

B.Pharm. Fourth Semester (C.B.S.) Examination**PHARMACEUTICAL ANALYSIS—II****(Electroanalytical and Physical Method)****Paper—3**

Time : Three Hours]

[Maximum Marks : 80

- N.B. :—** (1) Question No. 1 is compulsory.
(2) Attempt any **FOUR** questions out of remaining.
(3) All questions carry marks as indicated.
(4) Draw neat labelled diagram wherever necessary.
(5) Discuss the reaction, mechanism wherever necessary.

1. Solve any **FIVE** of the following :
 - (a) What is specific and molar refraction ?
 - (b) Write about standard electrode potential.
 - (c) Define resistance, specific conductance, equivalent conductance and molar conductance.
 - (d) What do you mean by Coulometry at controlled potential ?
 - (e) Write the advantages and disadvantages of Dropping Mercury Electrode (DME).
 - (f) Draw a well labelled diagram of coulometric cell.
 - (g) Compare normal and differential polarography. 4×5=20
2. (a) Enlist different types of electrodes used in potentiometry. Explain ion selective electrodes. 8
(b) Describe various methods to locate end point in potentiometry. 7
3. (a) What are conductometric titrations ? Discuss various types of conductometric titration curves giving suitable examples. 10
(b) Define cell constant. How it can be determined ? 5
4. (a) What is refractometry ? Write construction, working and applications of Abbe's refractometer. 8
(b) Explain the principle of polarimetry. Write the factors affecting angle of rotation. 7
5. What do you mean by thermal methods ? Compare DTA and DSC with respect to their principle, factors affecting and applications. 15
6. (a) Explain Ilkovic equation with various terms involved in it. 8
(b) Write a note on amperometric titration. 7
7. Write notes on any **THREE** of the following :
 - (a) High frequency titration
 - (b) Dead stop end point
 - (c) Chronopotentiometry
 - (d) Electrogravimetry
 - (e) Thermogravimetric curve. 15