



This question paper contains 2 printed pages]

PP—29—2023

FACULTY OF SCIENCE AND TECHNOLOGY

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

NOVEMBER/DECEMBER, 2023

HUMAN ANATOMY AND PHYSIOLOGY-I

Paper BP101T

(Tuesday, 26-12-2023)

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 the point only.

1. Answer *all* the questions :

10×2=20

(a) Define Human Anatomy and Human Physiology.

(b) Enlist the functions of mitochondria.

(c) Give locations and functions of nervous tissues.

(d) Enlist the bones of axial skeleton.

(e) Define the term articulation.

(f) Give composition and functions of blood.

(g) Write a significance of Rh factor.

(h) Enlist any *six* cranial nerves.

(i) Draw a neat labelled diagram of heart.

(j) Define the term cardiac out. How is it calculated ?

P.T.O.

2. Long answer questions (answer any 2 out of 3) : 2×10=20
- (a) Draw a neat labelled diagram of plasma membrane. Discuss in detail about various mechanism involved in transport of materials across plasma membrane.
 - (b) Define the term blood coagulation. Discuss in detail about various phases of blood coagulation process.
 - (c) Define the term blood pressure. Discuss in detail long-term and short-term regulation of blood pressure.
3. Short answer questions (answer any 7 out of 9) : 7×5=35
- (a) Write a note on conducting system of heart.
 - (b) Discuss in short about systemic blood circulation.
 - (c) Draw neat labelled diagram of eye. Enlist its various physiological functions.
 - (d) Write a note on sympathetic nervous system.
 - (e) Write about ABO system.
 - (f) Write anatomy and physiology of lymph node.
 - (g) Classify structural and functional classification of joints.
 - (h) Write a note on physiology of muscle contraction.
 - (i) Write on structure, locations and functions of epithelial tissue.



This question paper contains 3 printed pages]

PP—33—2023

FACULTY OF SCIENCE AND TECHNOLOGY

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

NOVEMBER/DECEMBER, 2023

PHARMACEUTICAL ANALYSIS-I

Paper BP-102T

(Thursday, 28-12-2023)

Time : 10.00 a.m. to 1.00 p.m.

Time—Three 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 :

2×10=20

(a) What is metal ion indicator ?

(b) What are the secondary standards ?

(c) Comment on 'Blank determination'.

(d) Mention indicator and primary standard used in standardization of sodium thiosulphate.

(e) What is meant by Acidimetry Titration ?

P.T.O.

- (f) What are the Adsorption indicators ?
- (g) What are the ideal requirements of chelating agent used in complexometric titration ?
- (h) What do you mean by diazotisation titration ?
- (i) Give 'Ilkovic equation'.
- (j) Comment on 'Iodimetry'.

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

- (a) Explain the following conductometric titration with suitable example :
 - (i) Strong acid Vs. Strong base
 - (ii) Weak acid Vs. Strong base.
- (b) Explain steps involved in gravimetry.
- (c) Describe principle and procedure of standardisation of oxalic acid and hydrochloric acid.

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

- (a) Write in detail classification of solvents used in non-aqueous titration.
- (b) Write principle and procedure of Mohr's method.
- (c) Describe the term 'Masking and Demasking agents'.

- (d) Explain principle and applications of Bromatometry.
- (e) Write the construction and working of calomel electrode.
- (f) Describe different sources of errors.
- (g) Write principle and procedure of estimation of 'Ephedrine HCl'.
- (h) Discuss in detail instrumentation of polarography apparatus.
- (i) Describe sources of impurities in medicinal agents.

This question paper contains 2 printed pages]

PP—37—2023

FACULTY OF PHARMACEUTICAL SCIENCE AND TECHNOLOGY

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

NOVEMBER/DECEMBER, 2023

PHARMACEUTICS

Paper-I (BP-103T)

(Saturday, 30-12-2023)

Time : 10.00 a.m. to 1.00 p.m.

Time—3 Hours

Maximum Marks—75

- N.B. :—**
- (i) All questions are compulsory.
 - (ii) Figures to the right indicate full marks.
 - (iii) Answer to the point only.

1. Solve the following :

10×2=20

- (a) Define Pharmacy.
- (b) Differentiate between lotion and liniments.
- (c) What is the importance of date in prescription ?
- (d) Define :
 - (i) Ointment
 - (ii) Pastes.
- (e) Give advantages of emulsions.
- (f) Why are adjuncts needed in preparation of monophasic liquid dosage form ?

P.T.O.

- (g) Give ideal properties of suspensions.
- (h) Give classification of suspensions.
- (i) Write any *two* formulas for calculation of dose in children.
- (j) Why is glycerine used as a base in throat paint ?

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

- (a) Define suppositories. Explain in detail different methods of preparation of suppositories.
- (b) What do you mean by Posology ? Discuss different factors affecting dose of drug.
- (c) Define and classify sterile and non-sterile dosage form.

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

- (a) Describe in brief physical incompatibility.
- (b) Write in brief about eutectic mixtures.
- (c) Discuss in brief different methods of preparation of syrups.
- (d) Define emulsion. Write in detail various identification tests for emulsion.
- (e) Give different factors influencing dermal penetration of drugs.
- (f) Differentiate between flocculated and deflocculated suspension.
- (g) Write the advantages and disadvantages of powders.
- (h) Write in brief about parts of prescription.
- (i) Give formula and method of preparation of mouth washes.

This question paper contains 2 printed pages]

PP—41—2023

FACULTY OF PHARMACEUTICAL SCIENCE AND TECHNOLOGY

B.Pharm. (First Semester) EXAMINATION

JANUARY, 2024

PHARMACEUTICAL INORGANIC CHEMISTRY

(Tuesday, 02-01-2024)

BP104T

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) wherever necessary.

(iii) Figures to the right indicate full marks.

1. Answer *all* the questions :

10×2=20

(a) Define limit test. Enlist limit test.

(b) What are ideal properties of antacids ?

(c) What are expectorants ? Classify expectorants.

(d) Give pharmaceutical applications of radiopharmaceuticals.

(e) Why is nitric acid used in limit test for chloride ?

(f) Discuss Oral Rehydration Salt (ORS).

(g) What is cyanide poisoning ? Give name of antidote for it.

(h) Give functions of any *two* major Physiological ions.

(i) Give an account of buffer capacity.

(j) Define emetics with a suitable example.

P.T.O.

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

- (a) Classify GIT agents. Why is combination of antacids used ? Justify with example. Give preparation and uses of sodium bicarbonate.
- (b) Classify dental products. Define dentrifices. Write a note on zinc oxide eugenol (ZOE) cement.
- (c) What are major extra and intracellular electrolytes ? Explain electrolyte used in replacement therapy. Give preparation and uses of calcium gluconate.

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

- (a) What are haematinics. Provide preparation method, properties and uses of ferrous sulphate (FeSO_4).
- (b) Explain preparation, reaction and procedure of limit test of sulphate.
- (c) Discuss principle and reaction of limit test of arsenic. Draw its diagram.
- (d) What are different acid-base theories. Discuss any *two*.
- (e) What is radioactivity and half life ? Give account an of any *two* methods of radioactivity measurement.
- (f) Classify and write mechanism of action of antimicrobials.
- (g) Define astringent. Write molecular formula, preparation, properties and uses of zinc sulphate.
- (h) Discuss different sources of impurities.
- (i) Discuss physiology of acid-base balance.