

SHORT ANSWERS 02 MARKS

1. Write about preparation of first register.
2. Mention the offences and penalties in contravention of Pharmacy Act.
3. Differentiate between State and Joint State Pharmacy Council.
4. Define Education Regulation.
5. Mention the ex-officio members of PCI.

(b) Medicinal and Toilet Preparation Act – 1995

LONG ESSAYS 10 MARKS

1. Give the design of bonded laboratory. Discuss in detail about manufacturing of alcoholic preparations in bonded laboratory.
2. Give the design of non-bonded laboratory. Discuss in detail about manufacturing of alcoholic preparations under non-bonded laboratory.
3. Define Drug Inspector. Mention the qualifications, degrees and powers of Drug Inspector.

SHORT ESSAYS 05 MARKS

1. Discuss in detail about manufacture in bonded laboratory.
2. Write a short note on non-bonded laboratory.
3. Explain about ware-housing of alcoholic preparations as per M&TP Act 1995.
4. What are requirements of bonded laboratory?
5. Explain in brief about alcoholic preparations.
6. Write a note on patent and proprietary preparations.
7. Explain in brief about manufacturing of Ayurveda preparations under M&TP Act.
8. Write in brief about manufacturing in non-bonded laboratories.

SHORT ANSWERS 02 MARKS

1. Define London proof spirit under M &TP Act.
2. Define rectified spirit as per M&TP Act.
3. Write a short note on Central Drugs Standard Control Organization (CDSCO).

(c) Narcotic Drugs and Psychotropic substances Act – 1985 and Rules

LONG ESSAYS 10 MARKS

1. Write the objectives of NDPS Act 1985. Discuss briefly about offences and penalties of NDPS Act 1985.
2. What are the objectives of NDPS Act 1985? Give a detailed account on cultivation, production and sale of poppy straw.

SHORT ESSAYS 05 MARKS

1. Explain opium-poppy cultivation as per NDPS Act.
2. Define manufactured drug and controlled substances as per NDPS Act
3. Give the offences and penalties under NDPS Act.
4. Write a short note on Narcotic and Psychotropic consultative committee.
5. Describe the manufacture, sale and export of opium under NDPS Act.
6. Define manufactured drugs.
7. Write the operations controlled by central and state government under NDPS Act.
8. Write a note on manufacture of cocaine and morphine.



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SHORT ANSWERS 02 MARKS

1. What is the punishment specified for illegal cultivation of coca plant.
2. What are objectives of NDPS Act?
3. Define cannabis under NDPS Act.
4. State clandestine arrangement.

UNIT-IV : (a) Study of Salient Features of Drugs and Magic Remedies Act and its rules

LONG ESSAYS 10 MARKS

1. Define magic remedies. Write the classes of advertisements prohibited under D&MR Act.
2. Define drugs, advertisements and magic remedies as per D&MR Act.
3. Discuss the classes of advertisements exempted conditionally under D&MR Act.
4. Define magic remedies. Give the classes of advertisements.
5. Write the offences and penalties in contravention of D&MR Act.
6. Define advertisement and mention the objectives of D&MR Act.
7. Define magic remedies. Write a note on scrutiny of misguiding advertisements related to drugs.
8. Write about salient features of D & MR Act.

(b) Prevention of Cruelty to animals Act-1960 :(5+2)

SHORT ESSAYS 05 MARKS

1. Give the constitution and functions of Institutional Animal Ethical Committee (IAEC).
2. Write the objectives and prevention of cruelty to animals. What are the parts of CPCSEA guidelines?
3. What are CPCSEA guidelines for breeding and stocking of animals?
4. Write about transport and acquisition of animals for experiment.
5. Write a note on power to suspend or revoke of registration as per Prevention of Cruelty to animals Act.
6. Describe the facilities to be maintained for experimentation on animals under CPCSEA guidelines.



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(c) National Pharmaceutical Pricing Authorities

SHORT ESSAYS 05 MARKS

1. Write a short note on National List of Essential Medicines (NLEM).
2. Explain Drugs Price Control Order (DPCO).
3. Write a note on retail price and ceiling price of scheduled formulations.
4. Write a short on DPCO.
5. Write a short on sale price of bulk drugs and retail price of formulations.
6. Who maximum allowable post manufacturing expenses (MAPE) is calculated as per DPCO.

UNIT-V : (a) Pharmaceutical Legislations

SHORT ESSAYS 05 MARKS

1. Write the contributions of Bohre committee to the pharmacy profession.
2. Write a note on profession conduct of pharmacist.

SHORT ANSWERS 02 MARKS

1. Give two recommendations made by Bhatia committee.
2. Give the significance of Drugs Enquiry Committee (DEC).
3. Give any three recommendations of Hathi committee.
4. Write about Mudaliar committee.
5. What is Chopra's committee?
6. Mention the objectives of Pharmaceutical Legislations.
7. What is Hathi committee?
8. Write a note on health survey of Pharmaceutical Legislation.
9. Define Pharmaceutical Legislation.
10. Write a brief review on Pharmaceutical Legislation.

(b) Code of Pharmaceutical Ethics

SHORT ESSAYS 05 MARKS

1. Define code of ethics. Explain receiving and handling of prescription of pharmacist.
2. Discuss the code of ethics for pharmacist in relation to his trade.
3. Discuss the code of ethics for pharmacist in relation to his job.
4. Mention the role of pharmacist in relation to his medical profession.
5. Describe the role of pharmacist in relation to his profession.

SHORT ANSWERS 02 MARKS

1. What is Apprentice Pharmacist as per the code of pharmaceutical ethics?
2. Enlist the code of pharmaceutical ethics in relation to medical profession.
3. How a pharmacist should follow fair trade practice as per code of pharmaceutical ethics.
4. Describe professional vigilance as code of pharmaceutical ethics.
5. Define Pharmaceutical Ethics.
6. Reproduce pharmacist's oath.
7. Write a brief note on code of pharmaceutical ethics.
8. Differentiate between ethics and laws.
9. Write the role of pharmacist in health care system.

(c) Medical Termination of Pregnancy Act

SHORT ANSWERS (2 MARKS)

1. Write a short note on termination of pregnancy as per MTP Act.
2. Describe the places where pregnancy may be terminated as per MTP Act.
3. Write a short note on role of Chief Medical Officer (CMO).
4. Mention the objectives of MTP Act.
5. Mention the circumstances under which pregnancy can be terminated.
6. Mention the offences and penalties of MTP.

(d) Right to Information Act

SHORT ANSWERS 02 MARKS

1. Write a note on Central Information Commission.
2. Write a note on State Information Commission.
3. Define Right to Information.
4. What is Right to Information?
5. What are the duties of Right to Information?
6. Mention the functions of Right to Information Act.
7. Mention the responsibilities of Right to Information Act.
8. Enumerate the functions of Right to Information.

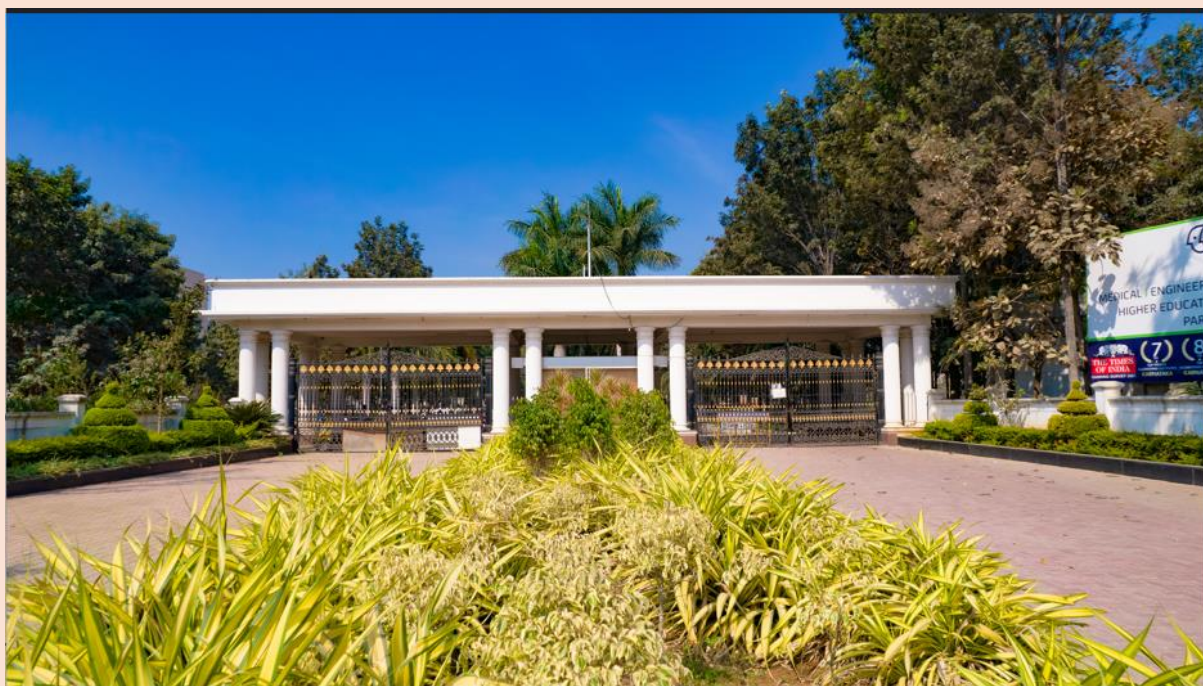


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(e) Introduction to Intellectual Property Rights (IPR)

SHORT ANSWERS 02 MARKS

1. Mention the type of patents.
2. Define copyright.
3. Write the types of patents.
4. Define patents. Mention types of patents.
5. Give the criteria for patenting of inventions.
6. Define trademark as per IPR Act



Vision and Mission of the Institution

Vision

The East Point College of Pharmacy aspires to be a globally acclaimed institution, **recognized for excellence in** pharmaceutical education, research and nurturing students for **holistic development**.

Mission

- M1** Create pharmacy graduates through **quality education**
- M2** Promote innovation, **creativity**, and excellence **in teaching**, learning, and **research**
- M3** **Inspire** integrity, teamwork, critical thinking, **personal** development, and ethics in **students** and lay **the** foundation for lifelong learning
- M4** **Serve** the **healthcare, technological, scientific**, and **economic** needs of then **society**.