

**School of Medical and Allied Sciences****Bachelor of Pharmacy****Summer Term / Backlog Examination - Jul /Aug 2024**

Duration : 180 Minutes

Max Marks : 75

**Sem I - BP102T- BPHT1002 - Pharmaceutical Analysis I**General Instructions*Answer to the specific question asked**Draw neat, labelled diagrams wherever necessary**Approved data hand books are allowed subject to verification by the Invigilator*

- 1) Interpret one advantage of polarography compared to other analytical techniques. K2(2)
- 2) Explain Fajans method and its application in titration. K2(2)
- 3) Show the reaction involved in iodometry and its application in estimating analytes. K1(2)
- 4) Show the difference between strong and weak acids in the context of titrations. K2(2)
- 5) Name three different techniques used in pharmaceutical analysis. K1(2)
- 6) Explain the use of non-aqueous solvents in certain titrations. K2(2)
- 7) Define oxidation and reduction reactions in the context of titrations. K1(2)
- 8) Explain the principle behind Mohr's method of precipitation titration. K2(2)
- 9) Analyze the factors that affect the accuracy of cerimetric titrations K1(2)
- 10) What is the difference between primary standards and secondary standards in analytical chemistry? K1(2)
- 11) Choose one of these methods from Cerimetry and iodimetry and describe the key features of the titration procedure, including the choice of titrant, indicator, and calculations involved. K3(5)

**OR**

- Apply your knowledge on various types of redox titration K3(5)
- 12) Organize the application of each type of redox titration K3(5)
  - 13) Examine the theory behind acid-base indicators and how they change color during titrations. K4(5)
  - 14) Construct the process of preparing and standardizing a molar solution of hydrochloric acid. K3(5)
  - 15) Analyze the construction and working principle of the standard hydrogen electrode (SHE) as a reference electrode. K4(5)
  - 16) Conclude the utilization of masking agents in complexometric titrations. K4(5)

**OR**

- Analyze Volhard's method for the estimation of halides. K4(5)
- 17) Analyze the theory behind titrating a weak base with a strong acid. K4(5)
- 18) Discuss the key considerations and techniques used for the analysis of protein-based drugs. Provide examples of analytical methods used for this purpose. K6(10)
- 19) Explain significant figures and their role in expressing the precision of measurements. K5(10)

**OR**

Estimate the preparation and standardization of sodium thiosulphate and potassium permanganate. K5(10)