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B. Pharmacy (First Semester) Examination, April-May 2026

(PCI Scheme)

(Pharmacy Branch)

PHARMACEUTICAL ANALYSIS-I

(Theory : BP102T)

Time Allowed : Three hours

Maximum Marks : 75

***Note** : Question paper contains three Sections. Read the instructions of each section carefully.*

Section-A **20×1=20**

(Objective Type Questions)

***Note** : Attempt all questions. Each question carries 1 mark.*

1. Fill in the blanks :

(i) Normality, is ..... .

(ii) In pharmaceutical analysis, ... term describes the degree of agreement among repeated measurements of the same quantity.

(iii) pH is ..... ion concentation ion.

(iv) Significant figure for 0.0025 kg is ..... g.

(v) ..... is the term for the graphical representation of current versus applied voltage in polarography.

(vi) EDTA is a ..... ligand.

(vii) In photoelectric titration, the role of the indicator electrode is to ..... .

(viii) In Polarography, the purpose of the dropping mercury electrode (DME) is to .....

(ix) In pharmaceutical analysis, ... term describes the degree of closeness between a measured value and the true or accepted value.

(x) The term "back titration" refer to in the context of precipitation titrations means ..... .

(xi) The primary reason for the use of excess silver nitrate ($AgNO_3$) in Mohr's method is to .....

(xii) The primary purpose of complexometric titrations is to ..... .

(xiii) The key advantage of gravimetric analysis over other analytical techniques is ..... .

(xiv) Define oxidation and reduction in the context of redox reaction ..... .

(xv) The primary objective of non-aqueous titrations is to ..... .

(xvi) ..... is known as self indicator.

(xvii) Potassium chromate (K_2CrO_4) is used as an indicator in ..... method.

(xviii) Potentiometry is type of ..... method.

(xix) Standardization of Iodine is carried out using .....

(xx) In titration end point can be determined by change in color by .....

Section-B **2×10=20**

(Long Answer Types Questions)

*Note : Attempt any **two** questions. Each question carries 10 marks.*

2. What is Error? Explain sources and methods of minimizing errors with examples.

3. What is Polarography? Explain Ilkovic equation, principle, construction, working and application of Polarography.

4. Elaborate the principle and steps involved in gravimetric analysis. How will you ensure purity of the precipitate?

Section-C **7×5=35**

(Short Answer Types Questions)

*Note : Attempt any **seven** questions. Each question carries 5 marks.*

5. Write notes on Volhard's and Modified Volhard's Method.

6. Explain Co-precipitation and Post precipitation method in Gravimetric Analysis.

7. Write notes on Masking and Demasking agent with example.

8. Give an account on reference electrodes used in potentiometric titration.

9. Explain Primary and Secondary standards. Give preparation and standardization of 0.1 N Sodium Hydroxide.

10. Write notes on solvents used in Non-aqueous Titration with example.

11. Differentiate between Iodimetry and iodometry titration with example

12. Write notes on Pharmacopoeia.

13. Discuss acid-base indicator Theory.