Ref. No.: Ex/BP102T/2024(S)

B. PHARMACY FIRST YEAR FIRST SEMESTER SUPPLEMENTARY EXAM - 2024
SUBJECT: PHARMACEUTICAL ANALYSIS I,
Full Marks 75

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

Group A

1. A. Define the following terms **(any four)** [4x2=8

a) Titration b) Titrant c) Equivalence point d) Titrand e) End point

B) How will you titrate a strong acid with a strong base? Discuss with suitable titration curve. [7

2. What is the principle of precipitation titration? Write details about Volhard **or** Mohr's Method of precipitation titration. [5+10

3. a) How you will prepare and standardize 0.1 N perchloric acid. [7
   b) Write short notes on levelling effect and differentiating effect. [8

Group B

4. What are redox titrations and redox indicators? Write the theory behind redox titrations involving iodine. How are the iodometric titrations used to determine (a) copper in crystallized copper sulfate and (b) dissolved oxygen in water? [3+7+5]

5. Write a short note on (a) Bromatometry (b) Permanganometry (c) Chromimetry. [5x3

Group C

6. a) Discuss about the principle and procedure of potentiometric titrations. [6
   b) Discuss the advantages of potentiometric titrations. How do you measure the end point by potentiometric titrations? [2 + 3 = 5
   c) Write an account on saturated calomel electrode. [4

7. a) Discuss about various types of currents in polarography. [5
   b) Discuss about various factors affecting diffusion current in polarography? [3
   c) Discuss various applications of conductivity measurements. [4
   d) Discuss the advantages of conductometric titrations. [3

Group D

8. a) Define Normality and Molarity. [4+5+6=15
   b) Write about Primary and secondary standard with suitable example.
   c) Write about methods for minimizing errors.

9. a) How will you prepare and standardize Sodium hydroxide, Potassium permanganate, Sodium thiosulphate, Ceric ammonium sulphate? (Any three)
   b) Write about different type of techniques used for analysis. [4×3+3=15