



This question paper contains 2 printed pages]

PM—01—2025

FACULTY OF SCIENCE AND TECHNOLOGY

B. Pharm. (Fifth Semester) EXAMINATION

APRIL/MAY, 2025

MEDICINAL CHEMISTRY-II

(Wednesday, 7-5-2025) (BP501T) Time : 10.00 a.m. to 1.00 p.m.

Time—3 Hours

Maximum Marks—75

N.B. :- (1) All questions are compulsory.

(2) Figures to the right indicate full marks.

1. Answer the following :

10×2=20

- (a) What is congestive heart failure ? Name the drugs used in it.
- (b) Draw the structure and IUPAC name of Diphenhydramine.
- (c) Draw the structure of progesterone with numbering.
- (d) Give mechanism of action of Acetazolamide.
- (e) Write briefly about nitro-vasodilators.
- (f) Explain the mechanism action of anti-coagulants.
- (g) Write in short about storage and release of Insulin.
- (h) Write the MoA and uses of biguanides.
- (i) Classify antineoplastic with examples.
- (j) Write adverse effects of oral contraceptives.

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PM—01—2025

2×10=20

2. Solve any *two* of the following :

- (a) Write classification of antihistamines giving their structure and write SAR of piperazines. Sketch out synthesis of promethazine.
- (b) Classify antineoplastic agents with examples. Outline the synthesis of mercaptopurine and methotrexate.
- (c) Define and classify local anesthetics with suitable examples. Explain the SAR of local anesthetic agent.

3. Solve any *seven* of the following :

7×5=35

- (a) Describe chemistry of oral contraceptives.
- (b) What are Vasodilators ? Give the mechanism of action of calcium channel blockers.
- (c) Classify antidiabetic drugs with at least *one* structure of each class.
- (d) Discuss in brief about vasodilators and outline the synthesis of Nitroglycerin.
- (e) Write a short note on metabolism of steroids.
- (f) Write in detail the chemistry and SAR of Insulin.
- (g) Explain mechanism of action of H₂ receptor antagonist.
- (h) Write a short note on proton pump inhibitors.
- (i) Write the MoA and uses of class-III anti-arrhythmic drugs.

PM—01—2025

2

This question paper contains 2 printed pages]



PM—05—2025

FACULTY OF SCIENCE AND TECHNOLOGY

B. Pharm (Third Year) (Fifth Semester) EXAMINATION

APRIL/MAY, 2025

INDUSTRIAL PHARMACY-I

BP502T

(Friday, 9-5-2025)

Time : 10.00 a.m. to 1.00 p.m.

Time—3 Hours

Maximum Marks—75

N.B. :— (i) All questions are compulsory.

(ii) Draw a neat labelled diagrams wherever necessary.

(iii) Answer to the points only.

1. Answer the following :

10×2=20

(a) Define the term granulation. Write its types.

(b) Write the IP. specifications of angle of repose.

(c) Enlist the pharmaceutical suspending agents.

(d) Write the advantages of capsules.

(e) Draw a neat labelled diagram of hand operated capsule filling machine.

(f) Enlist official evaluation tests of tablets.

(g) Write the importance of packaging in pharmaceuticals.

P.T.O.



- (h) Enlist evaluation tests of liquid orals.
- (i) Write the different uses of cosmetics.
- (j) Enlist steps in dry granulation.
2. Answer any *two* of the following : 2×10=20
- (a) Describe the various quality control tests of parenterals.
- (b) Explain preformulation studies carried in pharmaceuticals.
- (c) Define the term tablets and explain wet granulation techniques in detail along with equipments used in wet granulations.
3. Answer any *seven* of the following : 7×5=35
- (a) Classify tablets and write about ideal characteristics required for tablets.
- (b) What is aseptic condition. Explain production facilities and controls of parenteral products.
- (c) Differentiate between hard gelatin and soft gelatin capsules.
- (d) Write the formulation and preparations of cold creams.
- (e) Define the term pellets and explain pelletisation by using different machines.
- (f) Why coating to the tablets and explain film coating ?
- (g) Define aerosols. Explain meter dose inhalers.
- (h) Define capsules and write the evaluations tests of capsules.
- (i) What is isotonic solution. Explain evaluation tests of ophthalmic preparations.

This question paper contains 2 printed pages]



PM—9—2025

FACULTY OF SCIENCE AND TECHNOLOGY

B.Pharm. (Fifth Semester) EXAMINATION

APRIL/MAY, 2025

PHARMACOLOGY-II

Paper BP-503T

(Tuesday, 13-5-2025)

Time : 10.00 a.m. to 1.00 p.m.

Time—Three Hours

Maximum Marks—75

N.B. :— (i) All questions are compulsory.

(ii) Figures to the right indicate full marks.

(iii) Draw appropriate charts/diagrams wherever necessary.

1. Answer the following : 10×2=20
- (a) What are anabolic steroids ?
 - (b) Enlist various hormones secreted by pituitary gland.
 - (c) Write role of Vitamin D.
 - (d) What is Bioassay ?
 - (e) Write therapeutic uses of captopril.
 - (f) Define cardiac output.
 - (g) What are cardiotonic ?
 - (h) What are arrhythmia ? Mention 2 drugs.
 - (i) Define hypertension.
 - (j) Write therapeutic uses of propranolol.

P.T.O.



2. Answer the following (any two) :

2×10=20

- (a) Discuss bioassay of insulin and digitalis.
- (b) What are oral contraceptives ? Discuss various types of oral contraceptives.
- (c) Classify non-steroidal anti-inflammatory drugs. Write pharmacology of Aspirin.

3. Answer the following (any seven) :

7×5=35

- (a) What is gout ? Write pharmacology of colchicine.
- (b) Explain Renin-angiotensin system.
- (c) Write actions of glucocorticoids.
- (d) What is diabetes ? Write pharmacology of biguanides.
- (e) Write actions of histamine.
- (f) What is angina ? Write pharmacotherapy of nitrates.
- (g) Discuss plasma volume expanders.
- (h) Write actions of Leukotrienes.
- (i) Write drugs used in treatment of shock.



This question paper contains 3 printed pages]

PM—13—2025

FACULTY OF SCIENCE AND TECHNOLOGY

B. Pharm. (Third Year) (Fifth Semester) EXAMINATION

APRIL/MAY, 2025

PHARMACOGNOSY AND PHYTOCHEMISTRY-II

(Thursday, 15-5-2025) (BP504T) Time : 10.00 a.m. to 1.00 p.m

Time—Three Hours

Maximum Marks—75

Note :— (i) Write the answer of the point.

(ii) Figures to the right indicate full marks

1. Solve the following :

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|-----|---|---|
| (a) | Define secondary metabolites with example. | 2 |
| (b) | Draw biosynthetic pathway for Alanine. | 2 |
| (c) | Enlist methods of injecting radio active isotopes in the plant. | 2 |
| (d) | Write biological source and uses of Vinca. | 2 |
| (e) | Define Alkaloids and Glycosides. | 2 |
| (f) | Give an identification test for caffeine. | 2 |

P.T.O.



- (g) Write an utilization of diosgenin. 2
- (h) Write application of thin layer chromatography. 2
- (i) Give method of isolation of citral. 2
- (j) Write biological source and chemical constituents of Aloe. 2
2. Solve any *two* of the following :
- (a) Draw and explain shikimic acid pathway. 10
- (b) Write industrial production, estimation and utilization of Atropine. 10
- (c) Write pharmacognostic account of digitalis. 10
3. Solve any *seven* of the following : 35
- (a) Write in detail about Supercritical Fluid Extraction (SFE) method. 5
- (b) Write biological source, chemical constituents and uses of cinnamon and fennel. 5
- (c) Explain in detail about Geiger-Muller detector. 5
- (d) Write isolation and identification of glycyrrhetic acid. 5
- (e) Give industrial production and utilization of taxol. 5



- (f) Write biological source, chemical constituents, identification test and uses of senna. 5
- (h) Define resins and write its classification with example. 5
- (i) Write industrial production of caffeine. 5
- (j) Give method of isolation of curcumin. 5



This question paper contains 3 printed pages]

PM—17—2025

FACULTY OF SCIENCE AND TECHNOLOGY

B. Pharm. (Fifth Semester) EXAMINATION

APRIL/MAY, 2025

PHARMACEUTICAL JURISPRUDENCE

(Saturday, 17-5-2025)

(BP505T)

Time : 10.00 a.m. to 1.00 p.m

Time—Three Hours

Maximum Marks—75

Note :— (i) All questions are compulsory.

(ii) Answer to the point only.

(iii) Figures to the right indicate full marks.

1. Solve the following :

10×2=20

- (a) Define Magic remedies. Enlist the classes of advertisement.
- (b) Mention the places from which drugs are imported in India.
- (c) Define illicit traffic.
- (d) Give offence and penalties of Pharmacy Act, 1948.
- (e) Give the objectives of the Pharmacy Act, 1948.

P.T.O.



(f) Define Government analyst under the D & C Act, 1940 and rules.

(g) Define cosmetics under D & C Act, 1940 and rules.

(h) What are the objectives of Trade Mark Act ?

(i) What are Schedule G & N ?

(j) Give examples of any *four* Narcotic drugs.

2. Solve any *two* of the following : 2×10=20

(a) Write in detail about PCI and its constitution with its functions.

(b) Write in detail about schedule M under D & C Act, 1940.

(c) Write in detail about Medical Termination of Pregnancy Act.

3. Solve any *seven* of the following : 7×5=35

(a) Define drug as per Drug and Cosmetic Act, 1940.

(b) Give the specimen label for schedule H and H₁ drug with suitable example (Draw label).

(c) Explain in brief about Education Regulation

(d) Define opium and opium derivative.



- (e) Write a short note on Intellectual Property Act.
- (f) Write in brief the constitution and functions of DTAB.
- (g) Write in brief the qualification and duties of drug inspector.
- (h) Discuss the rules relating to the export-import of Narcotic drug.
- (i) Write in brief about manufacturing outside the bond.