AUTUMN END SEMESTER EXAMINATION-2025

1st Semester B.Pharm

HUMAN ANATOMY & PHYSIOLOGY-I

BP101T

(For 2025 Admitted Batch)

Time: 3 Hours | Full Marks: 75

Answer Question No.1 (Part-A) is compulsory,
any SEVEN from Part-B and any TWO from Part-C.
The figures in the margin indicate full marks.
All parts of a question should be answered at one place only.

PART-A

1. Objective Answer Type Questions (Answer All) [2 × 10]

   (a) Differentiate between homeostasis and haemostasis.

   (b) Define proximal and distal.

   (c) Classify different types of bones.

   (d) What is anemia?

   (e) What is erythropoiesis?

   (f) Write the name and functions of 10th cranial nerve.

   (g) Name the neurotransmitter of sympathetic and para-sympatheic nervous system.

   (h) Define cardiac output and hypertension.

   (i) Write the functions of spleen.

   (j) Name the instrument that measure ECG and Blood pressure.

PART-B

2. Focused-Short Answer Type Questions-(Answer Any Seven) [5 × 7]

   (a) Classify tissue; and write location and functions of different epithelial tissue. [2+3]

   (b) Describe the general principles of cell communication. [5]

   (c) Classify joints with examples. Discuss about synovial joint. [2+3]

   (d) Write the structure and functions of skin. [2+3]

   (e) Describe the mechanism of blood coagulation. [5]

   (f) What is lymph? Describe details about lymph nodes. [1+4]

   (g) Write a note on neuro-muscular junction. [5]

   (h) Write a note on cardiac cycle. [5]

   (i) Compare sympathetic with parasympathetic nervous system. [5]

PART-C

Long Answer Type Questions (Answer Any Two)

3. With neat and labeled diagram discuss the human cell. Write the structure and functions of Nucleus and mitochondria. [5+5]

4. Describe the composition and functions of blood. Write detail notes on blood group and its significance. [5+5]

5. Describe the followings: [5+5]

   a) Physiology of human heart

   b) Physiology of muscle contraction.

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AUTUMN END SEMESTER EXAMINATION-2025

1st Semester B.Pharm

PHARMACEUTICAL ANALYSIS-I

BP102T

(For 2025 Admitted Batch)

Time: 3 Hours | Full Marks: 75

Answer Question No.1 (Part-A) is compulsory,
any SEVEN from Part-B and any TWO from Part-C.
The figures in the margin indicate full marks.
All parts of a question should be answered at one place only.

PART-A

1. Objective Answer Type Questions (Answer All): [2 × 10]

   (a) Define molarity and molality.

   (b) Explain accuracy and precision.

   (c) Define Arrhenius theory.

   (d) Define with examples about Lewis Acids.

   (e) Differentiate Chelating agents with sequestering agents.

   (f) Write down the names of reagents required for diazotisation titration reaction.

   (g) Define specific resistance and specific conductance.

   (h) Write about two weak organic acids with structure.

   (i) Name two organic bases with structure.

   (j) Write down any two oxidising agents.

PART-B

2. Focused-Short Answer Type Questions-(Answer Any Seven): [5 × 7]

(a) Discuss about half-wave potential. [5]

(b) Give a short note on latest edition of I.P. [5]

(c) Write about types of solvents used in non-aqueous titration. [5]

(d) Write a detail note on Fajan's method. [5]

(e) Briefly discuss the steps involved in Gravimetry. [5]

(f) What is Iodimetry? Discuss in detail. [1+4]

(g) Discuss the applications of Conductometry. [5]

(h) How to prepare and standardize 0.1 N HCl solution? [5]

(i) Give the procedure for the limit test of iron. [5]

PART-C

Long Answer Type Questions (Answer Any Two)

3. Write a detail note on Limit test for Arsenic. [10]

4. Give detail review on acid base titration curves. [10]

5. Write note on different types of indicator electrodes. [10]

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AUTUMN END SEMESTER EXAMINATION-2025

1st Semester B.Pharm

PHARMACEUTICS I

BP103T

(For 2025 Admitted Batch)

Time: 3 Hours | Full Marks: 75

Answer Question No.1 (Part-A) is compulsory,
any SEVEN from Part-B and any TWO from Part-C.
The figures in the margin indicate full marks.
All parts of a question should be answered at one place only.

PART-A

1. Objective Answer Type Questions (Answer All) [2 × 10]

   (a) List the various parts of a typical prescription.

   (b) The adult dose of a drug is 500 mg. Calculate the appropriate dose for a child who is 4 years old using Young's Formula.

   (c) Define "Proof Spirit" and provide the formula for its calculation.

   (d) Differentiate between effervescent and efflorescent powders.

   (e) Define flocculated suspension.

   (f) Write about the test for identification of type of emulsion.

   (g) What is Displacement Value in pharmaceutics?

   (h) Define Therapeutic Incompatibility.

   (i) Name the factors that influence the dermal penetration of drugs.

   (j) Differentiate between ointment and gel.

PART-B

2. Focused-Short Answer Type Questions-(Answer Any Seven) [5 × 7]

   (a) Discuss the historical background and development of the profession of pharmacy in India. [5]

   (b) Classify dosage forms with suitable examples for each category. [5]

   (c) Discuss in detail about evaluation tests for suppositories. [5]

   (d) In what proportion should a 20% alcohol solution be mixed with a 5% alcohol solution to prepare a 10% alcohol solution? Calculate using method of allegation. [5]

   (e) Describe the various solubility enhancement techniques used for liquid dosage forms. [5]

   (f) Classify different types of bases used in the preparation of suppositories.

   (g) Explain "Physical Incompatibilities" with suitable examples and methods to rectify them. [5]

   (h) Discuss the various excipients used in the formulation of semisolid dosage forms. [5]

   (i) Explain the mechanisms of drug penetration through the skin with a neat and labelled diagram. [5]

PART-C

Long Answer Type Questions (Answer Any Two)

3. Define "Prescription." Explain in detail the professional way of handling a prescription and discuss the various types of errors commonly encountered in prescriptions. [1+5+4]

4. Define "Suspensions." Discuss their classification, stability problems, and the various methods used to overcome these stability issues. [1+2+3+4]

5. Define "Pharmaceutical Incompatibilities." Provide a detailed classification and discuss "Chemical Incompatibilities" with specific examples and their remedies. [1+2+7]

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AUTUMN END SEMESTER EXAMINATION-2025

1st Semester B.Pharm

PHARMACEUTICAL INORGANIC CHEMISTRY

BP104T

(For 2025 Admitted Batch)

Time: 3 Hours | Full Marks: 75

Answer Question No.1 (Part-A) is compulsory,
any SEVEN from Part-B and any TWO from Part-C.
The figures in the margin indicate full marks.
All parts of a question should be answered at one place only.

PART-A

1. Objective Answer Type Questions (Answer All) [2 × 10]

   (a) What is the role of Citric acid and Thioglycolic acid in the limit test for Iron?

   (b) What is buffer capacity?

   (c) What is the composition and uses of ORS?

   (d) Explain combination antacids.

   (e) Define Saline cathartics with an example.

   (f) Note down the advantages of Povidone-Iodine.

   (g) Differentiate expectorants and emetics.

   (h) List any two applications of astringents.

   (i) Define radioactivity and mention its units.

   (j) Mention the precautions and storage requirements for radioactive substances.

PART-B

2. Focused-Short Answer Type Questions-(Answer Any Seven) [5 × 7]

   (a) With a neat and labelled diagram, explain the limit test for Arsenic. [5]

   (b) Explain dental caries. What is the role of Fluoride in its prevention? [5]

   (c) What are the methods used for the adjustment of tonicity? [5]

   (d) Classify antimicrobials with suitable examples. [5]

   (e) Write about the method of preparation, assay and uses of Ammonium chloride. [5]

   (f) Write a short note on Haematinics. [5]

   (g) Discuss the method of preparation, assay and uses of Sodium thiosulphate. [5]

   (h) Describe methods of measurement of radioactivity. [5]

   (i) Discuss the diagnostic and therapeutic applications of radioisotopes. [5]

PART-C

Long Answer Type Questions (Answer Any Two)

3. Discuss the types and sources of impurities in pharmaceutical substances. [10]

4. Derive the buffer equation and explain the mechanism of buffer action. [5+5]

5. Compare and contrast the properties of α-, β- and γ-particles. [10]

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