Code No: G-13222/PCI

FACULTY OF PHARMACY

B. Pharmacy (PCI) I - Semester (Backlog) Examination, October 2025
Subject: Pharmaceutical Inorganic Chemistry

Time: 3 Hours **Max. Marks: 75**

PART - A

Note: Answer all the questions. **(10 x 2 = 20 Marks)**

1. Define astringents and give the examples.
2. Write the composition and applications of ORS.
3. Define impurity and give three examples.
4. Write the difference between Antiseptic and Disinfectant.
5. Give the physiological role of calcium.
6. Define antacids and give with examples.
7. Write the uses of Hydrogen peroxides
8. What is dental fluorosis?
9. Define replacement therapy.
10. Write the composition of ringer's injection.

PART - B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11. Explain principle and procedure involved in the limit test for Arsenic with a neat labelled Diagram.

12. (a) Write the significances of Antacids. Give the method of preparation, assay and uses of Sodium bicarbonate.
    (b) Give the method of preparation, assay and uses of Hydrogen peroxide.

13. What are electrolyte replenishers. Write the method of preparation, assay and uses of Sodium Chloride and Calcium gluconate.

PART - C

Note: Answer any seven questions **(7 x 5 = 35 Marks)**

14. Write about the physiological acid-base balance.
15. Define haematinic and explain preparation, properties and uses of Ferrous gluconate.
16. Write the preparation, assay and uses of Sodium thiosulphate.
17. What are Antimicrobial and give four examples. Explain mechanism of action.
18. Write the method of preparation, assay and uses of Copper sulphate.
19. Discuss about various sources of impurities.
20. Write a note on Emetics.
21. Write preparation, properties and uses of Potassium iodide and sodium nitrite.
22. Explain the principle and procedure involved in the preparation of magnesium hydroxide mixture.

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Code No: G-13224/PCI

FACULTY OF PHARMACY

B. Pharmacy I Semester (PCI) (Backlog) Examination, October 2025

Subject: Remedial Biology

Time: 1½ Hours **Max Marks: 35**

PART – A

Note: Answer any one questions **(1 x 10 = 10 Marks)**

1. Describe the dark reaction of photosynthesis in Plants with a note on factors effecting photosynthesis.
2. Describe the structure of human heart with the help of neat labelled diagram.

PART – B

Note: Answer any five questions. **(5 x 5 = 25 Marks)**

3. Describe the types of inflorescence.
4. Write about the secretions of various endocrine glands.
5. Describe the structure of nephron and write about urine formation.
6. Define tissues. Describe various types of plant tissues.
7. What is biological nitrogen fixing?
8. Describe the anatomy of dicot stem.
9. Describe the mechanism of breathing.

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Code No: G-13225/PCI

FACULTY OF PHARMACY

B. Pharmacy I Semester (PCI) (Backlog) Examination, October 2025

Subject: Remedial Mathematics

Time: 1½ Hours **Max Marks: 35**

PART – A

Note: Answer any one questions **(1 x 10 = 10 Marks)**

1. Solve the system of equations using matrix inversion method , $2x - y + 3z = 9$, $x + y + z = 6$ and $x - y + z = 2$.

2. Resolve into partial fractions $\frac{2x+3}{(x+1)\,(x+3)}$.

PART – B

Note: Answer any five questions. **(5 x 5 = 25 Marks)**

3. If $P = \begin{bmatrix} 0 & 1 \\ 2 & 3 \end{bmatrix}, Q = \begin{bmatrix} -1 & 2 \\ 4 & 3 \end{bmatrix}$ and $R = \begin{bmatrix} 2 & -1 \\ 6 & 5 \end{bmatrix}$ show that $P(Q + R) = PQ + PR$.

4. If $a^x = b^y = c^z$ and $y^2 = zx$. Prove that $\log_b a = \log_c b$.

5. Find the equations of the straight lines cutting off intercepts a, b on the coordinate axes such that $a + b = 5,\ ab = 6$.

6. Find the derivative of $y = 2at$, $x = at^2$.

7. Find the Laplace transform of $7t^2 - 2\sin t$.

8. Evaluate $\int \cos(4 - 5x)\, dx$.

9. Evaluate $\lim_{x \to 2} \frac{x^2-4}{x-2}$.

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Code No: G-13223/PCI

FACULTY OF PHARMACY

B. Pharmacy I Semester (PCI) (Main & Backlog) Examination, October 2025

Subject: Communication Skills

Time: 1½ Hours **Max Marks: 35**

PART – A

Note: Answer any one questions **(1 x 10 = 10 Marks)**

1. Write about the basic listening skills and ways to become an active listener.
2. Discuss in detail the various barriers of communication and its impact.

PART – B

Note: Answer any five questions. **(5 x 5 = 25 Marks)**

3. Write about the Communication process.
4. Discuss the role of Verbal Communication?
5. What are the Do's and Don'ts of Interview?
6. Write about the Communication styles?
7. What is the role of Body Language in Communication?
8. How is Visual perception affecting our communication perspective?
9. Write about the non-verbal communication.

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Code No. G-13221/PCI

FACULTY OF PHARMACY

B. Pharmacy (PIC) I - Semester (Backlog) Examination, September 2025
Subject: Pharmaceutics

Time: 3 Hours **Max. Marks: 75**

PART – A

Note: Answer all the questions. **(10 x 2 = 20 Marks)**

1. Differentiate between efflorescent and effervescent powder?
2. Explain the preparation of throat paint.
3. What is displacement value? Write its importance.
4. Define Enemas with an example.
5. Define Posology? Write Clarks equation to calculate paediatric medication dosage.
6. Classify Emulsions?
7. Define Lotions and Liniments?
8. Give an example for Physical incompatibility and how do you overcome it?
9. Differentiate between ointments and creams?
10. Write advantages and disadvantages of suppositories.

PART – B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11. Define Prescription. Add a note on parts of prescription and types of prescription with examples.
12. Define and classify incompatibility. Explain chemical and therapeutic incompatibility with examples.
13. Write a note on preparation and evaluation of ointments.

PART – C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14. Write a brief note on history of pharmacy.
15. Explain in detail about various solubility enhancement techniques.
16. Differentiate between flocculated and de flocculated suspension.
17. Write a note on stability problems of emulsions and methods to overcome it.
18. Write a note on different types of bases used in the preparation of suppositories.
19. Write a note on mechanism and factors influencing dermal penetration of drugs.
20. Write a brief note on Indian Pharmacopoeia?
21. Write a brief note on methods of adjustment of isotonicity.
22. Prepare 500ml of 70% v/v alcohol from 95% v/v alcohol and 40% v/v alcohol.

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Code No: G-13220/PCI

FACULTY OF PHARMACY

B. Pharmacy (PCI) I - Semester (Backlog) Examination, September 2025
Subject: Pharmaceutical Analysis

Time: 3 Hours **Max.Marks:75**

PART - A

Note: Answer all the questions. **(10 x 2 = 20 Marks)**

1. What is an error and mention different types of errors.
2. List out the types of redox titrations.
3. Define end point and equivalence point.
4. What is an indicator and give examples of acid base indicators.
5. Differentiate Iodimetry and Iodometry.
6. Explain the terms Co-precipitation and post precipitation.
7. Describe the significance of half wave potential in polarography.
8. Write about the source of impurities in medicinal agents.
9. Write the Principle of diazotization titrations.
10. Write about pharmacopoeia and its significance in pharmaceutical Analysis.

PART – B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11. Write the theories of acid-base indicators.

12. What is potentiometry? Explain construction and working of electrochemical cell? Mention the applications of potentiometry?

13. Describe various steps involved in gravimetric Analysis.

PART – C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14. Write a note on methods of minimizing errors.
15. Define primary and secondary standard?
16. Write in detail any one method of precipitation titrations.
17. Write about different methods of expressing concentration of solutions.
18. Write the preparation and standardization of 0.1N NaOH.
19. Explain Masking agents and Demasking agents in Complexometric titrations?
20. What is conductance? Write about conductivity cell with a neat labeled diagram.
21. Discuss different types of solvents with examples used in Non-Aqueous titrations.
22. Explain the principle and types of complexometric titration with an example.

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Code No: G-13219/PCI

FACULTY OF PHARMACY

B. Pharmacy (PCI) I – Semester (Backlog) Examination, September 2025
Subject : Human Anatomy and Physiology - I

Time: 3 Hours **Max. Marks: 75**

PART - A

Note: Answer all the questions. **(10 x 2 = 20 Marks)**

1. Define the terms Sagittal plane, frontal plane, Transverse plane and Differentiation.
2. List out Cranial nerves with their main functions.
3. Describe the terms Osmosis, Osmotic pressure, hydrostatic pressure and isotonic solution.
4. Write the functions of bone and skeletal systems.
5. Write about the structure of synovial joints with diagram.
6. Define the terms hemopoiesis and anaemia.
7. Write the functions of lymphatic system.
8. Outline the strucute of Ear and label it.
9. Compare Resistance blood vessels and capacitance blood vessels.
10. What is meant by peripheral resistance?

PART - B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11. Classify peripheral nervous system and explain structure and functions of sympathetic system.
12. Classify Connective tissues and explain about location and functions of Dense connective tissues with neat labeled diagrams.
13. Define blood pressure. Explain short term and long-term regulation of blood pressure with a note on hypertension.

PART - C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14. Explain the physiology of vision.
15. Describe the structure of heart with a note on pulmonary and systemic circulations.
16. Explain mechanism of blood coagulation.
17. Describe the composition and functions of Blood.
18. Describe the conductivity of heart and explain the influence of vagal tone on heart.
19. Explain the physiology of muscle contraction.
20. Describe about cell junctions.
21. Explain the types of joints movements.
22. With diagrams explain about cardiac muscle tissue and nervous tissue.

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Code No: G-13073/PCI

FACULTY OF PHARMACY

B. Pharmacy (PCI) I - Semester (Main & Backlog) Examination, March 2025

Subject: Human Anatomy and Physiology – I

Time: 3 Hours **Max. Marks: 75**

PART – A

Note: Answer all the questions. **(10 x 2 = 20 Marks)**

1. Describe the Axial skeleton and list out the bones of the skull.
2. List the different types of taste buds and write their functions.
3. List the bones in the appendicular skeleton.
4. Write any two actions of the parasympathetic system.
5. Write the functions of platelets.
6. Explain the terms vasodilation and vasoconstriction.
7. Explain the terms (a) End diastolic volume and (b) End systolic volume.
8. Explain the terms (a) Angina pectoris and (b) Hypertension.
9. Write the structure and functions of the endoplasmic reticulum.
10. What is the role of Renin in the regulation of blood pressure?

PART – B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11. Define the cardiac cycle. Explain in detail the phases of the cardiac cycle.
12. Describe the structure of the eye. Explain the physiology of vision.
13. What are the components of neuromuscular junction and explain the process of muscle contraction in detail.

PART – C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14. Describe the structure and functions of hyaline and elastic cartilage.
15. Explain in detail the structure and life cycle of RBC cells.
16. Explain the anatomy of the ear with a neat labelled diagram.
17. Explain the structure and function of the following bones- (a) Sternum (b) Lumbar vertebra
18. Define ECG and correlate ECG with the events of the cardiac cycle.
19. Classify different types of muscular tissues and write their functions.
20. Explain the composition and functions of blood.
21. Explain the structure and functions of lymph nodes with a neat labelled diagram.
22. Write the differences between the sympathetic and parasympathetic nervous system.

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Code No. G-13077/PCI

FACULTY OF PHARMACY

B. Pharmacy (PCI) I - Semester (Main & Backlog) Examination, March 2025
Subject: Communication Skills

Time: 1 ½ Hours **Max Marks: 35**

PART - A

Note: Answer any one question. **(1 x 10 = 10 Marks)**

1. Explain the objectives and types of interview with a note on factors responsible for an interview.
2. Discuss the various elements of Communication.

PART - B

Note: Answer any five questions. **(5 x 5 = 25 Marks)**

3. Discuss the Communication process?
4. What is the role of Body language in Communication?
5. Write in detail about Communication style matrix.
6. Write about the common barriers of listening.
7. How to overcome the nervousness before an interview.
8. How do you structure a Presentation?
9. What are the Do's and Don't's of Group discussion.
10. What are the methods to improve the leadership qualities in group discussion?
11. How are feelings and language affecting our Communication perspective?

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Code No: G-13076/PCI

FACULTY OF PHARMACY

B. Pharmacy I - Semester (PCI) (Main & Backlog) Examination, March 2025
Subject: Pharmaceutical Inorganic Chemistry

Time: 3 Hours **Max. Marks: 75**

PART - A

Note: Answer all the questions. **(10 x 2 = 20 Marks)**

1. Differentiate between limit test and assay.
2. List out the methods of adjusting isotonicity.
3. Define and classify expectorants.
4. Write the preparation and uses of ferrous gluconate.
5. Mention official preparations of iodine.
6. Define and write the ideal properties of antacid.
7. Write the reaction involved in the limit test for sulphate.
8. What are the different types of acidifiers?
9. Write the principle involved in limit test for Lead.
10. Define antimicrobials with examples.

PART - B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11. Explain the principle and procedure involved in the limit test for Iron and chlorides.
12. Define isotonic solution. Explain the methods of adjusting isotonicity.
13. (a) Write a note on electrolyte combination therapy.
    (b) Add a note on Heavy metallic poisoning and treatment.

PART - C

Note: Answer any seven questions **(7 x 5 = 35 Marks)**

14. Discuss the labeling, handling and storage of radiopharmaceuticals.
15. Explain physiological acid –base balance.
16. List out the various classes of cathartics agents with examples.
17. Write the composition of ringers solution. Explain its importance.
18. Mention the method of preparation, assay of Boric acid and potassium permanganate.
19. Write in detail about the mechanism of Antimicrobial agents.
20. Discuss in detail about desensitizing agents.
21. What are anticaries agents. Explain the role of fluorides in preventing dental caries?
22. Give the method of preparation, assay and uses of Ammonium chloride.

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Code No. G-13075/PCI

FACULTY OF PHARMACY

B. Pharmacy I - Semester (PCI) (Main & Backlog) Examination, March 2025

Subject: Pharmaceutics

Time: 3 Hours **Max. Marks: 75**

PART – A

Note: Answer all the questions. **(10 x 2 = 20 Marks)**

1. Classify Liquid dosage forms.
2. Define prescription
3. Calculate the dose for 5 years old boy if adult dose is 100mg?
4. Define Eutectic mixture with an example.
5. Differentiate syrups and elixirs with examples.
6. Describe types of emulsions with examples.
7. Define Suppositories.
8. Give an example for Therapeutic incompatibility.
9. Classify bases used in ointments.
10. Write the formula for Cold cream.

PART – B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

11. Describe parts of a prescription with example. Add a note on types of prescription.
12. Describe solubility enhancement techniques.
13. Explain physical stability of emulsions.

PART – C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

14. Write a note on Pharmacy as a career.
15. Write a note on Indian Pharmacopoeia.
16. Find the concentration of NaCl required to make 1% solution of Boric acid iso-osmotic with blood plasma [Freezing point of 1% w/v solution of NaCl is -0.576°C and Freezing point of 1% w/v solution of Boric acid is -0.288°C].
17. Describe simple and compound powders. Give two official preparations.
18. Differentiate lotions and liniments.
19. Write a note on preparation of suspensions.
20. How do you prepare 6 theobromail suppositories of 1gm. Each contains 500 mg of zinc oxide (Displacement value of zinc oxide as 5).
21. Explain physical incompatibility with examples.
22. Write a note on preparation of ointments.

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Code No: G-13074/PCI

FACULTY OF PHARMACY

B. Pharmacy (PCI) I - Semester (Main & Backlog) Examination, March 2025

Subject: Pharmaceutical Analysis

Time: 3 Hours **Max. Marks: 75**

PART - A

Note: Answer all the questions. **(10 x 2 = 20 Marks)**

1. What are self-indicators? Give examples.
2. Explain the Solubility product.
3. What are mixed indicators?
   What are primary and secondary standard substances? Give examples.
4. Define standard deviation and give its formula.
5. Explain Bronsted acid-base theory.
6. Differentiate between internal and external redox indicators.
7. Define Errors.
8. Explain Nernst equation.
9. Define ligands.

PART - B

Note: Answer any two questions. **(2 x 10 = 20 Marks)**

10. Write the principle and different types of titrations involved in Conductometric titrations.
11. Explain the concept of Iodometry and Iodimetry. Give the procedure for the Standardization of sodium thiosulphate solution using potassium iodate.
12. Discuss the principle and application of:
    (a) Redox titration. (b) Polarography.

PART - C

Note: Answer any seven questions. **(7 x 5 = 35 Marks)**

13. Explain the principle of sulphate limit test.
14. Preparation and standardization of 0.1M sodium hydroxide solution.
15. Write a note on Mohr's method.
16. Write the properties of primary standards and secondary standards with examples.
17. What is masking? Write its significance in analysis.
18. Explain the various types of currents of polarographic method.
19. Write the preparation and standardization of 0.1N sodium thiosulphate solution.
20. Explain the estimation of Barium sulphate by gravimetry.
21. Write the basic concept of conductometric titrations.

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Code No. G-13078/PCI

FACULTY OF PHARMACY

B. Pharmacy (PCI) I - Semester (Main & Backlog) Examination, March 2025
Subject: Remedial Biology

Time: 1 ½ Hours **Max Marks: 35**

PART - A

Note: Answer anyone questions. **(1 x 10 = 10 Marks)**

1. Describe the dark reactions of photosynthesis in plants. Explain the factors effecting photosynthesis.
2. Describe the structure and of human excretory system and process of urine formation with neat, labelled diagram

PART - B

Note: Answer any five questions. **(5 x 5 = 25 Marks)**

3. Write a note on meiosis cell division in plants.
4. Classify the animal tissues and write their functions.
5. Explain how fats will get digested in body.
6. Write a detail note on binomial nomenclature.
7. Write the composition of blood and its functions.
8. Describe mechanism of breathing.
9. Draw the internal structure of heart and label the parts.

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Code No:G-13079/PCI

FACULTY OF PHARMACY

B. Pharmacy I - Semester (PCI) (Main & Backlog) Examination, March 2025

Subject: Remedial Mathematics

Time: 1 ½ Hours **Max. Marks: 35**

PART – A

Note: Answer any one question. **(1 x 10 = 10 Marks)**

1. Using Cramer's rule solve the system of the equations $2x - y + 3z = 9, x + y + z = 6$ and $x - y + z = 2$.

2. Resolve $\frac{x^3}{(2x-1)(x+2)(x-3)}$ into partial fractions.

PART – B

Note: Answer any five questions. **(5 x 5 = 25 Marks)**

3. Find the equation of the line passing through the point (2,-3) and having intercepts Whose ratio is 3:2.

4. Evaluate $\int \frac{\cos(\tan^{-1} x)}{1+x^2} dx$.

5. Prove that $\frac{1}{1+\log_a bc} + \frac{1}{\log_b ca} + \frac{1}{1+\log_c ab} = 1$.

6. Differentiate $\log(\sec x + \tan x)$.

7. Prove that $7\log\frac{16}{15} + 5\log\frac{25}{24} + 3\log\frac{81}{80} = \log 2$.

8. Show that $\begin{vmatrix} a+b+2c & a & b \\ c & b+c+2a & b \\ c & a & c+a+2b \end{vmatrix} = 2(a+b+c)^3$.

9. Show that $\lim_{x \to 2} \frac{x^3-8x^2+45}{2x^2-3x-9} = -\frac{7}{3}$

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