VO—01—2022

FACULTY OF SCIENCE AND TECHNOLOGY

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

JUNE/JULY, 2022

HUMAN ANATOMY AND PHYSIOLOGY–I

Paper BPI-01T

(Monday, 25-7-2022)　　　　　　　　　　**Time : 9.30 a.m. to 1.15 p.m.**

Time—3.45 Hours　　　　　　　　　　　　*Maximum Marks—75*

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

　　　(ii)　Draw neat labelled diagram whenever necessary.

　　　(iii)　Figures to the right indicate full marks.

1.　Solve all the following questions :　　　　　　　　10×2=20

　(a)　Define the term Anatomy and Physiology.

　(b)　Enlist the functions of mitochondria.

　(c)　Name the bones of lower limb.

　(d)　Define Blood Pressure. Write its normal value.

　(e)　Draw neat labelled diagram of tongue.

　(f)　Define joints. Classify it.

　(g)　Give the significance of Rh factor.

　(h)　Write the classification of peripheral nervous system.

　(i)　Define the term myocardial infarction.

　(j)　Give composition and functions of Lympth.

P.T.O.

(2)

2. Solve any *two* of the following :

2×10=20

(a) Draw a neat labelled diagram of plasma membrane. Discuss in detail mechanism of transport of material across plasma membrane.

(b) Enlist various coagulation factor. Explain in detail mechanism of blood coagulation.

(c) Describe the types, structure, location and functions of connective tissue.

3. Solve any *seven* of the following :

7×5=35

(a) Write note on Electrocardiogram and its significance.

(b) Describe the structure and functions of human skin.

(c) Write the functions of vertebral column.

(d) Write a note on Hemopoeisis.

(e) Write structure and functions of Ear.

(f) Write a note on systemic circulation of blood.

(g) Define cell cycle ? Describe the mitotic phase of cell cycle.

(h) Describe the procedure for the determination of blood group.

(i) Describe the positive feedback mechamism with *one* example.

VO—09—2022

FACULTY OF SCIENCE AND TECHNOLOGY

B. Pharmacy (First Semester) EXAMINATION

JUNE/JULY, 2022

PHARMACEUTICAL ANALYSIS–I

(Wednesday, 27-7-2022)   (BP 102 T)   Time : 9.30 a.m. to 1.15 p.m.

Time—3.45 *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 :   20

(a) Define molarity and normality.

(b) Enlist non-aqueous indicators.

(c) Define chelating agent with example.

(d) Write principle of Diazotisation titration.

(e) What is cerimetry ?

(f) Name reference electrodes used in potentiometry.

(g) What is conductivity cell ?

(h) How many significant figures are present in the following numbers :

(i) 0.026 M

(ii) 1.052 N

(iii) 99.082%

(iv) 100.98%

(i) What do you mean by Neutralisation titration ?

(j) Write principle of dichrometry.

P.T.O.

2. Solve any *two* of the following :   20

   (a) Discuss various steps involved in Gravimetry.

   (b) Define error. Give classification of errors with example. Give methods for minimization of errors.

   (c) Give construction, working, advantages and limitations of dropping mercury electrode.

3. Solve any *seven* of the following :   35

   (a) Give procedure for preparation and standardisation of hydrochloric acid.

   (b) Discuss neutralisation curve of the following titrations :

      (i) Strong acid against strong base

      (ii) Strong acid against weak base.

   (c) Write estimation of magnesium sulphate.

   (d) Describe principle and chemical reaction of Volhard's method.

   (e) Describe applications of conductometry.

   (f) Write estimation of sodium benzoate.

   (g) Explain sources of impurities in pharmaceuticals.

   (h) Write construction and working of standard hydrogen electrode.

   (i) Explain the term bromatometry with an example.

This question paper contains **2** printed pages]

VO—17—2022

FACULTY OF SCIENCE AND TECHNOLOGY

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

JUNE/JULY, 2022

PHARMACEUTICS–I

Paper BP-103T

(Friday, 29-7-2022)   **Time : 9.30 a.m. to 1.15 p.m.**

Time—3.45 Hours   *Maximum Marks—75*

N.B. :— Q. No. **1** is compulsory.

1.   Answer any *five* following :   10×2=20

   (*a*)   Define the term Posology.

   (*b*)   Give the ideal format of prescription.

   (*c*)   In what proportion should alcohol of 75% and 60% strengths be mixed
          to make 90 ml of 70% alcohol ?

   (*d*)   Give the advantage and disadvantages of liquid dosage forms.

   (*e*)   Differentiate between floceulated and deflocculated suspensions.

   (*f*)   Enlist the tests of identification of emulsion.

   (*g*)   Give the ideal properties of suppository base.

   (*h*)   Define the term physical incompatibilities.

   (*i*)   Define ointment and cream.

   (*j*)   What are insufflations ?

                                                                    P.T.O.

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

(a) Discuss in detail about the factors affecting on calculation of dose.

(b) Classify in detail suppository bases and write about evaluation of suppository.

(c) Discuss in detail about formulation of ointments.

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

(a) Write in brief about different parts of prescription.

(b) Write a note on pharmacy as a career.

(c) Discuss about compound and simple powders.

(d) Write in brief about solubility enhancement techniques.

(e) Write in brief about preparation of troat paint and elixirs.

(f) Write a note on formulation of suspension.

(g) Discuss about stability problems in emulsion.

(h) Write a note on therapeutic incompatibility.

(i) Write about excipients used in semisolid dosage forms.

VO—25—2022

FACULTY OF PHARMACEUTICAL SCIENCE

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

JUNE/JULY, 2022

(CBCS PCI)

PHARMACEUTICAL INORGANIC CHEMISTRY

Paper BP-104T

(Monday, 1-8-2022)   **Time : 9.30 a.m. to 1.15 p.m.**

Time—3.45 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 *all* of the following :   20

   (a)   Define Radioactivity.

   (b)   Define and classify expectorants.

   (c)   What is achlorhydria ? How is this condition treated ?

   (d)   Draw well labelled diagram of arsenic test apparatus.

   (e)   Give the properties of Gamma radiations.

   (f)   What are desensitizing agents ?

   (g)   Write Henderson-Hasselbalch equation.

   (h)   How does a buffer control the pH of a solution ?

   (i)   Why dil. HNO_3 is used in limit test of chloride ?

   (j)   Why are antacids given in combination ?

                 P.T.O.

20

2. Answer any *two* of the following :

(a) Define impurity. Explain in detail about sources of impurities in pharmaceutical substances.

(b) What are haematinics ? Give method of preparation, properties, uses and assay of ferrous sulphate.

(c) List any *five* radioisotopes with their applications. Explain handling and storage of radiopharmaceuticals.

35

3. Answer any *seven* of the following :

(a) Describe in detail about mechanisms involved in physiological acid-base balance.

(b) Explain the principle and procedure of limit test for chlorides.

(c) Give a detailed account on history of Indian pharmacopoeia.

(d) Explain functions of major physiological ions.

(e) What are emetics ? Give method of preparation, properties and uses of copper sulphate.

(f) Give the classification of antidotes on the basis of mechanism of action along with suitable examples.

(g) Define Antacid. Give ideal properties of Antacids.

(h) What are astringents ? Give preparation, properties and uses of potash alum.

(i) Explain construction and working of GM counter.