

B.Pharm Fourth Semester (C.B.S.) Examination

PHARMACEUTICAL ANALYSIS—II (Electroanalytical and Physical Methods)

Paper—3 (4T3)

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) Write the factors affecting refractive index.
- (b) Define :
 - (i) Specific resistance
 - (ii) Equivalent conductance.
- (c) Give the advantages and limitations of conductometry.
- (d) Name the electrodes used in potentiometry.
- (e) Write about TG curve.
- (f) Describe Illkovic equation in detail.
- (g) What is oscillometry ?

4×5

2. Define conductance. Give the principle and different types of acid-base conductometric titrations.

15

3. (a) Discuss various end point determination methods in potentiometry.

8

(b) Give the advantages of DSC over DTA.

7

4. (a) Discuss the construction and working of Abbe's refractometer.

8

(b) Write the methods of detecting end point in amperometric titrations.

7

5. (a) Explain different types of electrodes used in polarography with types, advantages and disadvantages.

10

(b) Explain recent advantages in polarography.

5

6. Give principle, instrumentation and applications of Differential Thermal Analysis.

15

7. Write short notes on (any **three**) :

(i) Derivative polarography

(ii) Electrogravimetry

(iii) Thermal Analysis

(iv) Applications of DSC.

15