Code No: G-13095/PCI

FACULTY OF PHARMACY

B. Pharmacy (PCI) V - Semester (Main & Backlog) Examination, March 2025

Subject: Medicinal Chemistry-II

Time: 3 Hours **Max. Marks: 75**

PART – A

Note: Answer all the questions. **(10 x 2 = 20 Marks)**

1. Write the uses and mechanism of action of acetazolamide.
2. Explain anti-hyperlipidemic agents with examples.
3. Write the structure and uses of diethylstilbestrol.
4. Write the synthesis of warfarin.
5. Write the uses and mechanism of action of digitoxin.
6. Write the structure of betamethasone and dexamethasone.
7. Write the mechanism of action of bleomycin.
8. Write the uses and MOA of sildenafil.
9. Write the structure of testosterone and progesterone.
10. Explain loop diuretics.

PART – B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11. Write the chemical classification (with structures) and SAR of H_1-antihistaminic agent.
12. Define antineoplastic agents. Write its classification (with structures) and detailed mechanism of action of each class.
13. Classify Local anesthetics. Explain the mechanising action & SAR.

PART – C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14. Discuss in detail about proton pump inhibitors along with mechanism of action.
15. Explain the stereo chemistry of steroids.
16. What is diabetes? Classify antidiabetics with examples and give their mechanism of action.
17. Write the short note on anti-arrhythmic agents.
18. Explain in detail about coagulants and anticoagulants.
19. Write the synthesis of nitroglycerin and methyldopa.
20. Write short notes on oral contraceptives.
21. Write the structure and uses of L-thyroxine, L-thyronine, propylthiouracil, methimazole.
22. Define and classify diuretic agents. Write the mechanism of action of thiazide diuretics.

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Code No: G-13099/PCI

FACULTY OF PHARMACY

B. Pharmacy (PCI) V - Semester (Main & Backlog) Examination, March 2025

Subject: Pharmaceutical Jurisprudence

Time: 3 Hours **Max. Marks: 75**

PART - A

Note: Answer all the questions. **(10 x 2 = 20 Marks)**

1. Define Loan license and repacking license.
2. What are the labelling instructions for Schedule X drugs.
3. Write the role of Drug Inspector.
4. Define Narcotic drugs and psychotropic substances.
5. Write the objectives of DPCO (Drug Price Control Order).
6. Write the constitution of Institutional Animal Ethics Committee.
7. Write the functions of the government Analyst.
8. Define patent.
9. Define medicinal hemp and poppy straw.
10. What is schedule N and its requirements?

PART - B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11. Explain the legal procedure for cultivation, production, manufacturing and sale of opium.
12. Describe the salient features, prohibited advertisements, exempted advertisements of drugs as per magic remedies act.
13. Explain the objectives and write about the constitution and functions of Pharmacy council of India (PCI) under Pharmacy Act-1948.

PART - C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14. Write a note on Central drugs laboratory.
15. Discuss the layout and construction of Bonded laboratory.
16. Write a short note on Drug Enquiry Committee.
17. Define Narcotic drugs and psychotropic substances as per Act. Explain the offence and Penalties as per act.
18. Define the term Advertisement and Magic remedies. Explain prohibited advertisement as per act.
19. Write a note on CPCSEA guidelines for experiments on animals.
20. Write the procedure for obtaining a manufacturing license for schedule C, C1 drugs.
21. Write a note on National list of Essential Medicines (NLEM).
22. Write a note on Drug Price Control Order.

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Code No: G- 13098/PCI

FACULTY OF PHARMACY

B. Pharmacy (PCI) V - Semester (Main & Backlog) Examination, March 2025
Subject: Pharmacognosy & Phytochemistry – II

Time: 3 Hours **Max.Marks:75**

PART - A

Note: Answer all the questions. **(10 x 2 = 20 Marks)**

1. Write the applications of tracer technique.
2. Write about autoradiography.
3. Give the source and chemical structure of artemisin.
4. Describe the source and chemical test for Aloes.
5. Write the importance of spectroscopy.
6. Define chromatography.
7. Define alkaloids and steroids.
8. Write the biological source of Digitalis and Liquorice.
9. Describe the gold beaters skin test and muroxide test.
10. Give the source and mechanism of action of taxol.

PART - B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11. Define and write the principles of extraction. List the extraction techniques and describe any three methods with merits and demerits.

12. Write the source, isolation and estimation of Quinine and caffeine.

13. What are volatile oils and classify. Discuss the methods of volatile oil extraction.

PART - C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14. Write the source, chemistry and therapeutic uses of Opium.
15. What are resins? Give the source and uses of Asafoetida colophony.
16. Describe the source, chemical structure, uses and isolation of forskolin.
17. Discuss the principle and applications of HPLC and HPTLC.
18. Give an informative note on electrophoresis.
19. Describe the specific chemical test for steroids, flavonoids and alkaloids.
20. Write the estimation of artemisin and digoxin.
21. Write the applications of IR and UV spectroscopy.
22. Write the source and chemical structure of diosgenin, podophyllotoxin and Reserpine.

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Code No: G-13097/PCI

FACULTY OF PHARMACY

B. Pharm (PCI) V - Semester (Main & Backlog) Examination, March 2025

Subject: Pharmacology-II

Time: 3 Hours **Max. Marks: 75**

PART - A

Note: Answer all the questions. **(10 x 2 = 20 Marks)**

1. Explain the MOA of digoxin.
2. What are antiarrhythmic drugs and give examples?
3. What are the therapeutic uses of vit k?
4. Define and write the therapeutic uses of fibrinolytics.
5. Give examples and write the therapeutic uses of 5-HT3 antagonists.
6. What is thyroxine and write its therapeutic uses.
7. What are the therapeutic uses of prostaglandin analogs?
8. What are anabolic steroids and write their therapeutic uses?
9. Define bioassay. List out the types of bioassays.
10. Classify the drugs used for gout.

PART - B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11. (a) Define and classify antihypertensives.
    (b) Write the mechanism of action, adverse drug reactions and therapeutic uses of ACE inhibitors.

12. (a) Define and classify Oral hypoglycemic agents.
    (b) Write notes on insulin preparations.

13. What are the methods of bioassay of insulin? Discuss any two methods in detail.

PART - C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14. Classify antianginal drugs. Write the therapeutic uses of organic nitrates.
15. Classify antihyperlipidemic. Discuss about statins.
16. Write short notes on hematinics.
17. Classify diuretics. Write the MOA and therapeutic uses of loop diuretics.
18. Classify autocoids and write the pharmacology of histamine.
19. Write the pharmacological actions and therapeutic uses of thyroid hormones.
20. Write short notes on antirheumatic drugs.
21. Write notes on oral contraceptives
22. Classify NSAIDS with examples.

Code No: G-13096/PCI

FACULTY OF PHARMACY

B. Pharmacy (PCI) V - Semester (Main & Backlog) Examination, March 2025
Subject: Industrial Pharmacy-I

Time: 3 Hours **Max. Marks: 75**

PART – A

Note: Answer all the questions. **(10 x 2 = 20 Marks)**

1. Define Preformulation.
2. What is BCS classification of drugs?
3. Differentiate D tooling and BB tooling.
4. Describe identifying tests for type of emulsion.
5. Write a note on Bloom Strength.
6. Write the differences between type A and type B gelatin.
7. Differentiate small volume parenterals and large volume parenterals.
8. What is Aseptic area?
9. Describe types of Glass used for packaging of pharmaceutical products.
10. Define and classify cosmetics.

PART – B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11. Describe production of hard gelatin capsule shell and filling of hard gelatin capsules.
12. Explain formulation and production of parenterals.
13. Describe Quality control tests for Tablets.

PART – C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14. Describe methods to study solid forms.
15. Write a note on determination of partition coefficient and its significance.
16. Describe different types of coating of tablets.
17. Explain formulation considerations of liquid dosage forms.
18. Write in detail about extrusion-spheroniation technique.
19. Write a note on propellants in Aerosols.
20. Explain the process of Freeze drying.
21. Describe the formulation and preparation of Shampoos.
22. Describe factors influencing choice of containers for pharmaceutical products packaging.

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Code No: F-7334/PCI

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.

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Code No: F-7338/PCI

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.

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Code No: F-7337/PCI

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 Glycyrhetinic 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.

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Code No: F-7336/PCI

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 Bioassy of Vasopressin and d-Tubercurarine.

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 mehanisms and uses.
22. Write a note on advantages and disadvantages on Human Albumin.

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Code No: F-7335/PCI

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.

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Code No: F-7182/PCI

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.

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Code No: F-7181/PCI

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 isotonocity? 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.

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Code No: F-7184/PCI

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.

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Code No: F-7183/PCI

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 Caffiene.
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.

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Code No: F-7180/PCI

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 oestrione 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 H_1-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 dinitrite.
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.

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Code No: E-12410/PCI

FACULTY OF PHARMACY

B. Pharmacy V Semester (PCI) (Backlog) Examination, November 2023

Subject: Medicinal Chemistry - II

Time: 3 Hours **Max. Marks: 75**

PART-A

Note: Answer all the questions. **(10 x 2 = 20 Marks)**

1. Write the structures and uses of Triprolidine hydrochloride.
2. Write the MOA of Spironolactone.
3. Write the synthesis of Isosorbide dinitrite.
4. Explain the antithyroid drug with examples.
5. Write the uses and mechanism of action of Thiazolidinedione's.
6. Write the structure of Cortisone and Hydrocortisone.
7. Explain Anti-hyperlipidemic agents with examples.
8. What are proton pump inhibitors.
9. Write the structure and uses of nitro-glycerine, chlorthiazide.
10. Write the mechanism of action of Dibucaine.

PART-B

Note: Answer any two questions **(2 x 10 = 20 Marks)**

11. (a) Write short notes on drugs for erectile dysfunction.
    (b) Write the synthesis and uses of Tolbutamide.
12. Write the classification with one structure from each category of Diuretics. Explain the mechanism of action of each class.
13. Write a short notes on oral contraceptives.

PART-C

Note: Answer any seven questions **(7 x 5 = 35 Marks)**

14. Explain Antineoplastic agents with examples. Write the mechanism of action of Antimetabolite.
15. Write the MOA, uses and synthesis of metformin.
16. Write the classification of calcium channel blockers with structures.
17. Write the MOA and synthesis of Nitroglycerin.
18. Write a short notes on Anti-arrhythmic Drugs.
19. Write the SAR of local anaesthetic agents.
20. Explain the Nomenclature and Stereochemistry of steroids.
21. Write a short note on the alkylating agents.
22. Write the structure, uses and MOA of Omeprazole.

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Code. No: E-12413/PCI

FACULTY OF PHARMACY

B. Pharmacy V Semester (PCI) (Backlog) Examination, November 2023

Subject: Pharmacognosy & Phytochemistry-II

Time: 3 Hours **Max.Marks:75**

PART-A

Note: Answer all the questions. **(10 x 2 = 20 Marks)**

1. Define primary and secondary metabolites and write two examples.
2. What are cardiac glycosides?
3. Define glycosides and give classification of glycosides with examples.
4. Give biological source, chemical constituents and uses of Asafoetida.
5. Give the biological source, chemical constituents and uses of *Curcuma longa*.
6. How will you identify menthol?
7. Write a biological source, and uses of artemisinin.
8. Write application of HPTLC in phytochemistry.
9. Give biological source and chemical constituents and uses of Cinnamon and Bitter almond.
10. Write the application of electrophoresis.

PART-B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11. Write a descriptive note on Shikimic acid pathway.
12. (a) Give the method of isolation for Atropine.
    (b) How will you estimate sennosides?
13. Write a descriptive note on industrial production of podophyllotoxin as anticancer agent.

PART-C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14. Discuss the chemistry of digitalis.
15. Write a note on tracer techniques in biogenetic study.
16. Give the estimation and utilization of Caffeine.
17. How will you isolate, identify and analyse the Citral.
18. Write a principle and application of TLC.
19. Define volatile oil. Give various methods used for isolation of volatile oil.
20. Write the biological source, structures of chemical constituents & uses of Digitalis.
21. Give biological source, chemical constituents and uses of Opium and Clove.
22. Define tannins and write a note on Catechu.

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Code. No: E-12414/PCI

FACULTY OF PHARMACY

B. Pharmacy V Semester (PCI) (Backlog) Examination, November 2023
Subject: Pharmaceutical Jurisprudence

Time: 3 Hours **Max.Marks:75**

PART-A

Note: Answer all the questions. **(10 x 2 = 20 Marks)**

1. Define Drug and Cosmetic according to drugs and cosmetics act 1940.
2. Differentiate wholesale and retail sale.
3. What is Schedule P?
4. List the central drugs laboratories in India.
5. Write the objective of Medicinal and Toilet Preparation Act 1955.
6. How is sale and export of Opium controlled?
7. What is the constitution of Institutional Animal Ethics Committee?
8. List the classes of exempted advertisements.
9. Define Intellectual Property Rights.
10. Write the purpose of Hathi committee.

PART-B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11. Describe Administration of Drugs and Cosmetics Act 1940, and its rules 1945.
12. Describe the salient features, prohibited advertisements, exempted advertisements of drugs and magic remedies act.
13. Explain in detail about Pharmacy Act 1948.

PART-C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14. What are the requirements for manufacture of schedule X drugs?
15. Write a note on Schedule U.
16. Describe Manufacture In bond and Outside bond.
17. Write the Constitution and Functions of narcotic & Psychotropic Consultative Committee
18. What are the general labelling requirements for drugs and cosmetics?
19. Write a note on Code of Pharmaceutical Ethics.
20. Explain CPCSEA guidelines for animal experiments.
21. Write a note on right to information act.
22. Write a note on National list of Essential Medicined (NLEM).

Code No: E-12412/PCI

FACULTY OF PHARMACY

B. Pharmacy V-Semester (PCI) (Backlog) Examination, November 2023
Subject: Pharmacology – II

Time: 3 Hours **Max. Marks: 75**

PART-A

Note: Answer all the questions. **(10 x 2 = 20 Marks)**

1. What is arrhythmia? Mention two drugs used in its treatment.
2. Discuss the mechanism of antianginal effect of Glyceryl trinitrate.
3. What are fibrinolytics? Mention two examples.
4. Classify antidiuretics.
5. Describe the triple response of histamine.
6. What are the different uses of antihistaminics.
7. What are the adverse effects of Corticosteroids?
8. What are the therapeutic uses of T_3 & T_4?
9. Mention the uses of oral contraceptives.
10. Define bioassay. List out the types of bioassays.

PART-B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11. Explain the various methods of bioassay of oxytocin and d-tubocurarine.
12. (a) Classify the non-steroidal anti-inflammatory agents with examples.
    (b) Explain the mechanism of action, uses and adverse effects of salicylates.
13. (a) What is congestive heart failure? Classify the drugs used for its treatment.
    (b) Explain the mechanism of action, adverse drug reactions and uses of digoxin.

PART-C

Note: Answer any seven questions **(7 x 5 = 35 Marks)**

14. Write short notes on oral anticoagulants.
15. Write the pharmacological actions and uses of prostaglandins.
16. Explain the pharmacology of Sodium nitroprusside.
17. Write the mechanism of action, adverse drug reactions and therapeutic uses of ACE inhibitors.
18. Explain the pharmacology and uses of vasopressin.
19. Write the pharmacology of allopurinol.
20. Write the mechanism of action, adverse drug reactions and uses of metformin.
21. What are the methods of bioassay of insulin? Discuss any one method in detail.
22. Write a brief note on oral contraceptives.

Code. No: E-12411/PCI

FACULTY OF PHARMACY

B. Pharmacy V Semester (PCI) (Backlog) Examination, November 2023
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 BCS classification of drugs? Write example of each class.
2. Enlist the methods to study particle size and shape of solids.
3. What is the use of glidant, lubricant and anti-adherent in tablet manufacturing?
4. Write the methods for pharmaceutical emulsion manufacturing.
5. Enlist the quality control tests for hard gelatin and soft gelatin capsules.
6. Give significance of pelletization.
7. Describe sterility test for eye ointments.
8. What are the different routes of administration for parenteral products?
9. Define and classify cosmetics.
10. Discuss the role of packaging in pharmaceuticals.

PART-B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11. (a) Explain IPQC for uncoated tablets.
    (b) Write the significance of tablet coating. Describe the process of sugar coating.
12. (a) Explain official and non-official QC tests for glass as packaging material.
    (b) Discuss evaluation tests for pellets.
13. Discuss the components of aerosol with neat and labelled diagram. Add a note on types of propellant.

PART-C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14. Describe the methods to study solid forms.
15. Explain racemization and polymerization of API with examples.
16. Write a note on manufacturing of pharmaceutical suspensions.
17. Discuss tablet manufacturing defects and techniques to overcome them.
18. Describe steps involved in extrusion-spheronization.
19. Explain manufacturing of SGC.
20. Discuss the method of pyrogen testing for injections.
21. Describe manufacturing and evaluation of shampoo.
22. Explain the formulation and labelling requirements for ophthalmic products.

Code No: E-12229/PCI

FACULTY OF PHARMACY

B. Pharmacy V-Semester (PCI) (Main & Backlog) Examination, April / May 2023

Subject: Pharmacology - II

Time: 3 Hours **Max. Marks: 75**

PART-A

Note: Answer all the questions **(10 x 2 = 20 Marks)**

1. Write the differences between COX-I and COX-II.
2. What are the different waves and segments of ECG? Write their significance.
3. Mention various Anterior Pituitary Hormones.
4. Write the functions of Insulin and Glucagon.
5. What are antiplatelet drugs and write their therapeutic uses?
6. Define diuretics. Mention their therapeutic uses.
7. Write the mechanism of action and therapeutic uses of 5-HT_3 antagonists.
8. Mention the uses of tocolytics.
9. What are anabolic steroids? What are their uses?
10. Define Bioassay. Discuss its applications.

PART-B

Note: Answer any two questions **(2 x 10 = 20 Marks)**

11. (a) Define and classify Oral hypoglycemic agents.
    (b) Write in detail about Sulphonylureas.
12. Define and classify Diuretics. Write the mechanism of action, adverse drug reactions and therapeutic uses of loop diuretics.
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. What is angina pectoris? Classify antianginal drugs.
15. Write a note on HMG-CoA reductase inhibitors.
16. Define Coagulants. Add a note on fibrinolytics.
17. Write short notes on anti-diuretics.
18. Classify NSAIDs with examples. Explain the mechanism of action of aspirin.
19. Explain the pharmacological actions of histamine and mention H2 antagonists and their uses.
20. Classify antithyroid agents. Write about thyroid hormone inhibitors.
21. Write a note on calcium regulation in body.
22. Write short notes on oral contraceptives.

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Code. No: E-12228/PCI

FACULTY OF PHARMACY

B. Pharm. V-Semester (PCI) (Main & Backlog) Examination, April / May 2023

Subject: Industrial pharmacy I

Time: 3 Hours **Max.Marks:75**

PART-A

Note: Answer all the questions. **(10 X 2 = 20 Marks)**

1. Write the equation indicating relationship between pH and pKa for acids and bases.
2. Give significance of preformulation studies in pharmaceutical formulation design.
3. Describe friability test for tablets.
4. Write the methods for oral liquid filling.
5. Enlist quality control tests for capsules.
6. Describe any four manufacturing defects in capsules.
7. Enlist critical formulation considerations for parenteral products.
8. What are the evaluation tests for eye drops?
9. Define and classify creams. Write the legal and official requirements for pharmaceutical containers.
10. What is the difference in formulation of vanishing cream & cold cream?

PART-B

Note: Answer any two questions. **(2 X 10 = 20 Marks)**

11. (a) Discuss tablet excipients with examples.
    (b) Describe parts of tablet punching machine. Emphasize on different tablet Tooling.
12. Explain the manufacturing of hard gelatin capsule shells and filling methods.
13. (a) Describe sterility testing and pyrogen testing for injections.
    (b) Discuss formulation of eye ointment.

PART-C

Note: Answer any seven questions **(7 X 5 = 35 Marks)**

14. What is partition coefficient? Write the significance and method to identify the same.
15. How you will improve the flow ability of solid blends?
16. Write a note on tablet coating.
17. Describe the evaluation tests for pharmaceutical emulsions.
18. Differentiate between hard gelatin and soft gelatin capsules.
19. Discuss aseptic filling for parenteral products.
20. Describe manufacturing and evaluation of toothpaste.
21. Describe different types of aerosols.
22. Discuss the types and quality control tests for plastic as packaging material for pharmaceuticals.

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Code No: E-12227/PCI

FACULTY OF PHARMACY

B. Pharmacy V Semester (PCI) (Main & Backlog) Examination, April / May 2023

Subject: Medicinal Chemistry - II

Time: 3 Hours **Max. Marks: 75**

PART-A

Note: Answer all the questions. **(10 x 2 = 20 Marks)**

1. Write the uses and mechanism of action of cimetidine.
2. Write the uses of Spironolactone and captopril.
3. Explain Anti-arrhythmic Drugs with examples and their structures.
4. Write the synthesis of Warfarin.
5. Explain the antithyroid drug with examples. Write the structures of propylthiouracil.
6. Write the uses and mechanism of action of Glycosidase inhibitors.
7. Write the uses of Betamethasone and Dexamethasone.
8. Write the uses of Testosterone and Progresterone.
9. Write the uses of Furosemide, Nifedepine.
10. Write the mechanism of action of Bleomycin.

PART-B

Note: Answer any two questions. **(2 x 10 = 20Marks)**

11. (a) Write short notes on oral contraceptives.
    (b) Write the synthesis and uses of Isosorbide dinitrite.
12. Write the classification with one structure from each category of Antineoplastic agents. Explain the mechanism of action of each class.
13. Write a short notes on Gastric proton pump inhibitors.

PART-C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14. Write the classification of calcium channel blockers with examples.
15. Explain diuretic agents with examples. Write the mechanism of action of thiazide diuretics.
16. Write the MOA, uses and synthesis of Methyldopate hydrochloride.
17. Write the MOA and synthesis of Nitroglycerin.
18. Write a short notes on Anti-hyperlipidemic agents.
19. Write the SAR of local anaesthetic agents.
20. Explain the Nomenclature and Stereochemistry of steroids.
21. Write a short note on the sulfonylurea class of drugs.
22. Write the structure, uses and MOA of sildenafil.

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Code. No: E-12231/PCI

FACULTY OF PHARMACY

B. Pharm. V Semester (PCI) (Main & Backlog) Examination, April / May 2023

Subject: Pharmaceutical Jurisprudence

Time: 3 Hours **Max.Marks:75**

PART-A

Note: Answer all the questions **(10 x 2 = 20 Marks)**

1. Define Loan license and repacking license.
2. What are the objectives of Drugs and Cosmetics Act 1940?
3. What are the labeling instructions for Schedule X drugs?
4. What is Schedule G?
5. How is manufacture and export of alcoholic preparations regulated?
6. What is the eligibility criterion for registration as a pharmacist?
7. Write the formula for calculating retail price of formulations.
8. What are CPCSEA guidelines?
9. Define Trademarks.
10. What are the functions of NPPA?

PART-B

Note: Answer any two questions **(2 x 10 = 20 Marks)**

11. Write a note on Narcotic drugs and Psychotropic substances Act 1985 and rules.
12. Write a note on Pharmaceutical Legislations.
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 classes of drugs and cosmetics prohibited from import?
15. Write a note on Drug Technical Advisory Board.
16. Write a note on Schedule F.
17. Discuss the constitution and functions of pharmacy council.
18. Write a note on pharmaceutical ethics to be followed by a pharmacist.
19. Write a note on Prevention of Cruelty to animals Act 1960.
20. Write a short note on Drug Enquiry Committee.
21. Write a note on Drug Price Control Order.
22. Describe prohibited advertisements, exempted advertisements of drugs and magic remedies act.

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Code No.D-8248/PCI

FACULTY OF PHARMACY

B. Pharmacy V Semester (PCI) (Backlog) Examination, September 2022
Subject: Pharmacology - II

Time: 3 Hours **Max. Marks: 75**

PART - A

Note: Answer all the questions. **(10 x 2 = 20 Marks)**

1 Explain the mechanism of anti-arrhythmic action of lidocaine.
2 What is arrhythmia? Mention two drugs used in its treatment.
3 What are fibrinolytics? Mention two examples.
4 Mention the uses of vasopressin analogues.
5 Classify autacoids with examples.
6 What is rheumatism? Mention the drugs used in rheumatism.
7 What are anabolic steroids? Write their uses.
8 Explain about hormonal regulation of plasma calcium levels.
9 Write the mechanism of action of glucocorticoids.
10 Define bioassay. Mention its applications.

PART - B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11 Explain the various methods of bioassay of insulin and digitalis.

12 (a) Classify the non-steroidal anti-inflammatory agents with examples.
(b) Explain the mechanism of action, uses and adverse effects of salicylates.

13 (a) What is congestive heart failure? Classify the drugs used for its treatment.
(b) Explain the mechanism of action, adverse drug reactions and uses of digoxin.

PART - C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14 Write short notes on pharmacology vitamin B_{12}.
15 Classify anticoagulants. Mention the pharmacological actions of heparin.
16 What is angina pectoris? Classify antianginal drugs.
17 Write the mechanism of action, adverse drug reactions and therapeutic uses of ACE inhibitors.
18 Explain about histamine receptors and drugs acting on them.
19 Write the pharmacology of allopurinol.
20 Write the mechanism of action, adverse drug reactions and uses of metformin.
21 Write the pharmacological actions and therapeutic uses of thyroxine.
22 Write a brief note on oral contraceptives.

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Code No. D-8247/PCI

FACULTY OF PHARMACY

B. Pharmacy V Semester (PCI) (Backlog) Examination, August 2022
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 to study of solid forms of a substance.
3 Explain friability test for tablets.
4 What are the tests used for detecting type of emulsion?
5 Write the differences between type A and type B gelatin.
6 Write the advantages of pellets.
7 Explain the concept of aseptic processing.
8 Plastic bottles are preferred over glass bottles for saline. Justify.
9 Write the type of glass with their uses for pharmaceutical products.
10 Define cosmetics and give classification of cosmetics with examples.

PART - B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11 (a) Discuss about crystallinity of solid substances.
(b) Describe the chemical reactions involved in degradation of API.

12 Explain in detail about manufacturing of hard gelatin capsules and soft gelatin capsules.

13 (a) Describe the components of aerosol system with the help of a neat diagram.
(b) Discuss the types of aerosol system.

PART - C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14 Explain the techniques for solubilization of API.
15 Discuss the steps involved in sugar coating of tablets.
16 Describe the evaluation of liquid orals as per pharmacopoeia.
17 Explain in detail about extrusion-spheronization technique.
18 Elaborate the parenteral additives with their examples.
19 What are pyrogens? Discuss the pyrogen test for injectables.
20 Write the differences between flocculated and deflocculated suspensions.
21 Elaborate water attack test USP and powder glass test USP for packaging glass.
22 Discuss the manufacturing, and uses of cold cream and vanishing cream.

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Code No: D-8246/PCI

FACULTY OF PHARMACY

B. Pharmacy V Semester (PCI) (Backlog) Examination, August 2022
Subject: Medicinal Chemistry - II

Time: 3 Hours **Max. Marks: 75**

PART - A

Note: Answer all the questions. **(10 x 2 = 20 Marks)**

1 Write the structure and uses of omeprazole.
2 Write the mechanism of action of antimetabolites.
3 Outline the synthesis of isosorbide dinitrite.
4 Discuss the mechanism of action of ACE inhibitors.
5 Outline the synthesis of warfarin.
6 Define antiarrhythmics.
7 What are oral contraceptives? Give examples.
8 Write the structures of testosterone and oestradiol.
9 Discuss the mechanism of action of glucosidase inhibitors.
10 Write about structure of insulin.

PART - B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11 (a) What are H_2-antagonists? Outline the synthesis of cimetidine.
(b) Classify anti-neoplastic agents with two structures from each class.

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 Outline the synthesis of Diphenhydramine hydrochloride and promethazine hydrochloride.
15 Classify calcium channel blockers with one structure from each class.
16 Classify anti-hypertensives with one structure from each class.
17 Give an account on agents used in treating congestive heart failure.
18 Write in detail about oral contraseptives with structures.
19 Write a note on thyroid and anti-thyroid drugs.
20 Discuss mechanism of action of any two categories of diuretics with examples.
21 Classify local anesthetics with structures.
22 Outline the synthesis of tolbutamide and benzocaine.

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Code No: D-8250/PCI

FACULTY OF PHARMACY

B. Pharmacy V Semester (PCI) (Backlog) Examination, September 2022
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 drugs and cosmetics which are prohibited from import.
2 Define drug according to D & C Act.
3 What are the labeling instructions for Schedule X drugs?
4 Write the functions of government drug analyst.
5 Explain the terms In bond and Outside bond according to Medicinal and Toilet preparation Act 1955.
6 What is the eligibility criterion for registration as a pharmacist?
7 Write the formula for calculating retail price of formulations.
8 Write the constitution of Institutional Animal Ethics Committee.
9 Define ethics.
10 Define Intellectual Property Rights.

PART - B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11 Enlist the objectives of Pharmacy Act 1948. Write about the constitution and functions of state pharmacy council.

12 Explain the legal procedure for cultivation, production, manufacturing and sale of opium.

13 Explain requirements for manufacture of drugs for test, examination and analysis. Add a note on loan license and repacking license.

PART - C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14 What are the objectives of Drugs and Cosmetics Act 1940?
15 Write a note on central drugs laboratory.
16 Write a note on Schedule Y.
17 Discuss the layout and construction of bonded and non bonded laboratory.
18 Write a note on pharmaceutical ethics to be followed by a pharmacist.
19 Define trademarks, copyrights and patents.
20 Write a short note on Drug Enquiry Committee.
21 What are the salient feature of Drugs and Magic Remedies Act?
22 Write a note on Drug Price Control Order.

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Code No.D-8249/PCI

FACULTY OF PHARMACY

B. Pharmacy V Semester (PCI) (Backlog) Examination, September 2022
Subject: Pharmacognosy & Phytochemistry - II

Time: 3 Hours **Max. Marks: 75**

PART - A

Note: Answer all the questions. **(10 x 2 = 20 Marks)**

1 Give various application of radioisotopes.
2 How will you introduce radiolabelled compounds in plant?
3 Define glycoside and give its classification with examples.
4 Give the special test for identification of aloe.
5 Give the structure and uses of rutin.
6 How will you isolate menthol?
7 Write about important applications of diosgenin.
8 How will you estimate caffeine?
9 Give biological source and uses of digitalis.
10 Write about biological source and uses of cinnamon.

PART - B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11 Explain in detail the biosynthesis of any one secondary metabolite through acetate mevalonate pathway.

12 Explain in detail method of isolation, identification and analysis of reserpine.

13 Write a note on various chromatographic techniques used in identification and purification of phytoconstituents.

PART - C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14 Explain Shikimic acid pathway.
15 What are alkaloids? Give general method of isolation for alkaloids.
16 Write a note on method of isolation and identification of podophylotoxin.
17 Give the method of estimation for sennoside.
18 Write about biological source, chemical constituents and uses of fennel and catechu.
19 Write a note on method of isolation and identification of atropine.
20 Explain the Isolation, identification and analysis of artemisin.
21 What do you mean by tannins? Give its classification and general tests for identification of tannins.
22 Write a brief note on modern method for extraction of phytoconstituents.

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Code No. D8175/PCI

FACULTY OF PHARMACY

B. Pharmacy V Semester (PCI) (MAIN & BACKLOG) Examination,
February / March 2022

Subject: Pharmaceutical Jurisprudence

Time: 3 Hours **Max. Marks: 75**

PART - A

Note: Answer all questions. **(10 x 2 = 20 Marks)**

1 Define misbranded and spurious drugs according to drugs and cosmetics act 1940.
2 What do you understand by loan license and repacking license?
3 What is Schedule H?
4 What is the role of drug inspectors?
5 Write the constitution of state pharmacy council.
6 Define narcotic drugs and psychotropic substances.
7 What are the objectives of drug price control order?
8 List the classes of exempted advertisements.
9 Define Patents.
10 What for schedule M, N, X and Y?

PART - B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11 Describe schedule M with regard to requirements for manufacturing of a drug.

12 Describe the salient features, prohibited advertisements, exempted advertisements of drugs as per magic remedies act.

13 Explain in detail about pharmaceutical ethics.

PART - C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14 What are the requirements for manufacture of schedule X drugs?
15 Describe the classes of drugs and cosmetic prohibited from import according to D & C Act.
16 Describe wholesale, retail and restricted licenses for sale of drugs.
17 Write the constitution and responsibility of drug technical advisory board.
18 What are the objectives and functions of Pharmacy Act 1948?
19 Describe the procedure for manufacture and export of alcoholic preparations.
20 How do you calculate retail and ceiling price of scheduled formulations?
21 Explain CPCSEA guidelines for animal experiments.
22 Write a note on right to information act.

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Code No. D-8174/PCI

FACULTY OF PHARMACY

B. Pharmacy V Semester (PCI) (MAIN & BACKLOG) Examination,
February / March 2022

Subject: Pharmacognosy & Phytochemistry - II

Time: 3 Hours **Max. Marks: 75**

PART - A

Note: Answer all questions. **(10 x 2 = 20 Marks)**

1 What do you mean by radioisotope? Give some examples of radioisotopes used in tracer techniques.
2 Define primary and secondary metabolites and give examples.
3 What is cardiac glycosides?
4 Define alkaloids and give its classification with examples.
5 Give structure and uses of Caffeine.
6 How will you isolate curcumin from turmeric?
7 Write about important applications of Sennoside.
8 Give the structure and uses of Artemisinin.
9 Give the biological source and uses ginger.
10 Give chemical tests for identification of tannins.

PART - B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11 Explain in detail the biosynthesis of any one secondary metabolite through Shikimic acid pathway.

12 Explain in detail method of isolation, identification and analysis of Glycyrrhezitinic acid.

13 Write a descriptive note on various techniques used for extraction of phytoconstituents.

PART - C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14 Write a note on tracer techniques.
15 Write about biological source, chemical constituents and uses of opium and aloe.
16 Write a note on method of isolation and identification of quinine.
17 Give the method of estimation for vincristine and vinblastine.
18 Write about biological source, chemical constituents and uses of coriander and benzoin.
19 Write a note on method of isolation and identification of podophylotoxin.
20 Explain the Isolation, identification and analysis of citral.
21 What do you mean by volatile oil? Give its classification and method of isolation.
22 Write a brief note on Electrophoresis.

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Code No. D-8173/PCI

FACULTY OF PHARMACY

B. Pharmacy V Semester (PCI) (MAIN & BACKLOG) Examination, February 2022

Subject: Pharmacology - II

Time: 3 Hours **Max. Marks: 75**

PART - A

Note: Answer all questions. **(10 x 2 = 20 Marks)**

1 What is hyperlipidemia? Mention two drugs used in hyperlipidemia.
2 Elucidate the mechanism of antianginal effect of Glyceryl trinitrate.
3 What are antiplatelet drugs and write their therapeutic uses?
4 What are the applications of plasma volume expanders?
5 Describe the triple response of histamine.
6 What is gout? Mention the drugs used in gout.
7 What are the therapeutic uses of T_3 and T_4?
8 Enlist the actions of insulin.
9 Define bioassay. List out the types of bioassays.
10 Mention the uses of tocolytics.

PART - B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11 (a) Classify Diuretic agents.
(b) Explain the pharmacology of Loop diuretics.

12 Define antihypertensives. Classify with examples. Write the mechanism of action, adverse drug reactions and therapeutic uses of ACE inhibitors.

13 (a) Define and classify Oral Hypoglycemic agents.
(b) Write the pharmacology of Biguanides.

PART - C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14 Explain about oxytocics.
15 What are the methods of bioassay of d-tubocurarine? Discuss any one method in detail.
16 Write short notes on oral contraceptives.
17 Discuss the pharmacology of corticosteroids.
18 Classify NSAIDs with examples. Explain the mechanism of action of aspirin.
19 Write the pharmacological actions and uses of prostaglandins.
20 Write short notes on oral anticoagulants.
21 Discuss briefly about anti-platelet drugs.
22 What is arrhythmia? Classify antiarrhythmic drugs.

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Code No. D8172/PCI

FACULTY OF PHARMACY

B. Pharmacy V Semester (PCI) (Main & Backlog) Examination,
February 2022

Subject: Industrial Pharmacy - I

Time: 3 Hours **Max. Marks: 75**

PART - A

Note: Answer all questions. **(10 x 2 = 20 Marks)**

1 What is the need of preformulation studies in pharmaceutical product development?
2 Write the differences between crystalline and amorphous forms of solid.
3 Explain the importance of enteric coating of tablet.
4 Describe the granulation methods for tablet manufacturing.
5 Outline the steps of manufacturing of hard gelatin capsule SHELL.
6 Enlist the pelletization techniques.
7 What is isotonicity? Explain its importance for parenteral products.
8 Write the principle involved in LAL test for injectables.
9 Illustrate the components of aerosol system with the help of neat diagram.
10 How sunscreen products help to protect skin against UV radiation?

PART - B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11 (a) Describe the compression cycle for tablet manufacturing.
(b) Explain in process quality control tests for tablet compression.

12 (a) Describe sterility test procedures as per official books.
(b) Discuss formulation considerations for ophthalmic products.

13 (a) Elucidate the manufacturing of lipstick.
(b) What are the possible interactions between content and packaging material?

PART - C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14 What is BCS classification? Discuss its importance.
15 Discuss the tablet additives with examples of each class.
16 Describe the importance of fine particle characterization in preformulation studies.
17 Discuss the method for preparation of emulsion.
18 Describe the manufacturing defects of hard gelatin capsules.
19 Explain powder and liquid layering methods for pelletization, with a note on equipment used for the same.
20 Discuss quality control of parenteral products.
21 Describe ingredients for toothpaste manufacturing.
22 Explain the criteria for selection of packaging material.

Code No.D8171/PCI

FACULTY OF PHARMACY

B. Pharmacy V Semester (PCI) (MAIN & BACKLOG) Examination,
February / March 2022

Subject: Medicinal Chemistry - II

Time: 3 Hours **Max. Marks: 75**

PART - A

Note: Answer all questions. **(10 x 2 = 20 Marks)**

1 Write about histamine receptors and their distribution in the body.
2 Outline the synthesis of mercaptopurine.
3 Classify antianginals with examples.
4 Outline the synthesis of chlorthiazide.
5 What are coagulants? Give examples.
6 Describe HMGCoA reductase inhibitors.
7 Write the structures of oestrione and oestriol.
8 What are thyroid drugs? Give examples.
9 Discuss the mechanism of action of biguanides with examples.
10 Write the structures of procaine and benzocaine.

PART - B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11 (a) Classify H_1-antagonists with two structures from each class.
(b) Classify alkylating agents. Explain the mechanism of action and synthesis of meclorethamine.

12 Discuss in detail about the mechanism of action of the following classes of diuretics:
(a) Carbonic anhydrase inhibitors.
(b) Potassium sparing diuretics
(c) Loop diuretics.

13 (a) Classify local anesthetics with structures.
(b) Write the mechanism of action and synthesis of disopyramide phosphate.

PART - C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14 Discuss the mechanism of action of proton pump inhibitors.
15 Write the mechanism of action of vasodilators and outline the synthesis of nitroglycerin.
16 Classify anti-hyperlipidemic agents with one structure from each class.
17 Give an account on anticoagulants. Give the synthesis of warfarin.
18 Write a note on drugs used in congestive heart failure.
19 Classify sex hormones with examples.
20 Explain in detail about corticosteroids.
21 Write a note on insulin preparations.
22 Discuss SAR of local anesthetics.

Code No. 12327/PCI

FACULTY OF PHARMACY

B. Pharmacy V-Semester (PCI) (Backlog) Examination, September 2021

Subject: Medicinal Chemistry – II

Time: 2 Hours **Max. Marks: 75**

Note: Answer any seven questions Part – A, any one question from Part – B and any five questions from Part – C.

PART – A (7 x 3 = 21 Marks)

1 Write about histamine receptors and their distribution in the body.
2 Outline the synthesis of mechlorethamine.
3 Classify vasodilators with examples.
4 Outline the synthesis of furosemide.
5 What are coagulants? Give examples.
6 Discuss the mechanism of action of HMGCoA reductase inhibitors.
7 Write the structures of oestrione and diethylstilbestrol.
8 What are anti-thyroid drugs? Give examples.
9 Discuss the mechanism of action of glucosidase inhibitors with examples.
10 Write the structures of lidocaine and dibucaine.

PART – B (1 x 14 = 14 Marks)

11 (a) Classify H_1-antagonists with two structures from each class.
(b) Classify antimetabolites. Explain the mechanism of action and synthesis of methotrexate.

12 Discuss in detail about the mechanism of action of the following classes of diuretics:
(a) Carbonic anhydrase inhibitors
(b) Thiazides
(c) Loop diuretics

13 (a) Classify anti-arrhythmic drugs with structures.
(b) Write the mechanism of action and synthesis of tolbutamide.

PART – C (5 x 8 = 40 Marks)

14 Discuss the mechanism of action of omeprazole.
15 Write the mechanism of action of vasodilators and outline the synthesis of Isosorbide dinitrite.
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 Explain oral contraceptives with structures of drugs.
20 Write a note on insulin preparations.
21 Discuss SAR of local anesthetics.
22 Outline the synthesis of benzocaine and procaine.

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Code No. 12328/PCI

FACULTY OF PHARMACY

B. Pharmacy V-Semester (PCI) (Backlog) Examination, September 2021

Subject: Industrial Pharmacy – I

Time: 2 Hours **Max. Marks: 75**

Note: Answer any seven questions Part – A, any one question from Part – B and any five question from Part – C.

PART – A (7 x 3 = 21 Marks)

1 Define Polymorphism.
2 Classify tablets and give ideal characteristics of tablets.
3 Give formulation of suspension.
4 Write a note on sizes of hard gelatin capsules.
5 What are pellets? Give advantages of pellets.
6 Mention different evaluation tests for parenterals.
7 What are Tonicity modifiers?
8 What is the use of Abrasives in the formulation of tooth pastes?
9 What is Orange peel effect in tablet coating?
10 What are the unofficial tests for evaluation of tablets?

PART – B (1 x 14 = 14 Marks)

11 Explain the study of physical characteristics during preformulation.

12 (a) Explain perforated coating pans.
(b) Write a brief note on filing of capsules.

13 (a) Explain pyrogen test for parenterals.
(b) Discuss about the formulation of pharmaceutical aerosols.

PART – C (5 x 8 = 40 Marks)

14 How flow properties of powders are measured?
15 Explain about hardness and friability testing of tablets.
16 Write a brief note on manufacturing defects in tablet coating.
17 Explain formulation considerations of liquid dosage forms.
18 Explain weight variation test and content uniformity test for capsules.
19 Enlist techniques of pelletization. Explain advantages of pallets over conventional dosage forms.
20 Write a brief note on sterile powders.
21 Explain Draize eye test for opthalmics.
22 Explain the factors affecting selection of pharmaceutical packaging materials.

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Code No. 12330/PCI

FACULTY OF PHARMACY

B.Pharmacy V Semester (PCI) (Backlog) Examination, September 2021

Subject: Pharmacognosy and Phytochemistry - II

Time: 2 Hours **Max. Marks: 75**

PART - A

Note: Answer any seven questions. **(7 x 3 = 21 Marks)**

1 Write the biological sources, chemical constituent names of senna.
2 What is the difference between TLC and PC?
3 Write the biological source and uses of sennosides and Atropine.
4 Write one chemical test for detection of flavonoids and alkaloids.
5 Write applications of UV spectroscopy in analysis of crude drugs.
6 Write the source, active constituents and uses of Liquorice.
7 Explain concept of microwave assisted extraction.
8 What are resins? Give five examples.
9 Give structure and uses of Digoxin.
10 Write the active constituents in clove and cinnamon.

PART - B

Note: Answer any one questions. **(1 x 14 = 14 Marks)**

11 Write a detailed note on super critical fluid extraction.
12 Write a procedure for isolative and estimation cur cumin.
13 Write about precursor-product and sequential analysis methods in tracer technique.

PART - C

Note: Answer any five questions. **(5 x 8 = 40 Marks)**

14 Write the biological source and therapeutic uses of
(a) Liquorice (b) Ginger (c) Artemesia.
15 Write a note on electrophoresis.
16 Draw structure and write procedures for isolation of menthol.
17 Discuss chemistry and identification tests for Opium alkaloids.
18 Write commercial applications of eugenol, gentian and vinca alkaloids.
19 Write source, active constituents and uses of guggul and digitalis.
20 Write procedures for industrial production of sennosides.
21 Enlist modern extraction techniques. Write in detail about any one technique.
22 Write biological sources, chemistry and uses of lignans.

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Code No. 12329/PCI

FACULTY OF PHARMACY

B. Pharmacy V-Semester (PCI) (Backlog) Examination, September 2021

Subject: Pharmacology – II

Time: 2 Hours **Max. Marks: 75**

Note: Answer any seven questions Part – A, any one question from Part – B and any five questions from Part – C.

PART – A (7 x 3 = 21 Marks)

1 Define and classify Autocoids.
2 Write the differences between COX-I and COX-II.
3 Write the mechanism of action of Streptokinase.
4 What are the adverse effects of Corticosteroids?
5 Define Bioassay. Write the applications of Bioassay.
6 What are different waves and segments of ECG? Write their significance.
7 Classify antidiuretics?
8 Explain the mechanism of action of Quinidine.
9 Mention various Anterior Pituitary Hormones.
10 Write the functions of Insulin and Glucagon.

PART – B (1 x 14 = 14 Marks)

11 (a) Define and classify diuretics.
(b) Write in detail about Loop Diuretics.

12 (a) Classify Anticoagulants.
(b) Explain the pharmacology of Heparin and Warfarin.

13 Write the Pharmacology and uses of Eicosanoids

PART – C (5 x 8 = 40 Marks)

14 Explain about oxytocic agents.
15 Write the bioassays of Insulin.
16 Write the pharmacology of ACE Inhibitors.
17 Explain the pharmacological actions of histamine and mention H2 antagonists and their uses.
18 Write a note on HMG-CoA reductase inhibitors.
19 Explain the pharmacology of Sodium nitroprusside.
20 Write a note on biguanides.
21 Classify antithyroid agents. Write about thyroid hormone inhibitors.
22 Explain the mechanism of action and adverse effects of Digoxin.

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Code No. 12331/PCI

FACULTY OF PHARMACY

B. Pharmacy V-Semester (PCI) (Backlog) Examination, September 2021

Subject: Pharmaceutical Jurisprudence

Time: 2 Hours **Max. Marks: 75**

Note: Answer any seven questions Part – A, any one question from Part – B and any five questions from Part – C.

PART – A (7 x 3 = 21 Marks)

1 Define registered pharmacist under pharmacy act 1948.
2 Define drugs and cosmetics as per D and C act.
3 Define opium and coca leaves.
4 Write the difference between adulterated and spurious drug.
5 Write the formula to calculate retail price of formulation.
6 Write the objectives of the medical termination of pregnancy.
7 What are schedule X and H drugs?
8 Differentiate between laws and ethics.
9 What is loan license?
10 Write the functions of the government analyst.

PART – B (1 x 14 = 14 Marks)

11 What is “manufacture of drugs”? Explain in detail about procedure to obtain license for manufacture of drugs belonging to schedule C, C_1 and X.
12 What do you mean by patent? Discuss the various intellectual property rights.
13 Differentiate between bonded and non-bonded manufactory. Write the objectives of Medicinal and Toilet preparation Act 1955. Explain in detail about construction of bonded laboratory.

PART – C (5 x 8 = 40 Marks)

14 Define the term advertisement and magic remedies. Explain prohibited advertisement as per act.
15 Write the objectives of pharmacy act. Explain the constitution of PCI.
16 How is DTAB constituted? Write its functions.
17 Explain the general labeling requirement for drug and cosmetics. Write the labelling requirements for an ophthalmic preparation.
18 Write the qualification, duties and power of drug inspector.
19 Explain CPCSEA guidelines for breeding and stocking of animals.
20 Explain in detail about the code of pharmaceutical ethics of pharmacist in relation to his job.
21 Define Narcotic drugs and psychotropic substances as per Act. Explain the offence and penalties as per act.
22 Discuss the various aspects of Indian Pharmaceutical Legislation.

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Code No. 12073 / PCI

FACULTY OF PHARMACY

B. Pharmacy V-Semester (PCI) (Main & Backlog) Examination, March 2021

Subject : Medicinal Chemistry – II

Time : 2 Hours **Max. Marks: 75**

Note: Answer any seven questions Part – A, any one questions from Part – B and any five question from Part – C.

PART – A (7x3=21 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 Outline the synthesis of disopyramide phosphate.
7 What are oral contraceptives? Give examples.
8 Write the structures of testosterone and oestradiol.
9 Discuss the mechanism of action of biguanides.
10 Write about structure of insulin.

PART – B (1x14=14 Marks)

11 (a) What are H_2-antagonists? Outline the synthesis of cimetidine.
(b) Classify anti-neoplastic agents with two structures from each class.

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 (5x8=40 Marks)

14 Outline the synthesis of triprolidine hydrochloride and promethazine hydrochloride.
15 Classify calcium channel blockers with one structure from each class.
16 Classify anti-hyperlipidemics with one structure from each class.
17 Give an account on agents used in treating congestive heart failures.
18 Write in detail about corticosteroids with structures.
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 to tolbutamide and procaine.

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Code No. 12077 / PCI

FACULTY OF PHARMACY

B. Pharmacy V-Semester (PCI) (Main & Backlog) Examination, March 2021

Subject : Pharmaceutical Jurisprudence

Time : 2 Hours **Max. Marks: 75**

Note: Answer any seven questions Part – A, any one questions from Part – B and any five question from Part – C.

PART – A (7x3=21 Marks)

1 Write the functions of DTAB.
2 Define Narcotic drugs and Psychotropic substances as per Act.
3 Write the functions of government analyst.
4 Define registered pharmacist under pharmacy act 1948.
5 Explain Education regulation.
6 Define cosmetic as per D & C act.
7 What is the instruction to be followed for schedule X and G drugs?
8 Differentiate between laws and ethics.
9 What is restricted license?
10 Define drugs and cosmetics as per D & C act.

PART- B (1x14=14 Marks)

11 Explain the legal procedure for cultivation, production, manufacturing and sale of opium.

12 Write the objectives of pharmacy act. Explain the constitution and functions of pharmacy council.

13 How will you differentiate between bonded and non-bonded manufactory? Write the objectives of Medicinal and Toilet preparation Act, 1955. Explain in detail about construction of bonded laboratory.

PART- C (5x8=40 Marks)

14 Explain in detail the classes of drugs whose import is prohibited as per D & C Act.

15 Explain the terms trademarks, patent and copy right as per act.

16 Write a short note on Central drug Laboratory.

17 Define the terms Advertisement and Magic remedies. Explain prohibited advertisement as per act.

18 Write the conditions for termination of pregnancy and admission register.

19 Write the qualification, duties and power of drug inspector.

20 Explain CPCSEA guidelines for Laboratory animals.

21 Explain in detail about the code of pharmaceutical ethics of pharmacist in relation to his job.

22 Describe the method of calculating the retail price of formulation.

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Code No. 12076 / PCI

FACULTY OF PHARMACY

B. Pharmacy V-Semester (PCI) (Main & Backlog) Examination, March 2021

Subject : Pharmacognosy & Phytochemistry – II

Time : 2 Hours **Max. Marks: 75**

Note: Answer any seven questions Part – A, any one questions from Part – B and any five question from Part – C.

PART – A (7x3=21 Marks)

1 Define Radioactive isotopes and give its applications.
2 Write the difference between Primary and Secondary metabolites.
3 Write the Biological source, Chemical constituents and uses of Cinnamon.
4 Write about Borntragers and modified Borntragers test.
5 Define Glycosides and write about cardenolides.
6 Write the Biological source, chemical constituents and uses of
a) Opium b) Pterocarpus
7 Write any two identification test for alkaloids.
8 Explain Keller – kilani test.
9 Write the Chemical constituents and the therapeutic uses of
a) Tea b) Asafoetida.
10 Give the Biological source and use of Artemisia and Rauwolfia.

PART – B (1x14=14 Marks)

11 Explain the biosynthesis of secondary metabolite through Shikimic acid pathway.
12 Describe the applications of chromatographic techniques with special emphasis on isolation and purification of Phytoconstituents in crude drugs.
13 Describe in detail the Biological source, macroscopy, microscopy, chemical constituents, chemical tests and therapeutic uses of
a) Fennel b) Coriander

PART – C (5x8=40 Marks)

14 Explain Autoradiography.
15 Write about Acetate malonate pathway.
16 Give the Biological source, chemical constituents, macroscopy, chemical test and therapeutic uses of Liquorice.
17 Explain the microscopy of Digitalis leaf with a neat labeled diagram.
18 Describe the isolation and analysis of menthol.
19 Write about the estimation and utilization of Diosgenin.
20 Explain the isolation, purification and identification of Phytoconstituents by Electrophoresis.
21 Explain the Biological source, Chemical Tests, Chemical constituents, microscopy and therapeutic uses of Benzoin.
22 Explain the Isolation, identification and analysis of Atropine.

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Code No. 12075 / PCI

FACULTY OF PHARMACY

B. Pharmacy V-Semester (PCI) (Main & Backlog) Examination, March 2021

Subject : Pharmacology – II

Time : 2 Hours **Max. Marks: 75**

Note: Answer any seven questions Part – A, any one questions from Part – B and any five question from Part – C.

PART – A (7x3=21 Marks)

1 Define haematinics and give examples.
2 Explain the uses of antihistaminics and give examples
3 Write a note on Allopurinol.
4 What are the uses of Plasma volume expanders?
5 Write a note on Spironolactone.
6 What are different uses of 5-HT antagonists?
7 What are the adverse effects of Corticosteroids?
8 Explain the mechanism of action of Statins.
9 Write about the steps of thyroid hormone synthesis.
10 What are anabolic steroids? What are their uses?

PART- B (1x14=14 Marks)

11 (a) Define and classify Oral Hypoglycemic agents.
(b) Write in detail about Sulphonylureas.

12 (a) Classify Diuretic agents.
(b) Explain the pharmacology of Thiazide diuretics.

13 Explain various methods of bioassays of Insulin and Oxytocin.

PART-C (5x8=40 Marks)

14 Explain about tocolytic agents.
15 Define Bioassay. What are different types of Bioassays.
16 Write the pharmacology of COX-II Inhibitors.
17 Classify antiarrhythmics. Add a note on class II antiarrhythmics.
18 Write a note on hormonal contraceptives.
19 Write the pharmacological actions and uses of prostaglandins.
20 Explain the pharmacology of Oxytocin.
21 Define Coagulants. Add a note on fibrinolytics.
22 Write a note on Calcium regulation in body.

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Code No. 12074 / PCI

FACULTY OF PHARMACY

B. Pharmacy V-Semester (PCI) (Main & Backlog) Examination, March 2021

Subject : Industrial Pharmacy – I

Time : 2 Hours **Max. Marks: 75**

Note: Answer any seven questions Part – A, any one questions from Part – B and any five question from Part – C.

PART – A (7x3=21 Marks)

1 Define pharmagel A and Pharmagel B.
2 What are the special instructions to be printed on the eye drop container according to drugs and cosmetics act?
3 Define Enteric coating and give its advantages.
4 Mention different sealing methods for hard gelatin capsules.
5 Define preformulation studies.
6 Write the BCS classification of drugs.
7 Write the significance of isotonicity in parenterals.
8 Define Base adsorption.
9 What are the different materials used for packaging?
10 Define Propellant.

PART – B (1x14=14 Marks)

11 Write a note on production facilities required for parenteral preparations.

12 (a) Write in brief about the manufacture of Aerosols.
(b) Explain about the defects in capsules.

13 (a) Explain about disintegration and dissolution test for tablets.
(b) Write in detail about evaluation of containers.

PART – C (5x8=40 Marks)

14 Explain polymorphism.
15 Explain sugar coating of tablets.
16 Write a brief note on filling and packaging of oral liquids.
17 Explain method of preparation of heard gelatin capsule shell.
18 Write in detail about solution layering.
19 Explain the process of freeze drying.
20 Explain sterility test for ophthalmic products.
21 Define and classify cosmetics and give their uses.
22 Write a brief note on propellants in Aerosols.

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Code No. 6287/PCI

FACULTY OF PHARMACY

B. Pharmacy V-Semester (PCI) (Suppl.) Examination, December 2020

Subject: Medicinal Chemistry-II

Time: 2 Hours **Max. Marks: 75**

PART – A

Note: Answer any Seven questions. ***(7 x3=21 Marks)***

1. Write the role of insulin hormone
2. What is the drug with Imidazole nucleus showing anti-hypertensive action and give its structure
3. Give the mechanism of action and uses of Mercaptopurine.
4. Write the mechanism of action of coagulation process
5. Give the structures of any two drugs used for treating angina pectoris.
6. What drugs are used as ACE inhibitors and give their mechanism?
7. Mention the problem associated with loop diuretics
8. Define anti-coagulants
9. What are carbonic anhydrase inhibitors? Give the examples with one structure.
10. Write the functions of thyroid hormones.

PART – B

Note: Answer One question. ***(1 x14=14 Marks)***

11. a) Classify H_1 anti-histaminics with examples.
    b) Write a note on gastric proton pump inhibitors

12. a) Classify anti-hypertensive agents with examples. Write the mechanism of Rennin- Angiotensin-Aldosterone system.
    b) Write a note on anti-metabolites used in the treatment of neoplasm.

13. Give the synthesis, mechanism of a action and uses of
    a) Diphenhydramine HCI
    b) Furosemide
    c) Procaine

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PART - C

Note: Answer any Five questions. ***(5x8=40 Marks)***

14. Write about the types of histamine receptors and their distribution in the human body.
15. What are alkylating agents? Classify them with examples
16. Discuss the SAR of thiazide diuretics
17. Explain how the anti-arrhythmic drugs are classified
18. Classify oral hypoglycemic agents with examples
19. Write about the drugs used in Congestive heart failure
20. Write a note on anti-thyroid drugs with examples
21. Give the synthesis and uses of
    a) Chlorthiazide and
    b) Tolbutamide
22. Classify local anaesthetics and write the mechanism of action.

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Code No. 6289/PCI

FACULTY OF PHARMACY

B. Pharmacy V-Semester (PCI) (Suppl.) Examination, December 2020

Subject : Pharmacology - II

Time: 2 Hours **Max. Marks: 75**

PART – A

Note: Answer any Seven questions. ***(7 x3=21 Marks)***

1. What is hyperlipidemia? Mention four drugs used as antihyperlipidemics
2. What is congestive heart failure? Mention two drugs used in congestive heart failure
3. What are the therapeutic uses of vasopressin analogs?
4. What is rheumatism? Mention the drugs used in rheumatism.
5. Describe the triple response of histamine
6. Classify autacoids with examples
7. What are Hematinics? Mention the names
8. Explain about hormonal regulation of plasma calcium level
9. What are anabolic steroids and write the therapeutic uses
10. Define bioassay. List out the types of bioassays

PART – B

Note: Answer One question. ***(1 x14=14 Marks)***

11. What is congestive heart failure? Classify the drugs for congestive heart failure Write the mechanism of action. Adverse drug reactions and therapeutic uses or digoxin.
12. Define and classify diuretics. Write the mechanism of action, adverse drug reactions and therapeutic uses of loop diuretics.
13. Classify oral hypoglycemic drugs. Write the pharmacology of sulfoylureas.

PART - C

Note: Answer any Five questions. ***(5x8=40 Marks)***

14. Write the mechanism of action, adverse drug reactions and therapeutic uses of ACE inhibitors.
15. What is arrhythmia? Classify antiarrhythmic drugs.
16. Write short notes on pharmacology of vitamin B_{12}.
17. Write short notes on oral anticoagulants.
18. Explain about 5-HT receptors and drugs acting on them.
19. Write the pharmacological actions of aspirin.
20. Write the pharmacological actions and therapeutic uses of thyroxine.
21. What are the methods of bioassay of insulin? Discuss any one method in detail.
22. Write notes on oxytocics and tocolytics.

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Code No. 6288/PCI

FACULTY OF PHARMACY

B. Pharmacy V-Semester (PCI) (Suppl.) Examination, December 2020
Subject : Industrial Pharmacy - I

Time: 2 Hours **Max. Marks: 75**

PART – A

Note: Answer any Seven questions. ***(7 x3=21 Marks)***

1. What is preformulation study
2. Define bulk density and write its importance in Pharmacy
3. Define buccal and sublingual tablets
4. Enlist various types of coating materials of tablets
5. What is the difference between cold cream & Vanishing cream?
6. What is aseptic area?
7. List out various ingredients used in tooth paste
8. What are the vehicles used in the preparation of parenterals?
9. Classify parenteral with suitable examples.
10. What are pyrogens?

PART – B

Note: Answer One question. ***(1 x14=14 Marks)***

11. Enlist the excipients used in tablet manufacture with examples. Write their role and mechanism of action.
12. Give the layout for manufacture of parenteral formulations.
13. Explain the formulation and evaluation of aerosols.

PART - C

Note: Answer any Five questions. ***(5x8=40 Marks)***

14. Write a note on formulation & lebelling of eye drops
15. Explain defects in tablet coating
16. Describe the manufacturing of soft gelatin capsules.
17. Write a note on injectable suspensions
18. What are propellants? Mention their advantages and disadvantages.
19. Write a note on factors influencing choice of containers
20. Write a note on formulation of lipsticks
21. Write a note on LAL test & sterility test.
22. Write a note on palletization process.

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Code No. 6290 / PCI

FACULTY OF PHARMACY

B. Pharmacy V-Semester (PCI) (Suppl.) Examination, December 2020

Subject : Pharmacognosy & Phytochemistry – II

Time: 2 Hours **Max. Marks: 75**

PART – A

Note: Answer any Seven questions. ***(7 x3=21 Marks)***

1 Define Biosynthesis.

2 What are Secondary metabolites? Give examples.

3 Write the Biological source, chemical constituents and uses of Guggul.

4 Write about macroscopical characters of Vinca.

5 Define Alkaloids and give the classification of Alkaloids.

6 Write about the estimation of Digoxin.

7 Define Terpenoids and give their classification.

8 Explain Vitali-morin test.

9 Write the Biological source, chemical constituents and uses of Senna.

10 Give the therapeutic uses of
(a) Ruta (b) Mentha (c) Myrrh (d) Aloe

PART – B

Note: Answer One question. ***(1 x14=14 Marks)***

11 Write in detail about the Acetate malonate and Acetate mevalonate pathway.

12 Write the synonym, Biological source, macroscopy, microscopy, chemical constituents, chemical tests and uses of Digitalis leaf.

13 What are the different types of chromatographic methods? Give their applications in the evaluation of crude drug formulations.

PART - C

Note: Answer any Five questions. ***(5x8=40 Marks)***

14 Write about the role of radioactive isotopes in the investigation of biogenetic studies.

15 Write a detailed pharmacognostical study of Belladonna.

16 Write about the estimation and utilization of Atropine.

17 Write the Biological source, macroscopy and uses of
(a) Ginger (b) Dioscorea

…2

18 Define Glycosides. Classify glycosides with specific examples.

19 Write about estimation and utilization of
(a) Sennoside (b) Caffeine

20 Write notes on the application of UV Spectroscopy in identification of phytoconstituents in crude drugs.

21 Explain the Biological source, macroscopy, chemical constituents, chemical tests and the therapeutic used Catechu.

22 Write in detail about the amino acid pathway.

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Code No.6061/PCI

FACULTY OF PHARMACY

B. Pharmacy V-Semester (PCI) (Main) Examination, December 2019

Subject: Industrial Pharmacy - I

Time: 3 Hours **Max. Marks: 75**

Note: Answer all questions from Part-A, any two questions from Part-B and any seven questions from Part-C

PART– A (10 x 2 = 20 Marks)

1 Define Preformulation study.

2 Classify tablets.

3 Why coating tablets are required.

4 Define emulsion & suspension.

5 List out various ingredients used in tooth paste.

6 What is aseptic area?

7 What are the vehicles used in the preparation of parenterals.

8 What are pyrogens?

9 What are different types of aerosols?

10 Classify parenteral with suitable examples.

PART – B (2 x 10 = 20 Marks)

11 Explain quality control tests of tablets.

12 Explain formulation and the production of parenterals.

13 Explain the formulation and quantity control tests for hard gelatin or soft gelatin capsules?

PART – C (7 x 5= 35 Marks)

14 Write a note on polymorphism and its applications.

15 Differentiate between flocculated and deflocculated suspension.

16 Write the formulation of cold cream.

17 Explain quality control tests of eye ointment.

18 Write a note on factors influencing choice of containers.

19 What are propellants? Mention their advantages and disadvantages?

20 Write a note on formulation of hair dyes.

21 Write a note on LAL test & sterility test.

22 Write a note on palletization process.

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Code No.6060/PCI

FACULTY OF PHARMACY

B. Pharmacy V-Semester (PCI) (Main) Examination, December 2019

Subject: Medicinal Chemistry-II

Time: 3 Hours **Max. Marks: 75**

Note: Answer all questions from Part-A, any two questions from Part-B and any seven questions from Part-C

PART– A (10 × 2 = 20 Marks)

1 What are the uses of cortico steroids. Give two examples of drugs.

2 What are proton pump inhibitors? Give four examples

3 Give the mechanism of action and uses of Amlodipine.

4 Write the mechanism of action of Local anaesthetics.

5 Give the structures of any two drugs used as H_2 antagonists.

6 What are the drugs used as folate antagonists and give examples?

7 Write the mechanism of oral contraceptives along with examples.

8 List out the clotting factors of coagulation process.

9 What are diuretics? Give the mechanism of loop diuretics with uses.

10 What are the drugs used for congestive heart failure.

PART – B (2 × 10 = 20 Marks)

11 Classify anti-neoplastic agents with examples and one structure for each class. Write the mechanism of alkylating agents. (6+4)

12 a) Classify diuretics with examples and write the SAR of thiazide diuretics. (6)
b) Explain how the potassium sparing diuretics shows the diuretic action. (4)

13 Give the synthesis, mechanism of action and uses of
a) Cimetidine
b) Tolbutamide
c) Benzocaine (4+3+3)

PART – C (7 × 5 = 35 Marks)

14 Write a note on H_2-Antagonists.

15 Discuss the SAR of Local anaesthestics.

16 Classify anti-diabetic drugs with examples.

17 What are anti-arrhythmic drugs? Classify them with examples.

18 Write the SAR of H_1- anti-histaminics.

19 Classify anti-hyperlipidemic agents with examples and one structure for each class.

20 Write a note on thyroid and anti-thyroid drugs.

21 Write the classifications mechanism of antihypertensive drugs.

22 Write a note on sex hormones.

Code No: 6138/PCI

FACULTY OF PHARMACY

B. Pharmacy V-Semester (PCI) (Main) Examination, January 2020

Subject: Pharmaceutical Jurisprudence (BP505T)

Time: 3 Hours **Max. Marks: 75**

Note: Answer all Questions from Part – A, and Two questions from Part – B, and any Seven questions from Part – C.

PART – A (10 X 2 = 20)

1 What are the objectives of pharmacy act?
2 Write about loan license.
3 Define medicinal hemp and poppy straw.
4 What are the following schedules under Drugs and Cosmetics Act stand for
a) Schedule N b) Schedule J c) Schedule H d) Schedule R
5 Write about the role of pharmacist in relation to his job?
6 Give various labeling requirements for Opthalmic preparations.
7 Define Drug as per Drugs and Cosmetics Act.
8 Differentiate between Manufacture in bond and Manufacture outside bond.
9 What is a patent?
10 Define spurious drug and misbranded drug.

PART – B (2 x 10 = 20)

11. Enlist the Narcotic drugs as per the Narcotic drugs and psychotropic substances act 1985. Write about the official procedures for cultivation, production of opium, sale and distribution of opium products.

12. Write the constitution and functions of Pharmacy Council of India.

13. a) Explain the classes of advertisements prohibited according to Drugs and Magic Remedies Act 1954.
b) Write a note on intellectual property rights.

PART- C (7 x 5 = 35 Marks)

14. Explain about the constitution and functions of DTAB.
15. Explain in detail Schedule M
16. Write a note on CPCSEA guidelines for experiment on animals.
17. What are the qualifications, duties and functions of drug inspector?
18. Explain the salient features of medical termination of pregnancy act.
19. Explain RTI act.
20. Write the procedure for obtaining a manufacturing license for schedule C, C (1) drugs.
21. Write about various pharmaceutical legislations.
22. Write about the Drug price control order.

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Code No: 6063/PCI

FACULTY OF PHARMACY

B. Pharmacy V Semester (PCI) (Main) Examination, January 2020

Subject: Pharmacognosy and Phytochemistry-II

Time: 3 hours **Max. Marks: 75**

Note: Answer all questions from part-A. Any two questions from part-B and any seven questions from part-C

PART – A (10 x 2 = 20 Marks)

1. Draw structure and write uses of
   a) Quinine (b) Alion.
2. Write one chemical test each for detection of anthraquinone and cardiac glycosides.
3. Write applications of gas chromatography.
4. Write biological source, active constituents and uses of colophony.
5. Write commercial applications of Podophyllotaxin and artemisinin.
6. Write the applications of electrophoresis.
7. Write the applications of TLC.
8. What are the uses of artermisin or digoxin?
9. Mention any four crude drugs containing glycosides.
10. What are the active constituents in (i) Clove (ii) Cinnamon and their uses?

PART – B (2 x 10 = 20 Marks)

11. a) Write a note on chemistry of sennnosides. 4
    b) Write procedures for isolation and estimation of caffeine. 6

12. Discuss about shikimic acid pathway. 10

13. Write procedures for industrial production of any one natural product drug. 10

PART – C (7 X 5 = 35 Marks)

14. Write source and uses of benzoin, cinnamon and asafetida.
15. Write a note on Supercritical fluid extraction.
16. Discuss chemistry of digitalis glycosides.
17. Write about the principle and procedure and applications of TLC.
18. Draw structure and write procedure for isolation of curcumin.
19. Write about chemistry and uses of opium alkaloids.
20. Write the sources and procedures for the isolation of Atropine.
21. Mention two alkaloids containing crude drugs, write their active constituents and uses.
22. Write source, chemical constituents and uses of a) liquorice b) Catechew.

Code:6062/PCI

FACULTY OF PHARMACY

B. Pharmacy V-Semester (PCI) (Main) Examination, January 2020

Subject: Pharmacology - II

Time: 3 Hours **Max. Marks: 75**

Note: Answer all Questions from Part – A, and Two questions from Part – B, and any Seven questions from Part – C.

PART – A (10 X 2 = 20)

1. Write the mechanism of action of digoxin.
2. What is hyperlipidemia? Mention the drugs.
3. What are antiplatelet drugs and write their therapeutic uses?
4. What is congestive heart failure? Mention the drugs used.
5. Write the mechanism of action and therapeutic uses of 5-HT_3 antagonists.
6. What are the therapeutic uses of prostagland in analogs?
7. Write the mechanism of action of glucocorticoids.
8. What are the therapeutic uses of T_3 & T_4?
9. What are autocoids? Mention the classes.
10. Define bioassay. List out the types of bioassays.

PART – B (2 x 10 = 20)

11. Define antihypertensives. Classify with examples. Write the mechanism of action, adverse drug reactions and therapeutic uses of ACE inhibitors.
12. Write the pharmacological actions, adverse effects and therapeutic uses of antihistamines.
13. Discuss about bioassay of insulin.

PART - C (7 x 5 = 35)

14. What is angina pectoris? Classify antianginal drugs.
15. Write short notes on pharmacology of vitamin B_{12}.
16. Write the mechanism of action, adverse drug reactions and therapeutic uses of loop Diuretics.
17. Classify anticoagulants. Write the therapeutic uses of oral anticoagulants.
18. Write the pharmacology of 5-HT.
19. Classify NSAIDS with examples.
20. Define bioassay. Write brief nots on types of bioassays.
21. Discuss about insulin preparations and mechanism of action of insulin.
22. Write short notes on oral contraceptives.