Ref. No.: Ex/BP102T/2025

B. PHARMACY FIRST YEAR FIRST SEMESTER EXAM - 2025

SUBJECT: PHARMACEUTICAL ANALYSIS I

Subject Code: BP102T **Full Marks 75**

Answer any five questions taking ***at least one*** from each group

Group A

1. Discuss the theory and procedure of permanganometry and chromimetry. Discuss their advantages and disadvantages. Why are the titrations involving $KMNO_4$ and $K_2Cr_2O_7$ performed in the acidic medium? [8+3+4]

2. Write a short note (any three) on (a) iodimetry and iodometry (b) determination of dissolved oxygen in water by redox titration (c) Bromatometry (d) determination of phenol by redox titration [5x3]

Group B

3. a) Define the following terms [5x1.5=7.5]
   i) Titration ii) Acidimetry iii) Equivalence point iv) Primary standard v) End point
   b) How you will titrate a strong acid with a weak base? [7.5]

4. What is the principle of precipitation titration? What is the principle of Diazotization titration? Write details about **Mohr's** method of precipitation titration. [4+4+7]

5. a) Write short notes on Mixed indicators. [4]
   b) How water interfere in non-aqueous titration. [4]
   c) How you will prepare and standardize 0.1 N perchloric acid. [8]

   OR

   Write short notes on levelling effect and differentiating effect.

Group C

6. a) Define Normality and Molality. [4+4+7]
   b) Write about Primary and secondary standard with suitable examples.
   c) Explain errors in Pharmaceutical Preparations.

7. a) How will you prepare and standardize Potassium permanganate, Sulfuric acid, Sodium thiosulphate, Ceric ammonium sulphate? (Any three)
   b) Write a short note on different type of analysis. [4×3+3]

[Turn Over]

Group D

8. a) How the resistance, specific resistance, and specific conductivity are related? [3]
   b) Discuss briefly the measurement of conductivity along with the relationship between cell constant and specific conductivity. [5]
   c) Write in detail about the application of conductivity measurements and the advantages of conductometric titrations. [4 + 3 = 7]

9. a) Discuss in detail about principle of potentiometric titration with proper diagrams and measurements. [5]
   b) Discuss in detail about Gran's plot. [4]
   c) Write short notes on standard hydrogen electrode and saturated calomel electrode. [3 + 3 = 6]

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