



Code No.: H-8145/PCI

FACULTY OF PHARMACY

B. Pharmacy (PCI) V - Semester (Main & Backlog) Examination, February/March 2026

Subject: Industrial Pharmacy - I

Time: 3 Hours

Max. Marks: 75

PART – A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Enlist the methods to study particle size and shape of solids.
2. What is angle of repose and its purpose.
3. Give examples of binders and disintegrants used in Tablets.
4. Differentiate syrups and elixirs.
5. Write a note on sizes of hard gelatin capsules.
6. Define Base adsorption.
7. Write the significance of isotonicity in parenterals.
8. Describe sealing of Ampoules.
9. What are the materials used for packaging of pharmaceutical products.
10. Define Propellant.

PART – B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Describe physical properties and chemical properties studied in preformulation studies of drug substance.
12. Describe the granulation methods in Tablet preparation. Add a note on compression and processing problems of Tablets.
13. Describe Quality control tests for Parenteral products.

PART – C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. How flow properties of powders are measured?
15. Explain polymorphism.
16. Describe Quality control tests for Tablets.
17. Differentiate between flocculated and deflocculated suspension.
18. Describe production of hard gelatin capsule shell.
19. Write a note on production facilities for Parenterals.
20. Write a note of formulation, preparation, labelling and containers for eye ointments.
21. Describe the formulation and preparation of cold cream and vanishing cream.
22. Describe propellants and valves used in Aerosols.



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FACULTY OF PHARMACY

B. Pharmacy (PCI) V - Semester (Main & Backlog) Examination, February/March 2026

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 promethazine hydrochloride.
2. Write the MOA of Omeprazole.
3. Write the MOA of spironolactone.
4. Write the synthesis of nitroglycerin.
5. Write the uses and mechanism of action of thiazolidinediones.
6. Write the uses of L-thyroxine, L-thyronine.
7. Write the MOA of anti-hyperlipidemic agents.
8. Write the uses of androlone and progesterone.
9. Write the structure and uses of clonidine hydrochloride.
10. Write the mechanism of action of prednisolone.

PART - B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Write the classification with one structure from each category of local anesthetics.
Explain the SAR of local anesthetics.
12. Write short notes on:
 - (i) Drugs used in congestive heart failure
 - (ii) Carbonic anhydrase inhibitors and thiazide diuretics.
13. Write a note on oral contraceptives.

PART - C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Define antineoplastic agents with examples. Write the mechanism of action of antimetabolites.
15. Write the MOA, uses and synthesis of metformin.
16. Write the classification of calcium channel blockers with structures.
17. Write a note on H₂-antagonists.
18. Write the MOA and synthesis of tolbutamide.
19. Write a short note on anti-arrhythmic Drugs.
20. Explain coagulant & anticoagulants with examples (with structures).
21. Write the structure, uses and synthesis of omeprazole.
22. Write short notes on drugs for erectile dysfunction.



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FACULTY OF PHARMACY

B. Pharmacy (PCI) V - Semester (Main & Backlog) Examination, February/March 2026

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. What are plasma volume expanders and give examples?
3. Define and write the MOA of fibrinolytics.
4. Describe the pathophysiological role of histamine.
5. Write the therapeutic uses of organic nitrates.
6. Write the mechanism of action of glucocorticoids.
7. What are the therapeutic uses of thyroxine?
8. What are anabolic steroids and write their therapeutic uses?
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) Classify the drugs used for congestive heart failure.
(b) Write the mechanism of action, adverse drug reactions and therapeutic uses of Digoxin.
12. Classify diuretics with examples. Discuss the pharmacology of loop diuretics.
13. (i) What are the methods of bioassay of insulin and describe any one method in detail.
(ii) What are the methods of bioassay of digitalis and describe any one method in detail.

PART - C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Write the mechanism of action, adverse drug reactions and therapeutic uses of ACE inhibitors.
15. Classify anti-hyperlipidemics. Discuss about statins.
16. Classify anticoagulants. Write the MOA and therapeutic uses of heparin.
17. Write notes on insulin preparations.
18. Explain about 5-HT receptors and drugs acting on them.
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 oral contraceptives.
22. Classify antithyroid drugs. Write about thioamides.



Code No: H-8147/PCI

FACULTY OF PHARMACY

B. Pharmacy (PCI) V - Semester (Main&Backlog) Examination, Feb/March 2026

Subject: Pharmacognosy & Phytochemistry - II

Time: 3 Hours

Max. Marks: 75

PART – A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. What are secondary metabolites.
2. Write source and uses of glycyrrhizin.
3. Mention the names of alkaloids present in Vinca and Rauwolfia.
4. Write uses of atropine and caffeine.
5. Write method for isolation of rutin.
6. What are deoxy sugars. Write how their presence in a drug is identified.
7. Write procedure for extraction of diosgenin.
8. Write the names of chemicals present in Senna & Aloe.
9. What are volatile oils. Mention any four and their sources.
10. Draw a soxhlet unit and label the parts.

PART – B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Write a note on Shikimic acid pathway
12. Draw the structure and write procedure for production, identification and analysis of Forskolin or Sennosides.
13. Write about
(i) Column chromatography and its application in isolation of plant constituents.

PART – C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Write various steps involved in amino acid pathway.
15. Write about isolation and identification of any one alkaloid.
16. Discuss production of caffeine or Taxol.
17. Write about borax test, shinoda, borntrager and thalleoquin tests. Mention their significance.
18. Describe industrial production and estimation of digoxin or sennoside.
19. Explain HPLC. Give its applications.
20. Write a note on microwave assisted extraction.
21. Write about the chemistry & therapeutic applications of cardiac glycosides.
22. Write a note on production of curcumin or taxol.



Code No. H-8148/PCI

FACULTY OF PHARMACY

B. Pharmacy (PCI) V - Semester (Main & Backlog) Examination, Feb/March 2026
Subject: Pharmaceutical Jurisprudence

Time: 3 Hours

Max. Marks: 75

PART - A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. What is the purpose of IAEC?
2. Differentiate wholesale and retail sale.
3. Define Loan license and repacking license.
4. What are the objectives of Pharmacy Act.
5. Define Advertisement and Magic remedies.
6. Mention various IPRs.
7. What are the labeling instructions for Schedule X drugs?
8. What for the schedules M, N, X and Y are made.
9. Define Trademark and Registered Medical Practitioner.
10. What are the regulations for export of alcoholic preparations

PART - B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Write a brief note on Administration of Drugs and Cosmetics Act 1940 and its rules 1945.
12. Write a brief note on Narcotic drugs and Psychotropic substances Act 1985 and Rules.
13. Write a note on General labelling requirement and specimen labels for drug and cosmetics.

PART - C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Write a note on CPCSEA guidelines for Breeding and Stocking of animals.
15. Write a short note on Code of Pharmaceuticals Ethics.
16. Write a note on Schedule U.
17. Write a note on Central Drugs Laboratory.
18. Write a note on right to information act.
19. Differentiate between Coca leaf and Coca derivatives.
20. Discuss the various aspects of Indian pharmaceutical Legislation.
21. Write a note on regulations for Opium cultivation and production of poppy straw.
22. Define the term Advertisements and give a short note on prohibited Advertisements.



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 autocooids 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/PC

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.



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 murexide 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-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)

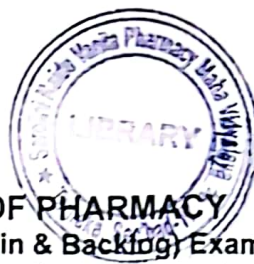
11. Write the chemical classification (with structures) and SAR of H₁-antihistaminic agent.
12. Define antineoplastic agents. Write its classification (with structures) and detailed mechanism of action of each class.
13. Classify Local anesthetics. Explain the mechanising action & SAR.

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 methyl dopa.
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.



Code No: G-13099/PC

FACULTY OF PHARMACY
B. Pharmacy (PCI) V - Semester (Main & Backing) 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.
