

FACULTY OF PHARMACY

B. Pharmacy V - Semester (PCI) (Backlog) Examination, October 2024

Subject: Medicinal Chemistry-II

Time: 3 Hours

Max. Marks: 75

PART – A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Write about histamine receptors and their distribution in the body.
2. What are proton pump inhibitors and write examples.
3. Write the mechanism of action of Vinka alkaloids.
4. Classify vasodilators with examples.
5. Discuss the mechanism of action of HMGCO-A reductase inhibitors with examples.
6. What are oral contraceptives? Give examples.
7. What are coagulants? Give examples.
8. Write the uses and mechanism of action of Thiazolidinedione's.
9. Explain the antithyroid drug with examples. Write the structures of propylthiouracil.
10. What are the uses of corticosteroids? Give two examples of drugs.

PART – B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. What are antineoplastic agents, write the classification and mechanism of action of different classes of drugs.
12. Classify Local anesthetics. Discuss mechanism of action of SAR.
13. Classify diuretics with examples and write the SAR of thiazide diuretics.

PART – C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Classify anti-diabetic drugs with examples & write their MOA.
15. Explain the Nomenclature and Stereochemistry of steroids.
16. Give an account on anticoagulants.
17. Write the classification of calcium channel blockers with examples.
18. Classify anti-hyperlipidemic agents with one structure from each class.
19. Write the SAR of H1- anti-histaminics.
20. Write a note on anti-arrhythmic agents.
21. Give the synthesis, mechanism of an action and uses of Methotrexate.
22. Write about sexhormones.

FACULTY OF PHARMACY

B. Pharmacy V - Semester (PCI) (Backlog) Examination, October 2024

Subject: Industrial Pharmacy-I

Time: 3 Hours

Max. Marks: 75

PART – A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Differentiate crystalline and amorphous forms of solid.
2. Differentiate Type A and Type B gelatin.
3. Define a pellet. Enlist different pelletization techniques.
4. What is orange peel effect in tablet coating?
5. What is isotonicity? Explain its importance for parenteral products.
6. Write the difference between cold cream and vanishing cream?
7. Write the ideal characteristics of tablets.
8. Explain the importance of preformulation in pharmaceutical product development.
9. Define aseptic area.
10. Enlist various ingredients used in toothpaste.

PART – B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Write in detail about quality control tests of tablets.
12. Write in detail about the study of physical characteristics during preformulation.
13. Explain the formulation and evaluation of aerosols.

PART – C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Write the BCS classification and its significance.
15. How flow properties of powders are measured?
16. Discuss the tablet additives with examples of each class.
17. Discuss quality control of parenteral products.
18. Explain the criteria for selection of packaging material.
19. Discuss the formulation of lipsticks.
20. Explain formulation considerations of liquid dosage forms.
21. Write briefly on filling of hard gelatin capsules.
22. Write the differences between flocculated and deflocculated suspension.

FACULTY OF PHARMACY

B. Pharmacy V - Semester (PCI) (Backlog) Examination, October 2024

Subject: Pharmacology-II

Time: 3 Hours

Max. Marks: 75

PART – A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Define the terms Congestive Heart Failure and Angina Pectoris.
2. Differentiate between anticoagulants and fibrinolytics with examples.
3. What are NSAIDs? Give classification with examples.
4. What are tocolytics? Mention their uses.
5. Mention the different forms of Insulin preparation.
6. Write a note on mechanism of action of Vit K.
7. Define Bioassay and classify them.
8. What are the clinical uses of glucocorticoids?
9. What are Haematinics? Mention their applications.
10. Define inflammation. Write the names & uses of any four NSAIDS.

PART – B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Classify Antihypertensive drugs. Write the mechanism, pharmacokinetics, adverse drug reactions of calcium channel blockers.
12. What are Diuretics? Classify them with examples. Write the mechanism, adverse drug reactions, uses of High Ceiling diuretics.
13. Write the Bioassay of Vasopressin and d-Tubercularine.

PART – C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. What are Angiotensin Receptor Blockers? Explain their mechanism of action and uses.
15. Write a note on Coumarin derivatives with examples.
16. Classify Histamine receptors and write their pathophysiological role.
17. Write the principles of Bioassay.
18. Classify anti-Gout drugs. Write in detail about their mechanism and adverse drugs reactions.
19. Write note on the pharmacological actions of class I anti arrhythmic drugs.
20. What are the therapeutic uses of Iron?
21. What are anti-platelet drugs? Write their mechanisms and uses.
22. Write a note on advantages and disadvantages on Human Albumin.

FACULTY OF PHARMACY

B. Pharmacy V - Semester (PCI) (Backlog) Examination, October 2024

Subject: Pharmacognosy & Phytochemistry – II

Time: 3 Hours

Max.Marks:75

PART - A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Describe is autoradiography.
2. What are Tannins and give the general chemical tests?
3. Give the source and structure of Morphine.
4. Write the identification test for Quinine and Caffeine.
5. Describe the principle of Gas chromatography.
6. Describe the applications of Electrophoresis.
7. Give the source and chemical structure of digoxin and eugenol.
8. Give the chemical structure and commercial applications of Diosgenin.
9. Describe the migration parameters in chromatography.
10. Give the source and mechanism action of Artemisia.

PART - B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Define and classify the chromatography. Discuss the principle and applications of TLC, HPLC and paper chromatography.
12. Describe in detail about Acetate mevalonate acid pathway.
13. Write the isolation and estimation of Glycyrrhetic acid and curcumin.

PART - C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Define and describe the principles of extraction technique. List the extraction techniques.
15. Define and classify the resins. Give the chemical test for Benzoin and asafoetida.
16. Write an informative note on cardiac glycosides.
17. Describe the source, mechanism of action and estimation of vincristine.
18. Write the biological source and the therapeutic use of Gentian, Myrrh and guggul.
19. Describe the principle and applications of the UV and IR spectroscopy.
20. Write note on precursor and product sequence.
21. What are Umbelliferous fruits? Give the source and chemistry and uses of any two.
22. Describe the applications, advantages and disadvantages of Maceration, Soxhlet and percolation extraction techniques.

FACULTY OF PHARMACY
B. Pharmacy V - Semester (PCI) (Backlog) Examination, October 2024
Subject: Pharmaceutical Jurisprudence

Time: 3 Hours

Max. Marks: 75

PART – A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Write any three classes of drug and cosmetics which are prohibited from import.
2. Differentiate wholesale and retail sale.
3. Write the objective of Medicinal and Toilet Preparation Act 1955.
4. What is schedule N and its requirements?
5. Write the formula for calculating retail price of formulations.
6. Write the functions of NPPA (National Pharmaceutical Pricing Authority).
7. What are the labeling instructions for Schedule X drugs?
8. Write about Hathi Committee.
9. Define Intellectual Property Rights.
10. Write the objectives of the medical termination of pregnancy Act.

PART – B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Write the objectives, constitution & functions of Pharmacy council of India.
12. Write a brief note on Narcotic drugs and Psychotropic substances Act 1985 and rules.
13. (a) Write the objectives and differentiate bonded and non-bonded Laboratory as per Medicinal and Toilet preparation Act 1955.
(b) Explain in detail about construction of bonded laboratory.

PART – C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Write the requirements for manufacture of schedule X drugs.
15. Write a short note on Code of Pharmaceutical Ethics.
16. Write a short note on Schedule F.
17. Write a note on central drugs laboratory.
18. Give a note on Prevention of Cruelty to animals Act 1960.
19. What are the salient features of Drugs and Magic Remedies Act?
20. Write the constitution and responsibility of drug technical advisory board.
21. Discuss the various aspects of Indian Pharmaceutical Legislation.
22. Define the term Advertisements and give a short note on Prohibited Advertisements.

FACULTY OF PHARMACY

B. Pharmacy II - Semester (PCI) (Main & Backlog) Examination, October 2024

Subject: Computer Application in Pharmacy

Time: 2 Hours

Max. Marks: 50

PART – A

Note: Answer any two questions from the following.

(2 x 10 = 20 Marks)

1. (i) Illustrate Objectives for Input and output Design.
(ii) List the different types of Cascading Style Sheets.
2. (i) How Barcode Labels Work?
(ii) Discuss the impact of bioinformatics on vaccine design and development.
3. (i) Develop the importance of Standard operating procedures (SOP).
(ii) Write about HTML.

PART – B

Note: Answer any five questions from following.

(6 x 5 = 30 Marks)

4. Estimate the equivalent decimal, octal and hexadecimal values for the 10101011 binary numbers.
5. Find difference between Low level programming language and high level programming language.
6. Illustrate the Importance of medication monitoring.
7. Explain the various types of databases in bioinformatics.
8. Judge the importance of chromatographic data system.
9. Illustrate the benefits of Electronic prescribing system.
10. Analyze the components of data flow diagram. And list its Strengths and Weaknesses.
11. Design major components to Microsoft Access.

FACULTY OF PHARMACY

B. Pharmacy V - Semester (PCI) (Main & Backlog) Examination, April 2024

Subject: Pharmacology-II

Time: 3 Hours

Max. Marks: 75

PART - A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. What are antiarrhythmics and give examples?
2. Explain the MOA of statins
3. Write short notes on plasma volume expanders
4. Define and write the therapeutic uses of fibrinolytics
5. Classify autacoids with examples
6. Write the mechanism of action and therapeutic uses of 5-HT₃ antagonists.
7. Write the mechanism of action of glucocorticoids
8. What are the therapeutic uses of thyroxine?
9. What are tocolytics and give examples?
10. What are the applications of bioassays?

PART - B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. (a) Define and classify anticoagulants.
(b) Write the mechanism of action, adverse drug reactions and therapeutic uses of warfarin.
12. (a) What are the methods of bioassay of insulin and describe any one method in detail.
(b) What are the methods of bioassay of digitalis and describe any one method in detail.
13. (a) Define and classify antihypertensives.
(b) Write the mechanism of action, adverse drug reactions and therapeutic uses of ACE inhibitors.

PART - C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Classify antianginal drugs. Write the therapeutic uses of organic nitrates
15. Write the pharmacology of digoxin
16. Classify diuretics. Write the MOA and therapeutic uses of loop diuretics
17. Write short notes on hematinics
18. Write notes on insulin preparations
19. Discuss the pharmacological actions of prostaglandins and write the therapeutic uses of prostaglandin analogs
20. Classify NSAIDs with examples. Explain the mechanism of action of aspirin.
21. Write short notes on oxytocics
22. Classify antithyroid agents. Write about thioamides.

FACULTY OF PHARMACY
B. Pharmacy V - Semester (PCI) (Main & Backlog) Examination, March 2024
Subject: Industrial Pharmacy-I

Time: 3 Hours

Max.Marks:75

PART - A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. What is Racemization? Give example.
2. Write the methods of study of solid forms of a substance.
3. What are the tests used for detecting type of emulsion.
4. Write the advantages of pellets.
5. What is isotonicity? Explain its importance for parenteral products.
6. Write the principle involved in LAL test for injectables?
7. What is orange peel effect in tablets coating?
8. Define propellants.
9. Define pharmagel A and pharmagel B?
10. What are pyrogens?

PART - B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Enlist the excipients used in tablet manufacture with examples. Write their role and mechanism of action.
12. Explain formulation and the production of parenterals.
13. Explain the formulation and evaluation of aerosols.

PART - C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. How flow properties of powders are measured.
15. What is partition coefficient? Write the significance of it.
16. Write a brief note on manufacturing defects in tablet coating.
17. Explain the techniques for solubilization of API.
18. Explain weight variation test and content uniformity test for capsules.
19. Write the differences between flocculated and deflocculated suspensions.
20. Write note on sterile powders.
21. Discuss the manufacturing and uses of cold cream and vanishing cream.
22. Explain the factors affecting selection of pharmaceutical packing materials.

FACULTY OF PHARMACY

B. Pharmacy V - Semester (PCI) (Main & Backlog) Examination, April 2024

Subject: Pharmaceutical Jurisprudence

Time: 3 Hours

Max. Marks: 75

PART - A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Describe conditions for grant of restricted license.
2. What are the objectives of Drugs and Cosmetics Act 1940 and its rules 1945?
3. What are the qualifications required for Government drug analysts?
4. What is Schedule H?
5. Write the functions of Pharmacy council of India.
6. What are the regulations for export of alcoholic preparations.
7. Write the formula for calculating retail price of formulations.
8. What is the purpose of IAEC?
9. Define Trademarks.
10. What is Schedule N?

PART-B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Write a note on Pharmacy Act-1948.
12. Write a note on General labelling requirements and specimen labels for drug and cosmetics.
13. Describe Schedule M, with regard to manufacture of drugs and cosmetics.

PART-C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. What are the conditions for grant of license, describe loan license and repacking license.
15. Write a note on Drug Consultative Committee.
16. Write a note on Schedule P.
17. Discuss the constitution and functions of pharmacy council.
18. Describe exempted advertisements as per drugs and magic remedies act.
19. Write a note on pharmaceutical ethics to be followed by a pharmacist.
20. Write a note on CPCSEA guidelines for Breeding and Stocking of animals.
21. Write a short note on Intellectual Property Rights.
22. Write a note on regulations for Opium cultivation and production of Poppy straw.

FACULTY OF PHARMACY

B. Pharmacy V - Semester (PCI) (Main & Backlog) Examination, April 2024

Subject: Pharmacognosy & Phytochemistry – II

Time: 3 Hours

Max. Marks: 75

PART-A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Define radioisotopes. Give examples of radioisotopes used in tracer techniques.
2. What are the active constituents in Clove and Ginger and their uses
3. Define Flavonoids. Give chemical test used for identification of Flavonoids.
4. What are anthraquinone glycosides. Give chemical test for identification of anthraquinone glycosides.
5. Define resins and give its classification with examples.
6. Give method for isolation of menthol.
7. Give the structure and identification test for quinine.
8. Write the applications of electrophoresis.
9. Write the applications of TLC in phytochemistry.
10. Explain concept of microwave assisted extraction.

PART-B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Explain in detail shikimic acid pathway for biosynthesis for various secondary metabolite.
12. Explain in detail method of isolation, identification and estimation of Caffeine.
13. Write a note on various spectroscopic methods and their application in phytochemistry.

PART-C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Explain the Isolation, identification and analysis of citral
15. Write in detail about the acetate mevalonate pathway.
16. Write a brief note on various chromatographic methods used in isolation and purification of phytoconstituents.
17. Explain the biological source, chemical tests, chemical constituents and therapeutic uses of opium.
18. Explain Autoradiography in detail.
19. Explain method of isolation, identification and utilization of vincristine and vinblastine.
20. Define alkaloids. Give its classification with examples and general chemical tests.
21. Write the biological source, chemical tests, chemical constituents and therapeutic uses of digitalis.
22. Define tannins. Differentiate between black and pale catechu.

FACULTY OF PHARMACY

B. Pharmacy V Semester (PCI) (Main & Backlog) Examination, March 2024

Subject: Medicinal Chemistry-II

Time: 3 Hours

Max. Marks: 75

PART - A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Give the structures of omeprazole and lansoprazole.
2. Write the mechanism of action of anticancer plant products.
3. Outline the synthesis of nitroglycerin.
4. Discuss the mechanism of action of ACE inhibitors.
5. Outline the synthesis of warfarin.
6. Discuss the mechanism of action of HMGCoA reductase inhibitors.
7. Write the structures of oestrone and diethylstilbestrol.
8. Give the mechanism of action of insulin.
9. Discuss the mechanism of action of glucosidase inhibitors with examples.
10. Write the structures of lidocaine and dibucaine.

PART - B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. (a) Classify H₁-antagonists with two structures from each class.
(b) Classify antimetabolites? Explain the mechanism of action and synthesis of methotrexate.
12. (a) Explain the mechanism of action of anti-arrhythmic drugs with examples.
(b) Outline the synthesis of chlorothiazide and furosemide.
13. (a) Classify oral hypoglycemic drugs with one structure from each class.
(b) Discuss SAR of local anesthetics.

PART - C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Discuss the mechanism of action of gastric proton pump inhibitors.
15. Write the mechanism of action of vasodilators and outline the synthesis of isosorbide dinitrate.
16. Classify anti-hypertensive agents with one structure from each class.
17. Give an account on anticoagulants. Give the synthesis of warfarin.
18. Write in detail about stereochemistry of steroids.
19. Write a note on thyroid and anti-thyroid drugs.
20. Discuss mechanism of action of sulfonylureas and thiazolidinediones with examples.
21. Classify local anesthetics with structures.
22. Outline the synthesis of tolbutamide and procaine.
