This question paper contains **3** printed pages]

PM—29—2025

FACULTY OF PHARMACEUTICAL SCIENCES

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

JUNE, 2025

HUMAN ANATOMY AND PHYSIOLOGY–I

Paper–BP101T

(Tuesday, 17-6-2025) **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 a labelled diagram wherever necessary.

(*iii*) Figures to the right side indicate full marks.

1. Objective type questions : 10×2=20

(*a*) Enlist any *four* cranial nerves along with their origin.

(*b*) Draw a labelled diagram of lymph node.

(*c*) Give basic principles of cell communication.

(*d*) Define blood pressure. Give its normal value.

(*e*) Draw a neat labelled diagram of internal structure of ear.

P.T.O.

(*f*) Name the sutures and bones of skull.

(*g*) Define anatomical terms :

(*i*) Superior and

(*ii*) Inferior with suitable example.

(*h*) Define anemia. Enlist different types.

(*i*) Enlist the basic life processes.

(*j*) Define blood. Give its functions.

2. Long answer types questions (Solve any *two*) : 2×10=20

(*a*) Draw a neat labelled diagram of internal structure of heart. Describe cardiac cycle in detail.

(*b*) Classify peripheral nervous system. Write in detail structure and functions of sympathetic and parasympathetic nervous system.

(*c*) Write a short note on Anatomy and Physiology of RBCs. Explain ABO system of blood groups.

3. Short answer type questions (Solve any *seven*) : 7×5=35

(*a*) Draw labelled diagram of internal structure of blood vessel. Give the difference between artery and vein.

(*b*) Enlist any *four* clotting factors. Write a short note on mechanism of blood clotting.

(*c*) Define homeostasis. Explain negative feedback mechanism with suitable example.

(*d*) Classify joints. Explain sinovial joint with labelled diagram.

(*e*) Enlist the layers of heart wall. Write a note on conducting system of heart.

(*f*) Classify tissue in detail. Write a short note on connective tissues.

(*g*) Name intracellular organells of cell. Explain structure and functions of cell membrane.

(*h*) Give classification and functions of leucocytes.

(*i*) Describe structure and functions of skin.

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-~~203~~T) 102T)

(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 impurites.

(*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 methold 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—37—2025

FACULTY OF PHARMACEUTICAL SCIENCE

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

JUNE, 2025

PHARMACEUTICS-I

Paper-BP-103T

(Saturday, 21-06-2025) **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 a neat labelled diagram wherever necessary.

(*iii*) Number to right are total marks for that question.

1. Answer the following : 10×2=20

(*a*) Define the term Pharmacopoeia.

(*b*) Write any *two* formulas for calculation of dose in children.

(*c*) Define suppositories. Give its advantages.

(*d*) Write a note on gelling agent.

(*e*) Differentiate between liniment and lotion.

P.T.O.

(*f*) Why glycerine is used as a base in throat paint ?

(*g*) Give advantages of powders.

(*h*) What are syrups ?

(*i*) Define incompatability.

(*j*) Differentiate between cream and paste.

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

(*a*) Give a brief account on chemical incompatability. Discuss solution to overcome.

(*b*) Discuss in detail about stability problems in suspension and methods to overcome.

(*c*) Define prescription. Explain its parts and handling of prescription.

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

(*a*) Give formula and method of preparation of mouthwash.

(*b*) Write in brief about history of pharmacy profession in India.

(*c*) Calculate the dose of drug for :

(*i*) 6 months old infant

(*ii*) Child of 7 years.

When adult dose of drug is 100 mg ?

(*d*) What are hygroscopic powders of eutectic mixtures ?

(*e*) Give a brief account on methods of preparation for suppositories.

(*f*) Discuss in detail about factors influencing dermal penetration of drugs.

(*g*) Write a note on dusting powder. Give *two* official preparations.

(*h*) Write in detail about gargles and nasal drop.

(*i*) Give classification of dosage form in detail.

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PM—41—2025

FACULTY OF SCIENCE AND TECHNOLOGY

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

JUNE, 2025

PHARMACEUTICAL INORGANIC CHEMISTRY

Paper-BP-104T

(Tuesday, 24-06-2025) **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. Answer the following questions : 10×2=20

(*a*) What is an anticaries agent ? Give examples.

(*b*) Give the precautionary measure required to handle radioactive substances.

(*c*) Write the molecular formula and medicinal uses of sodium thiosulphate.

(*d*) Define the term Antidotes. Give its examples.

P.T.O.

(e) What are dentifricing agents ? Give its examples.

(f) What is importance of antacid ?

(g) What do you mean by the term monograph ? Enlist the contents of the monograph.

(h) Write the composition and application of zinc eugenol cement.

(i) Write the molecular formula and uses of ammonium chloride.

(j) What is Achlorhydria ?

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

(a) Define impurities and explain in detail pharmaceutical impurities.

(b) Describe the physiological mechanism of acid-base balance in the body.

(c) Explain the principle and procedure involved in the limit test of arsenic with a neat labelled diagram of Gutziet's apparatus.

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

(a) What are antacids ? Classify them with examples. State requirements for an ideal antacid.

(b) Write a note on pharmacopoeia of India.

(c) Give the principle, reactions and procedure involved in the limit test for chloride.

(*d*) Discuss the role of fluorides in dental caries.

(*e*) What are saline cathartics ? What is their mechanism of action ?

(*f*) Write a note on electrolytes used in replacement therapy.

(*g*) What are GIT agents ? Classify them with examples. Write a note on acidifiers.

(*h*) What are emetics ? Write the method of preparation and uses of copper sulphate.

(*i*) Write the pharmaceutical application of radioactive substances.