

**B.Pharm (Second Semester) (C.B.S.) Examination**

**PHARMACEUTICAL ANALYSIS—I**

**Paper—4 (2 T 4)**

Time : Three Hours]

[Full Marks : 80

- N.B. :**— (1) Question No. **1** is compulsory.  
(2) Solve any **FOUR** questions from the remaining.  
(3) Draw neat labeled diagram wherever necessary.  
(4) Use of electronic calculator is permitted.  
(5) Assume suitable data wherever necessary.

1. Solve any **FIVE** of the following :
  - (a) What is difference between idometric and idemetric titrations ?
  - (b) Write about various types of non-aqueous solvents.
  - (c) Explain ligand, chelates and complexes.
  - (d) Why freshly prepared solutions of potassium permanganate is heated prior to its use in titrations ?
  - (e) Write a note on preparation and standardization of 0.1 M Perchloric acid.
  - (f) Write a note on theory of Indicators. 5×4=20
2. (a) Describe Neutralization theory and neutralization curves of different acid-base titrations. 8  
(b) Define errors and classify them. How errors can be minimised ? 7
3. (a) What are adsorption indicators ? 5  
(b) Describe Mohr's Method for halide determination. 10
4. (a) Describe Redox titration curves. How end points are detected in redox titration ? 8  
(b) Explain standard reduction potential and formal potential. Give their significance in redox reaction. 7
5. Explain practical aspect in Gravimetric Analysis. Explain steps involved in it. Discuss in detail co-precipitation and post-precipitation. 15

6. Discuss principle and procedure involved in the assay of any **THREE** :
- (a) Aspirin
  - (b) Hydrogen peroxide
  - (c) Calcium gluconate
  - (d) Iodine solution
  - (e) Phenol. 3×5=15
7. Write short notes on any **THREE** of the following :
- (a) Primary and Secondary standards
  - (b) Methods of expressing concentration
  - (c) Masking and Demasking
  - (d) Thermogravimetry
  - (e) Henderson-Hasselbach equation. 3×5=15