SVKM NMIMS Global University

School of PharmacyTechnology Management

Programme: B.Pharm/MBA Pharma Tech

Year: I/Semester I (Exam Year: 2025-2026)

Subject: Human Anatomy and Physiology I

Date: 24 Nov 2025 **Time:** 10:00 am - 01:00 pm (03:00 Hrs.)

Max Marks: 75

FINAL EXAMINATION(2025-2026)

Instructions:

1. This question paper contains 3 pages
2. All questions are compulsory.
3. Answer to each new question to be started on a fresh page.
4. Figure in right hand side indicates full marks.
5. Draw the diagrams or flow charts wherever necessary.

1. Answer the following **20**

1. List the six levels of structural organization of the human body. **2**

2. List the two types of transport across the plasma membrane and one difference between them. **2**

3. List the functions of bones. **2**

4. Name the examples of primary and secondary lymphatic organs. **2**

5. Define cardiac output and blood pressure. **2**

6. Name the examples of the chambers and layers of the heart. **2**

7. What is the effects of sympathetic and parasympathetic system stimulation on the heart and blood pressure? **2**

8. Label and draw a diagram of the ear. **2**

9. List the functions of the nose. **2**

10. List and name the structural components of the autonomic nervous system. **2**

2. Answer the following(Attempt Any 2 Questions) **20**

1. Classify epithelial tissues and explain their structure and functions in detail. **10**

2. Outline the well-labelled diagram of the skin. Explain the structure and functions of the epidermis and dermis. **10**

3. Construct a neat, well-labelled diagram of the heart and explain its anatomy. **10**

3. Answer the following(Attempt Any 7 Questions) **35**

1. Illustrate a well-labelled diagram of a cell and explain the functions of mitochondria and lysosomes. **5**

2. Explain the definition of tissue and illustrate the structure and functions of any two connective tissues. **5**

3. Illustrate with a neat and well-labelled diagram of a synovial joint and explain its structure and functions. **5**

4. Explain the structure and functions of the spleen with a neat, well-labelled diagram. **5**

5. Construct a well-labeled diagram of the heart and explain the circulation of blood. **5**

6. Organize different types of blood vessels and explain the structure and function of arteries. **5**

7. Classify the peripheral nervous system. Explain the difference between the sympathetic and parasympathetic nervous systems. **5**

8. Outline and explain the names, numbers, and functions of the mixed cranial nerves. **5**

9. Explain the structure of the eye with the help of a neat, well-labeled diagram. **5**

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School of PharmacyTechnology Management

Programme: B.Pharm/MBA Pharma Tech

Year: I/Semester I (Exam Year: 2025-2026)

Subject: Pharmaceutical Analysis I

Date: 26 Nov 2025 **Time:** 10:00 am - 01:00 pm (03:00 Hrs.)

Max Marks: 75

FINAL EXAMINATION(2025-2026)

Instructions:

1. This question paper contains 2 pages
2. Answer to each new question to be started on a fresh page.
3. Figure in right hand side indicates full marks
4. All questions are compulsory
5. Draw diagrams / figures wherever necessary

1.	Answer all the following Objective Type Questions	**20**
	1. State the difference between accuracy and precision?	**2**
	2. Enlist various methods of expressing concentration?	**2**
	3. Enlist any four types of acid-base titrations?	**2**
	4. State the principle of acid-base titration?	**2**
	5. Name any two indicators used in precipitation titrations?	**2**
	6. Give two pharmaceutical applications of complexometric titration?	**2**
	7. 1. What is the principle and procedure for estimation of Sodium chloride?	**2**
	8. Write down the Pharmaceutical applications of Redox titrations?	**2**
	9. Compare the potentiometry and volumetric methods of analysis?	**2**
	10. Describe any two factors affecting refractive index	**2**

2. Long Answer Questions (Answer 2 out of 3)(Attempt Any 2 Questions) **20**

1. Discuss sources and types of errors in detail. How can they be minimized? **10**

2. Explain in detail the neutralization curves of strong acid–strong base, weak acid–strong base, and very weak acids and bases? **10**

3. Write a short note on principle and applications of Gravimetric methods of analysis and Diazotization titrations? **10**

3. Short Answer Questions (Answer 7 out of 9)(Attempt Any 7 Questions) **35**

1. Classify analytical techniques and explain any two types with suitable examples? **5**

2. Write a short note on titration? **5**

3. Write the procedure for preparation and standardization of sodium hydroxide solution. **5**

4. Write short notes on the estimation of ammonium chloride by acid-base titration? **5**

5. Write short notes on the estimation of calcium gluconate by complexometric titration? **5**

6. Define oxidation and reduction with suitable examples. Enlist the names of oxidizing and reducing agents? **5**

7. Describe the construction and working of a Standard Hydrogen Electrode (SHE). **5**

8. Write a short note on Conductometry? **5**

9. Define and differentiate between specific refraction and molar refraction. Discuss applications of polarography in pharmaceutical or chemical analysis. **5**

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School of PharmacyTechnology Management

Programme: B.Pharm/MBA Pharma Tech

Year: I/Semester I (Exam Year: 2025-2026)

Subject: Pharmaceutical Inorganic Chemistry

Date: 01 Dec 2025 **Time:** 10:00 am - 01:00 pm (03:00 Hrs.)

Max Marks: 75

FINAL EXAMINATION(2025-2026)

Instructions:

1. This question paper contains 2 pages
2. All questions are compulsory
3. Figures to the right indicate full marks
4. Draw the diagrams or flow charts wherever necessary

1.	Answer all of the following Objective Type Questions	**20**
	1. Identify the main purpose of a monograph in pharmacopoeia.	**2**
	2. List two effects of impurities can have on drugs.	**2**
	3. Name two methods for measuring tonicity.	**2**
	4. Define dentifrice with suitable example.	**2**
	5. Define achlorhydria.	**2**
	6. State the difference between bacteriostatic and bactericidal agents.	**2**
	7. Write the daily iron requirements for different groups.	**2**
	8. Explain the mechanism of antidote action of Sodium Nitrite.	**2**
	9. Define radioactivity.	**2**
	10. What is a Geiger-Muller counter used for?	**2**
2.	Long Answers(Answer 2 out of 3) (Attempt Any 2 Questions)	**20**

1. Describe the principles, types, and procedures of limit tests in pharmaceutical analysis, detailing their importance for quality control. **10**

2. Describe the mechanism of dental caries and methods of prevention. **10**

3. What is cyanide poisoning? Discuss the preparation, chemical properties, assay, and clinical applications of Sodium Thiosulphate. **10**

3. Short Answer(Answer7 out of 9)(Attempt Any 7 Questions) **35**

1. Outline the procedure and reasoning behind the limit test for sulphates in pharmaceutical analysis. **5**

2. Describe the major fluid compartments of the body and the distribution of electrolytes in each. **5**

3. Discuss the causes and symptoms of achlorhydria. what is treatment of achlorhydria? **5**

4. Discuss the mechanism and advantages of povidone-iodine over traditional iodine preparations. **5**

5. Discuss the properties and uses of Potassium Iodide. **5**

6. Describe the clinical management of cyanide poisoning with sodium nitrite and sodium thiosulphate. **5**

7. Explain the preparation and quality control of Technetium-99m radiopharmaceuticals. **5**

8. Discuss the types, properties and uses of radioactive emissions (alpha, beta, gamma). **5**

9. Describe the clinical applications of Sodium Iodide I-131. **5**

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School of PharmacyTechnology Management

Programme: B.Pharm/MBA Pharma Tech

Year: I/Semester I (Exam Year: 2025-2026)

Subject: Pharmaceutics I

Date: 28 Nov 2025 **Time:** 10:00 am - 01:00 pm (03:00 Hrs.)

Max Marks: 75

FINAL EXAMINATION(2025-2026)

Instructions:

1. This question paper contains 3 pages
2. Answer to each new question to be started on a fresh page.
3. Figure in right hand side indicates full marks
4. Draw the diagrams or flow charts wherever necessary.

1.	Answer the following	**20**
	1. Name the father of pharmacy education and pharmacology in India?	**2**
	2. State the advantages and disadvantages of liquid dosage forms.	**2**
	3. Why are emulsions considered as “thermodynamically unstable systems”?	**2**
	4. State the classification of semisolid dosage forms.	**2**
	5. **1**Calculate the dose of a child of 18-month old when the adult dose is 500 mg. (Use Fried’s rule)	**2**
	6. Define the terms: ointment and creams.	**2**
	7. What are eutectic mixtures? Give their examples.	**2**

8. Differentiate between syrups and elixirs. **2**

9. What are the functions of emulsifying agents? **2**

10. Define displacement value. Give displacement values of any two medicaments with reference to coca butter. **2**

2. Answer the following(Attempt Any 2 Questions) **20**

1. **1**Classify different dosage forms based on their physical state. Explain with definitions and examples various monophasic and biphasic liquid dosage forms. **10**

2. Explain in detail about various formulation approaches used in the development of pharmaceutical suspensions. **10**

3. Define and classify powders. Describe any three powder preparations in terms of composition and considerations during dispensing. **10**

3. Answer the following(Attempt Any 7 Questions) **35**

1. **1**Classify and give definitions of various semisolid dosage forms. **5**

2. **1**Describe the preparation and uses of gargles and mouthwashes. **5**

3. **1**Explain about various excipients used in the preparation of suspensions. **5**

4. **1** Explain different factors influencing the dermal penetration of the drug from semisolid dosage forms. **5**

5. **1A.** If the average adult dose of a drug is 50 mg, what is the dose for a child who has a body surface area equal to 0.57 m^2? (2 M) **5**

B. How much 95% alcohol and how much 50% alcohol will be needed to attain 450 ml of 70% alcohol? (Use alligation Method) (3 M)

6. **1** Explain various evaluation parameters of semisolid dosage forms. **5**

7. **1** Describe chemical incompatibilities with suitable examples. **5**

8. **1** Explain the efflorescent and hygroscopic powders with examples. **5**

9. **1** **A.** Explain dry gum preparation method (4:2:1 method) of emulsions. (2.5 M) **5**
Explain the role of excipients used in semi-solid dosage forms. (2.5 M)

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School of PharmacyTechnology Management

Programme: B.Pharm/MBA Pharma Tech

Year: I/Semester I (Exam Year: 2025-2026)

Subject: Communication Skills

Date: 03 Dec 2025 **Time:** 10:00 am - 11:30 am (01:30 Hrs.)

Max Marks: 35

FINAL EXAMINATION(2025-2026)

Instructions:

1. This question paper contains 2 pages
2. Answer to each new question to be started on a fresh page.
3. Figure in right hand side indicates full marks
4. All questions are compulsory
5. Draw a well labelled diagram wherever necessary.
6. Do not write/tick on the question paper.

1.	Answer the following questions:(Attempt Any 1 Question)	**10**
	1. Explain physical and physiological barriers to communication with simple examples and suggest ways to overcome them.	**10**
	2. Explain cultural and emotional barriers to communication in your own words with simple examples.	**10**
2.	Answer the following questions:(Attempt Any 5 Questions)	**25**
	1. **Illustrate** how tone of voice can **influence** or **change** the meaning of a message during conversation.	**5**
	2. **Describe** the Direct Style of Communication, **identify** its main characteristics, and **discuss** ways to use it effectively.	**5**
	3. **Differentiate** between active and passive listening by **giving** simple examples.	**5**
	4. **Describe** situations where written communication should be used and **support** your answer with simple examples.	**5**
	5. **Identify and describe** any three don’ts that a candidate should avoid during an interview.	**5**

6. **Discuss** the common fears people experience before giving a presentation and **explain** simple ways to overcome them. **5**

7. **Identify** any three don’ts that participants should avoid in a group discussion. **5**

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School of PharmacyTechnology Management

Programme: B.Pharm/MBA Pharma Tech

Year: I/Semester I (Exam Year: 2025-2026)

Subject: Remedial Biology

Date: 05 Dec 2025 **Time:** 10:00 am - 11:30 am (01:30 Hrs.)

Max Marks: 35

FINAL EXAMINATION(2025-2026)

Instructions:

1. This question paper contains 1 pages
2. All questions are compulsory.
3. Answer to each new question to be started on a fresh page.
4. Figure in right hand side indicates full marks.
5. Draw the diagrams or flow charts wherever is necessary.

1.	Answer the following(Attempt Any 1 Question)	**10**
	1. Evaluate the physiological regulation of breathing.	**10**
	2. Discuss in detail the process of urine formation and its regulation.	**10**
2.	Answer the following(Attempt Any 5 Questions)	**25**
	1. Explain the principles and advantages of binomial nomenclature.	**5**
	2. Outline the role of digestive enzymes in the human digestive system.	**5**
	3. Define nitrogen fixation and name microorganisms involved.	**5**
	4. Describe the parts of a typical flower in detail.	**5**
	5. Explain the phases of the menstrual cycle.	**5**
	6. Describe the importance of studying floral morphology in plant taxonomy.	**5**
	7. Describe the structure of a typical plant cell in detail with a well-labeled diagram.	**5**
	8. Explain the rate of plant growth and discuss the various factors that affect photosynthesis.	**5**

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School of PharmacyTechnology Management

Programme: B.Pharm/MBA Pharma Tech

Year: I/Semester I (Exam Year: 2025-2026)

Subject: Remedial Mathematics

Date: 05 Dec 2025 **Time:** 10:00 am - 11:30 am (01:30 Hrs.)

Max Marks: 35

FINAL EXAMINATION(2025-2026)

Instructions:

1. This question paper contains 3 pages
2. All question are compulsory.
3. Figure in right hand side indicates full marks
4. Do not write anything on question paper
5. Non-Programmable Calculator is allowed
6. Logarithm table is allowed

1. Answer the Following(Attempt Any 1 Question) **10**

   1. **Find the inverse of the matrix by adjoint Method** **10**

$$A=\begin{bmatrix}2 & 3 & 1\\ 1 & 2 & 3\\ 3 & 1 & 2\end{bmatrix}$$

   1. This is a sample question group(Attempt Any 5 Questions) **10**

      1. **2**

a. Find the value of $f\left(\frac{1}{3}\right), if\ f(x)=27^{x}-\log_3 x$

      2. **2**

b. Evaluate the limit : $\lim_{x \to 0} \frac{\tan 3x}{\tan 5x}$

3. **c. Find** $\frac{dy}{dx}$ *if* $y = x \sin^{-1} x$ **2**

4. **d. 2x + 3y + 7 = 0 and 2x + 3y – 13 =0 are two straight lines Are they parallel to each other.** **2**

5. **e.** *Find the order ∧ degree* $\sqrt[3]{\frac{d^2y}{dx^2}} = \sqrt{\frac{dy}{dx}}$ **2**

2. Answer the Following(Attempt Any 5 Questions) **25**

1. **5**

a) Resolve the Partial fraction $\frac{3x^2+17x+14}{x^3-8}$

2. **5**

b)

a. $If A = \begin{bmatrix} 2 & 4 & 1 \\ 0 & 3 & 5 \end{bmatrix} B = \begin{bmatrix} 3 & 5 & -1 \\ 1 & 4 & 0 \end{bmatrix} C = \begin{bmatrix} 1 & -1 & 4 \\ 2 & 1 & 3 \end{bmatrix}$

$Compute\ 3A - 2B + 2C$

b. $If A = \begin{bmatrix} 2 & 3 & 4 \\ -3 & 0 & 2 \end{bmatrix} B = \begin{bmatrix} 3 & -4 & -5 \\ 1 & 2 & 1 \end{bmatrix} C = \begin{bmatrix} 5 & -1 & 2 \\ 7 & 0 & 3 \end{bmatrix}$

$Find\ X\ such\ that\ 2A + 3B - X = C$

3. **5**

c) Find $\frac{dy}{dx}$ *if* : $y = x \tan x$; $y = \frac{e^x}{x}$

4. **d) Find the equation of line which is passing through the points (6,-4) and (-3,8).** **5**

5. **e)** *Solve the differential equation*: $\sqrt{1-x^2}\,dy+\sqrt{1-y^2}\,dx=0$ **5**

6. **f) Evaluate** **5**

a. $\int x\cos x\,dx$

b. $\int \frac{\tan\sqrt{x}}{\sqrt{x}}\,dx$

7. **g)** **5**

1) Find the log of : 112.07 , 42.593 , 0.6987

2) Find L $\{(5e^{2t}-3)^2\}$