KNT/KW/16/6560

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