IP—29—2023

FACULTY OF SCIENCE AND TECHNOLOGY

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

JULY/AUGUST, 2023

HUMAN ANATOMY AND PHYSIOLOGY–I

(Monday, 10-7-2023) (BP - 101 T) 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 a neat labelled diagram wherever necessary.

(iii) Answer to point only.

1. Answer the following : 10×2=20

(a) Define Homeostasis and Physiology.

(b) Enlist the cell organells in cell.

(c) Give the location and function of cardiac tissue.

(d) Enlist the bones of Thoracic Cage.

(e) Draw a well labelled diagram of skin.

(f) Explain cardiac cycle.

(g) Draw a neat labelled diagram of ECG.

(h) Enlist Cranial Nerves.

(i) Write a note on ABO system.

(j) Draw a well labelled diagram of Eye.

P.T.O.

2. Long answer (any *two*) : 2×10=20

   (a) Write in detail on Internal structure of Heart and explain in detail about double circulation.

   (b) Explain in detail about structure and function of sympathetic and parasympathetic Nervous System.

   (c) Explain in detail about axial skeleton and explain the physiology of muscle contraction.

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

   (a) Explain the levels of structural organization of Human Body.

   (b) Discuss about cell division.

   (c) Explain in detail about cell junctions.

   (d) Explain the structure, location and functions of epithelial tissue.

   (e) Explain in detail about Integumentary system.

   (f) Explain the appendicular skeletal system.

   (g) Classify the joints and explain any *one* with well labelled diagram.

   (h) Explain the mechanism of coagulation of Blood.

   (i) Explain the Lymph Node.

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FACULTY OF SCIENCE AND TECHNOLOGY

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

JULY/AUGUST, 2023

PHARMACEUTICAL ANALYSIS-I

Paper BP-102T

(Wednesday, 12-07-2023)   Time : 10.00 a.m. to 1.00 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 :   20

(a)   Enlist the sources of impurities.

(b)   Define the term accuracy and precision.

(c)   Give the importance of Pharmaceutical Analysis.

(d)   What do you mean by acid-base titration ?

(e)   Enlist name of indicators used in non-aqueous titration.

(f)   Write the principle of Mohr's method.

P.T.O.

(g)   Name indicators used in complexometric titration.

(h)   What do you mean by diazotisation titration ?

(i)   What is oxidising agent and reducing agent ?

(j)   Sketch a neat labelled diagram of conductivity cell.

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

(a)   Define error and classify it in detail.

(b)   Describe in detail about various steps involved in gravimetry

(c)   Write construction, working and applications of glass electrode.

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

(a)   Define primary standard substance and give ideal characteristics of primary standard substance.

(b)   Write procedure for preparation and standardisation of 1M NaOH.

(c)   Give classification of non-aqueous solvents with example.

(d)   What do you mean by complexometric titration ? Write the estimation of magnesium sulphate.

(e)   Write a short note on Iodimetry and Iodometry titration.

(f)   Write construction and working of dropping mercury electrode.

(g) Describe theory involved in the following titration :

    (i) Strong acid *Vs.* strong base

    (ii) Weak acid *Vs.* strong base.

(h) What do you mean by precipitation titration ? Explain Volhard's method in precipitation titration.

(i) Give application of conductometric titration.

This question paper contains 2 printed pages]

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FACULTY OF SCIENCE AND TECHNOLOGY

B. Pharma (First Semester) EXAMINATION

JULY/AUGUST, 2023

PHARMACEUTICS-I

(Friday, 14-07-2023)   CBP103T)   Time : 10.00 a.m. to 1.00 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)   Define Pharmacopoeia.

    (b)   Define Creams and Gels.

    (c)   Give Young's & Dillings formula for calculation of Dose in Children.

    (d)   Mention different systems of weights and measures.

    (e)   What is the importance of date in prescription ?

    (f)   Enlist different stability parameters for suspensions.

    (g)   Define and classify Emulsions.

    (h)   Enlist different excipients used in fraction of semisolid dosage form.

    (i)   What are the causes of Therapeutic Incompatibility ?

    (j)   Define Displacement value in suppository.

P.T.O.

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

   (a) Define and classify Sterile and Nonsterile dosage form.

   (b) Define Incompatibility. Discuss in detail chemical Incompatibility.

   (c) Define Emulsions. Describe in brief methods of preparation and identification tests for Emulsion.

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

   (a) Differentiate between Flocculated and Deflocculated suspensions.

   (b) Give evaluation of semisolid dosage forms.

   (c) Describe Hot/Fusion method of preparation of suppositories.

   (d) Give advantages and disadvantages of powders.

   (e) Calculate the volume of 90% alcohol required to produce 300 ml of 30% alcohol.

   (f) Define and classify syrups and give its method of preparation.

   (g) Give ideal qualities of suppository bases.

   (h) Give History of profession of pharmacy in India.

   (i) Write in brief about simple and compound powders.

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FACULTY OF SCIENCE AND TECHNOLOGY

B. Pharm (First Semester) EXAMINATION

JULY/AUGUST, 2023

PHARMACEUTICAL INORGANIC CHEMISTRY

Paper BP-104T

(Monday, 17-7-2023)   Time : 10.00 a.m. to 1.00 p.m.

Time—3 Hours   Maximum Marks—75

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

       (ii)   Draw structure(s) and write reaction(s).

       (iii)   Figures to the right indicate full marks.

1.   Answer all the questions :   20

(a)   What is limit test ? Give its significance.

(b)   Why lead acetate cotton wool is used in limit test for arsenic ?

(c)   What are antacids ?

(d)   What is hyperchlorhydria ?

(e)   What are haematinics ?

(f)   Define the term poison and antidote.

(g)   Define tonicity. Enlist the methods for measurement of tonicity.

P.T.O.

(h) Define the term radioactivity. Enlist units of measurement of radioactivity.

(i) Fill in the blanks :

    (1) .... is known as white vitrol.

    (2) Molecular weight of Zinc Sulphate is ....

(j) Write ideal properties of antacid.

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

(a) What is impurity ? Discuss various sources of impurities in pharmaceutical substances.

(b) Write in detail about storage, precaution, handling and pharmaceutical applications of radiopharmaceuticals.

(c) Write about Arrhenius, Bronsted-Lowry concept and Lewis acid and base concept with their limitations.

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

(a) Write limit test for arsenic as per IP.

(b) Define cathartics and explain its types and uses.

(c) Define antimicrobial and classify them on the basis of exact mode of action.

(d) Write method of preparation, properties and uses of Zinc Sulphate.

(e) Explain principle, working and construction of Geiger-Muller counter.

(f) Write a note on oral rehydration therapy and write formula for ORS powder.

(g) What are dental products ? Discuss the role of fluorides in preventing tooth caries.

(h) Write in detail about physiological acid base balance.

(i) How side effects of antacids are masked by using its combinations ?