

**B. PHARM**  
**(SEM 1) THEORY EXAMINATION 2022-23**  
**PHARMACEUTICAL ANALYSIS-I**

*Time: 3 Hours*

*Total Marks: 75*

**Note:** Attempt all Sections. If require any missing data; then choose suitably.

**SECTION A**

**1. Attempt all questions in brief. 10 x 2 = 20**

- (a) Describe the term Molarity.
- (b) Differentiate between primary and secondary standard.
- (c) Explain the levelling and differentiating effect.
- (d) Describe aqueous and non-aqueous titration.
- (e) Illustrate the significance of modified Volhard's method.
- (f)  $KCl + AgNO_3 \rightarrow AgCl + KNO_3$ , Predict the given example of reaction is related to which titration.
- (g) Define the term Indicator.
- (h) Define the terms oxidation and reduction.
- (i) Explain about standard and indicator electrode.
- (j) Discuss electrochemical methods of analysis.

**SECTION B**

**2. Attempt any two parts of the following: 2 x 10 = 20**

- (a) Explain the various methods of expressing concentration in detail.
- (b) Classify acid base indicators. Explain the theory of indicators with suitable examples.
- (c) Discuss the detailed account of various steps involved in gravimetric analysis.

**SECTION C**

**3. Attempt any five parts of the following: 7 x 5 = 35**

- (a) Outline the various techniques of analysis used in pharmaceuticals.
- (b) Explain various neutralization curve of acid base titrations.
- (c) Describe a brief note on Mohr's method of precipitation titration.
- (d) Differentiate between Iodimetric and Iodometric titrations with suitable examples.
- (e) Classify different types of redox titrations. Discuss the principle of Dichrometry.
- (f) Discuss the principle, instrumentation, and applications of conductometry.
- (g) Illustrate the working of Dropping Mercury Electrode (DME).