

This question paper contains 3 printed pages]

PM—31—2025

FACULTY OF PHARMACEUTICAL SCIENCES

B.Pharm (First Year) (Second Semester) EXAMINATION

JUNE, 2025

HUMAN ANATOMY AND PHYSIOLOGY-II

Paper BP201T

(Wednesday, 18-06-2025)

Time : 2.00 p.m. to 5.00 p.m.

Time—3 Hours

Maximum Marks—75

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

(ii) Draw neat labelled diagram wherever necessary.

(iii) Answers to the point only.

1. Answer the following :

10×2=20

(a) Define the following terms :

Receptor; synapse.

(b) Write the role of BMR.

(c) What are energetics ?

(d) Draw a neat well labelled diagram of pancreas.

(e) What is pineal gland ?

P.T.O.

- (f) What is artificial respiration ?
- (g) Define parturition and pregnancy.
- (h) What are/is Goitre and Grave's disease ?
- (i) Explain in short about neuroglia.
- (j) What is action potential ?

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

- (a) Explain anatomy and physiology of cerebral cortex. Draw a neat well labelled diagram of brain.
- (b) Describe in detail anatomy and physiology of hormones secreted by pituitary gland.
- (c) Discuss in detail the mechanism of conduction of nerve impulses across the nerve fibres and write the properties of nerve fibre.

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

- (a) Discuss about importance of genetics.
- (b) Draw a neat well labelled diagram of neuron. Write the functions of afferent and efferent nerve tracts.
- (c) Write in brief regulation of respiration.
- (d) Discuss in short about digestion of proteins in GIT.

- (e) Write a short note on resuscitation methods.
- (f) Discuss the hormones of pancreas and their roles.
- (g) Write the anatomy and physiology of salivary gland.
- (h) Explain in short disorders involved in GIT.
- (i) Write anatomy and physiology of cerebellum.

This question paper contains 4 printed pages]

PM—35—2025

FACULTY OF SCIENCE AND TECHNOLOGY

B. Pharm (First Year) (Second Semester) EXAMINATION

JUNE, 2025

PHARMACEUTICAL ORGANIC CHEMISTRY-I

Paper-BP202T

(Friday, 20-06-2025)

Time : 2.00 p.m. to 5.00 p.m.

Time—3 Hours

Maximum Marks—75

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

(ii) Figures to the right indicate full marks.

(iii) Draw structures wherever necessary.

1. Answer the following questions :

10×2=20

(a) Write reaction for synthesis of 2-Butene from 1-Butene.

(b) Discuss saytzeff's orientation with example.

(c) Write HVZ reaction (α -halogenation).

(d) Discuss the inductive effect.

(e) Arrange the following compounds in order of increasing acidity :

(i) Fluoroacetic acid

(ii) Chloroacetic acid

(iii) Bromoacetic acid

(iv) Iodoacetic acid.

P.T.O.

- (f) Draw the structure of :
- (i) 2, 2-Dimethylpropane
 - (ii) 3-Ethyl-4-fluorohexane.
- (g) Write the reaction of pyrolysis of alkane.
- (h) Why aldehydes are more reactive than ketones towards addition reaction ?
- (i) What is Diels-Alder reaction ?
 - (j) Draw structure and write uses of the following :
 - (i) Ethanolamine
 - (ii) Amphetamine.

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

- (a) Explain reaction, mechanism, kinetics, stereochemistry, potential energy diagram and factors affecting S_N2 reaction. What is Walden inversion in S_N2 reaction ?
- (b) Classify organic compounds on the basis of structure and functional group.
- (c) Explain the reaction, mechanism, stereochemistry and evidences of E_1 and E_2 reactions.

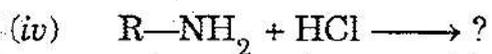
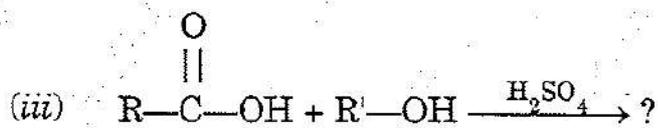
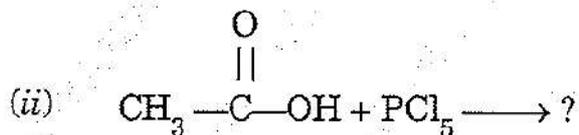
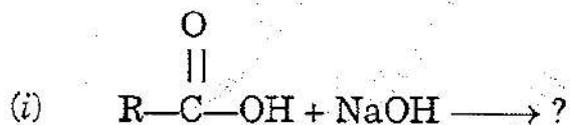
3. Answer any seven of the following :

7×5=35

- (a) Write the methods for preparation of carbonyl compounds.
- (b) Explain basicity of amines. Add a note on effect of substituents on the basicity.
- (c) What are dienes ? Classify with suitable example. Discuss stability of conjugated dienes.
- (d) Discuss about Cannizzaro reaction and crossed Cannizzaro reaction.
- (e) Explain qualitative tests to distinguish between 1°, 2° and 3° alcohols.
- (f) Explain acidity of carboxylic acids. Add a note on effect of substituents on the acidity.
- (g) Write short notes on :
 - (i) Electromeric effect
 - (ii) Markonikoff's and Anti-Markonikoff's orientation.
- (h) Draw structure and write uses of the following compounds :
 - (i) Trichloroethylene
 - (ii) Benzyl alcohol
 - (iii) Benzaldehyde
 - (iv) Salicylic acid
 - (v) Tartaric acid.

P.T.O.

(i) Complete the following reactions :



This question paper contains 2 printed pages]

PM—33—2025

FACULTY OF SCIENCE & TECHNOLOGY

B. Pharm. (First Year) (First Semester) EXAMINATION

JUNE, 2025

PHARMACEUTICAL ANALYSIS

Paper I (BP-203T)

(Thursday, 19-06-2025)

Time : 2.00 p.m. to 5.00 p.m.

Time—3 Hours

Maximum Marks—75

N.B. :— (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) Enlist sources of impurities.

(b) Give the principle of Iodometry.

(c) Define Molarity & Normality.

(d) Give applications of Polarography.

(e) What do you mean by diazotisation titration ?

(f) Give difference between Mohr's method and Volhard's method.

(g) Write Ilkovic equation.

P.T.O.

- (h) Sketch a neat labelled diagram of conductivity cell.
- (i) Write example of primary standard used in redox titration.
- (j) Enlist types of error.

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

- (a) What do you mean by acid-base titration ? Explain theories involved in acid-base indicators.
- (b) Write construction, working and applications of glass electrode.
- (c) Define primary standard with examples. Give ideal properties of primary standard.

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

- (a) Write construction and working of standard hydrogen electrode.
- (b) Write advantages and disadvantages of dropping mercury electrode.
- (c) Explain Volhard's method with example.
- (d) Explain types of EDTA titration.
- (e) Write classification of non-aqueous solvent with example.
- (f) Write estimation of calcium gluconate.
- (g) Discuss steps involved in Gravimetry.
- (h) Write applications of potentiometry.
- (i) Explain various methods of minimization of error.

This question paper contains 3 printed pages]

PM—43—2025

FACULTY OF SCIENCE AND TECHNOLOGY

B. Pharm. (Second Semester) EXAMINATION

JUNE, 2025

PATHOPHYSIOLOGY

Paper-BP-204T

(Wednesday, 25-06-2025)

Time : 2.00 p.m. to 5.00 p.m.

Time—3 Hours

Maximum Marks—75

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

(ii) Answer to the point only.

1. Answer the following :

10×2=20

(a) Define pathophysiology.

(b) Write a short note on Diabetes.

(c) Enlist various infectious diseases.

(d) Write about wound healing.

(e) Write a short note on Hypertrophy.

P.T.O.

- (f) What is cell swelling ?
- (g) Write sign and symptoms of COPD.
- (h) Define pathophysiology.
- (i) Write about inflammation.
- (j) Explain peptic ulcer.

2. Answer any *two* of the following :

2×10=20

- (a) Discuss in detail about acute and chronic renal failure.
- (b) Describe in detail about etiopathogenesis, treatment and prevention of tuberculosis.
- (c) Enlist various cardiovascular diseases. Give a detailed accounts of Hypertension and Angina.

3. Answer any *seven* of the following :

7×5=35

- (a) Give in detail about Hepatitis.
- (b) What is cancer ? Give its etiopathogenesis.
- (c) Write in detail about cell injury.
- (d) Compare positive and negative feedback mechanism.

- (e) Give pathophysiology of Atherosclerosis.
- (f) Explain in detail about Asthma.
- (g) Write a short note about Thalasemia.
- (h) Give accounts of AIDS.
- (i) Write about alcoholis liver disease.