

This question paper contains 3 printed pages]

IP—01—2023

FACULTY OF SCIENCE AND TECHNOLOGY

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

APRIL/MAY, 2023

MEDICINAL CHEMISTRY

Paper-II (BP-501T)

(Wednesday, 03-05-2023)

Time : 10.00 a.m. to 01.00 p.m.

Time—Three Hours

Maximum Marks—75

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

(ii) Figures to the right indicate full marks.

1. Answer the following questions : 10×2=20

- (a) Explain in detail mechanism of action of gastric proton pump inhibitors.
- (b) Write the structure and uses of any *two* antagonists.
- (c) Discuss the mechanism of action of Acetazolamide.
- (d) Write the structure and uses of any *two* anticoagulants.
- (e) What are potassium sparing diuretics ? Give the structure of triamterene.
- (f) Write briefly about nitro vasodilators.
- (g) Write a note on drugs used in Congestive heart failure.

P.T.O.

- (h) Illustrate the importance of Histamine receptors.
- (i) Explain the mechanism action of anticoagulants.
- (j) Outline synthesis of Benzocaine.

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

- (a) Define and classify diuretics with examples. Explain the mechanism of action of carbonic anhydrase inhibitors and explain the synthesis of Acetazolamide.
- (b) Define and classify local anaesthetics with examples. Explain the SAR of local anaesthetic agent.
- (c) Classify antineoplastic agents with examples. Outline the synthesis of Mercaptopurine and Methotrexate.

3. Answer the following : 7×5=35

- (a) Describe the chemistry of oral contraceptives.
- (b) Write a note on antithyroid drugs and give structure and uses of any *two*.
- (c) What are hypoglycemic agents ? Discuss about Glucosidase inhibitors as antidiabetic agents.
- (d) What are estrogens ? Discuss about synthetic estrogens.
- (e) Define and classify H₁ receptor antagonists with suitable examples. Outline the synthesis of Promethazine and Triprolidine HCl.
- (f) Discuss in brief about vasodilators and outline the synthesis of Nitroglyoxine.

- (g) What are anticoagulants ? Give the mechanism of action and synthesis of Warfarin.
- (h) Define and classify antiarrhythmic agents with examples. Give their medicinal uses.
- (i) Write a note on metabolism of steroids.

This question paper contains 2 printed pages]

IP—05—2023

**FACULTY OF PHARMACY (PHARMACEUTICAL SCIENCE AND
TECHNOLOGY)**

B. Pharm (Fifth Semester) EXAMINATION

APRIL/MAY 2023

INDUSTRIAL PHARMACY-I

(Saturday, 06-05-2023)

(BP-502T)

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

Time— Three Hours

Maximum Marks—75

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

(ii) Draw neat label diagram wherever necessary.

(iii) Answer to the point only.

1. Solve the following questions :

10×2=20

(a) Write advantages of liquid orals.

(b) Write ideal characteristics for Parenteral formulations.

(c) What are ideal requirements of pharmaceutical packaging materials.

(d) Define suspension. Enlist method of preparation of suspension.

(e) Write classification of cosmetics on the basis of their uses.

(f) Define ophthalmic. Enlist evaluation test for ophthalmic preparations.

(g) Define preformulation. Enlist physical properties of it.

(h) Write advantages of P'ceutical aerosol.

(i) Define tablet. Explain any *one* granulation method.

(j) Enlist various excipients used in emulsion formulation with suitable example.

P.T.O.

2. Answer any *two* of the following : 2×10=20
- (a) Describe various evaluation test for parenterals.
 - (b) Explain various quality control test for tablets.
 - (c) Define capsule. Explain advantages and disadvantages of capsule.
Explain Rotary Die process of soft capsule manufacturing.
3. Answer any *seven* of the following : 7×5=35
- (a) Define emulsion. Explain identification test of emulsion.
 - (b) Describe lipstick.
 - (c) What are propellants ? Write its functions and classification and container used for aerosol.
 - (d) Explain about glass containers used in pharmaceutical preparation.
 - (e) Explain tablet coating or Mannual capsule filling machine.
 - (f) Enlist and explain techniques of pelletisation.
 - (g) Explain liquid oral dosage form with example. Explain method of preparation of syrup.
 - (h) Explain formulation of parenterals with aseptic technique'.
 - (i) Describe cold cream.

This question paper contains 2 printed pages]

IP—09—2023

FACULTY OF SCIENCE AND TECHNOLOGY

B.Pharm. (Fifth Semester) EXAMINATION

APRIL/MAY, 2023

PHARMACOLOGY-II

(BP503T)

(Tuesday, 9-5-2023)

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

Time—3 Hours

Maximum Marks—75

N.B. :— (1) *All questions are compulsory.*

(2) *Draw appropriate diagram/chart wherever necessary.*

(3) *Answer to the point only.*

1. Answer the following :

10×2=20

- (a) Define hematinics and coagulants.
- (b) Enlist drugs used in angina pectoris.
- (c) Write a note on Substance-P.
- (d) Enlist various types of Bioassays.
- (e) Write down uses of frusemide.
- (f) Define antiplatelet drugs and give its uses.
- (g) What are anabolic steroids ?
- (h) Give a note on corticosteroids.
- (i) Define Goitre.
- (j) Enlist drugs used to treat toothache.

P.T.O.

2. Solve any *two* of the following :

2×10=20

- (a) Classify antihypertensive drugs. Explain mechanism of action, adverse effects of Atenolol and Nifedipine.
- (b) Classify diuretics and anti-diuretic drugs. Give mechanism of action of high-ceiling diuretics and potassium sparing diuretics.
- (c) Write down principle and applications of bioassays and explain bioassay of insulin.

3. Solve any *seven* of the following :

7×5=35

- (a) Classify Anti-hyperlipidemic drugs. Give pharmacology of Atovastatin.
- (b) What are prostaglandins and leukotriens ? Explain its clinical significance.
- (c) Explain electrophysiology of heart.
- (d) Write down note on calcitonin and vitamin D. Give its importance in diseases.
- (e) Classify oral hypoglycemic agents.
- (f) Write a short note on oral contraceptives.
- (g) Explain pharmacological accounts of thyroid hormones.
- (h) Explain pharmacology of drugs acting on uterus.
- (i) Classify NSAJDs and give its uses.

This question paper contains 3 printed pages)

IP—13—2023

FACULTY OF SCIENCE AND TECHNOLOGY

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

APRIL/MAY, 2023

PHARMACOGNOSY AND PHYTOCHEMISTRY

Paper-II

(Thursday, 11-05-2023)

BP504T

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

Time—Three Hours

Maximum Marks—75

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

(ii) Answer to the point only.

(iii) Draw neat labelled diagram wherever necessary.

(iv) Figures to the right indicate full marks.

1. Solve the following :

2×10=20

(a) Define metabolic pathway with a suitable example.

(b) Define chromatography and classify it.

(c) Write biological source and uses of fennel.

(d) Write chemical constituents of Belladonna and Bitter Almond.

(e) Draw the chemical structure of Citral.

(f) Enlist modern methods of extraction.

P.T.O.

(g) Write Killer Killani test for cardiac glycosides.

(h) What is radio tracer techniques ?

(i) Write morphological characters of Clove.

(j) Define the following :

(i) Flavonoids

(ii) Tannins.

2. Solve any *two* of the following :

2×10=20

(a) Write industrial production, estimation and utilization of Atropine.

(b) Discuss Acetate pathway.

(c) Give isolation, purification and identification of Reserpine.

3. Solve any *seven* of the following :

7×5=35

(a) Describe utilization of radioactive isotopes in the investigation of Cancer.

(b) Write biological source, chemical class and uses of Rauwolfia and Coriander.

(c) Discuss isolation of Quinine.

(d) Explain supercritical fluid extraction technique with a suitable example.

(e) Write industrial production of Sennoside.

(f) Discuss analysis of podophyllotoxin with suitable technique of Chromatography.

(g) Write morphology and microscopy of Vinca.

- (i) Write composition, therapeutic uses and commercial application of Opium.
- (ii) Justify HPTLC technique for analysis of crude drugs with suitable examples.

This question paper contains 2 printed pages]

IP—17—2023

FACULTY OF SCIENCE AND TECHNOLOGY

B.Pharm. (Fifth Semester) EXAMINATION

APRIL/MAY, 2023

PHARMACEUTICAL JURISPRUDENCE

(BP-505T)

(Saturday, 13-5-2023)

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

Time—3 Hours

Maximum Marks—75

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

(2) *Answer to the point only.*

(3) *Figures to the right indicate full marks.*

1. Solve the following :

10×2=20

- (a) Define magic remedies. Write the offence and penalties in contravention of D & MR Act.
- (b) Define spurious drugs as under Drugs and Cosmetic Act.
- (c) Define absolute alcohol and denatured alcohol.
- (d) Define bonded and non-bonded laboratory.
- (e) What is Schedule 'J' ?
- (f) Define adulterated drug as per D & C Act, 1940.
- (g) Define Coca leaf.
- (h) What are the objectives of D & C Act, 1940 ?
- (i) Write the full form of CPCSEA & NLEM.
- (j) Define advertisement.

P.T.O.

2. Solve any *two* of the following :

2×10=20

- (a) Give the constitution and functions of Drug Technical Advisory Board. (DTAB).
- (b) Give the offence and penalties under Narcotic Drugs and Psychotropic Substance Act.
- (c) What are CPCSEA guidelines for breeding and stocking of animals ?

3. Solve any *seven* of the following :

7×5=35

- (a) Write in brief about schedule 'M'.
- (b) Define opium and opium derivative.
- (c) Enlist the requirements of Bonded laboratory.
- (d) What is Education Regulation ?
- (e) Describe schedule 'P' and 'X' under D & C Act, 1940.
- (f) Define 'cosmetics' as per D & C Act, 1940.
- (g) What is 1st register ? How is it prepared ?
- (h) What are the prohibited advertisements ?
- (i) Write in brief the powers and duties of Drug Inspector.