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AM—29—2024

FACULTY OF SCIENCE AND TECHNOLOGY

B.Pharm. (First Semester) EXAMINATION

MARCH, 2025

HUMAN ANATOMY AND PHYSIOLOGY-I

(Tuesday, 11-3-2025) **Time : 2.00 p.m. to 5.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

N.B. :— Attempt *all* questions.

1. Answer *all* the questions : 10×2=20

   (*a*) Write the functions of mitochondria.

   (*b*) Write the normal value of WBC in male and female.

   (*c*) Write the composition of plasma.

   (*d*) Define stroke volume.

   (*e*) Name any *six* cranial nerves.

   (*f*) Define cell and tissue.

   (*g*) Draw a neat labelled diagram of lymph node.

   (*h*) Write scope of anatomy and physiology.

   (*i*) Mention the bones of thoracic age.

   (*j*) Enlist types of leukocytes.

P.T.O.

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

(*a*) Explain in detail physiology of Gearing.

(*b*) Write composition and functions of blood.

(*c*) Classify tissues and explain structure and functions of nervous tissue.

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

(*a*) Write a note on mitosis.

(*b*) Explain active transport of substances.

(*c*) Explain the conduction system of heart.

(*d*) Discuss about anatomy and physiology of spleen

(*e*) Explain structure and movement of knee joint.

(*f*) Explain the structure and functions of skin.

(*g*) Explain structure and functions of spinal cord.

(*h*) Write a note on Neuromuscular junction.

(*i*) Explain reticulo-endothelial system.

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AM—33—2024

FACULTY OF SCIENCE AND TECHNOLOGY

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

MARCH, 2025

PHARMACEUTICAL ANALYSIS–I

(Thursday, 13-3-2025) **Time : 2.00 p.m. to 5.00 p.m.**

Time—3 Hours *Maximum Marks—75*

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

(*ii*) Illustrate your answers with sketches wherever necessary.

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

(*iv*) Answer to the point only.

1. Answer the following questions : 10×2=20

(*i*) Write scope of pharmaceutical analysis.

(*ii*) What is Aprotic solvent ?

(*iii*) What is accuracy and precision ?

(*iv*) Define oxidation and reduction with example.

(*v*) Define demasking agent.

P.T.O.

(vi) What do you mean by molality ?

(vii) Write about Arrhensius theory.

(viii) What is complexometric titration ?

(ix) What is Cerimetry ?

(x) Give objective of pharmacopoeia.

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

(i) Define error. Explain the different types of errors and methods of minimizing of errors.

(ii) Describe construction, working, merits and demerits of dropping mercury electrode.

(iii) What is acidimetry and alkalimetry ? Explain the different types of solvents used in non-aqueous titrations.

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

(i) What is primary standard and secondary standard ? Write characteristics of both.

(ii) Discuss in brief different techniques of analysis.

(iii) Describe in detail theories of indicators in acid base titrations.

(iv) Describe the construction and working of silver chloride electrode.

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AM—37—2024

FACULTY OF PHARMACEUTICAL SCIENCE AND TECHNOLOGY

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

MARCH, 2025

PHARMACEUTICS

Paper–I

(Monday, 17-3-2025) **Time : 5.00 p.m. to 5.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

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

(*ii*) Answer to the point only.

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

1. Solve the following : 10×2=20

(*a*) What do you mean by pharmacopoeia ?

(*b*) Define liquid dosage form.

(*c*) List out various steps in handling of prescription.

(*d*) Give Young's formula and Pilling formula for calculation of dose in children.

(*e*) Define proof spirit.

(*f*) Enlist different excipients used in semisolid dosage form.

P.T.O.

(g) Define suspension and give its *one* example.

(h) Differentiate between lotion and liniment.

(i) What do you mean by creaming and cracking in emulsion ?

(j) Define displacement value.

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

(a) What do you mean by suppositories ? Explain in detail different methods of preparation of suppositories.

(b) Define Posology. Discuss various factors affecting dose of drug.

(c) What is pharmaceutical incompatibility ? Write in detail therapeutic incompatibility.

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

(a) Describe in brief history of profession of pharmacy in India.

(b) Define prescription. Write a note on superscription and inscription.

(c) Explain sterile and non-sterile dosage form.

(d) Differentiate between flocculated and deflocculated suspension.

(e) Discuss various factors influencing dermal penetration of drug.

(f) Write a note on geometric dilution of powder.

(g) Define emulsion. Explain various identification tests for types of emulsion.

(h) Write in brief different methods of preparation of syrups.

(i) Define powders. Give advantages and disadvantages of powders.

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AM—41—2024

FACULTY OF SCIENCE AND TECHNOLOGY

B. Pharm. (First Semester) EXAMINATION

MARCH, 2025

PHARMACEUTICAL INORGANIC CHEMISTRY

(Wednesday, 19-3-2025) **Time : 2.00 p.m. to 5.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

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

(*ii*) Figures to the right indicate full marks.

(*iii*) Answer to the point only.

1. Answer the following : 10×2=20

(*a*) What is the importance of buffer in pharmacy ?

(*b*) Name any *two* antimicrobials with their molecular formula.

(*c*) What is Haematinic agent ? Give its example.

(*d*) Explain Arrhenius theory with example.

(*e*) Write the molecular formula and uses of Boric Acid.

(*f*) What is achlorhydria ? Give its treatment.

(*g*) Define the term 'Antidote.' Give its examples.

(*h*) Write the importance of chloride as major extracellular electrolyte.

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

(*j*) Write the molecular formula and uses of Ammonium chloride.

P.T.O.

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

(*a*) Explain in detail sources of impurities with suitable examples in pharmaceutical substances.

(*b*) What are radiopharmaceuticals ? Explain in detail any *one* method employed for the measurement of radioactivity.

(*c*) Explain in detail electrolyte therapy for sodium chloride and calcium gluconate.

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

(*a*) Write the construction, working principle of the Geiger-Muller counter with a neatly labelled diagram.

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

(*c*) Give the principle, reaction and procedure for the limit test for chloride.

(*d*) What are saline cathartics ? Give their mechanism of action.

(*e*) What is cyanide toxicity ? Write the symptoms and treatment for cyanide poisoning.

(*f*) What are expectorants ? Give examples and mechanism of action.

(*g*) Explain the method of preparation and assay of Ammonium chloride.

(*h*) Write in brief about acid-base theory.

(*i*) Give the formula for ORS as per I.P. and give its importance.