TKN/KS/16/6989

B.Pharm. Semester–IV (C.B.S.) Examination

PHARMACEUTICAL ANALYSIS–II

(Electro–Analytical 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) What are the advantages of conductometric titration over normal titration method ?

(b) Draw neat and well labelled diagram of Abbe's refractometer.

(c) What do you mean by dead stop titration ?

(d) State applications of DSC.

(e) How will you determine the end point of zero order potentiometric titration curve ?

(f) Define specific conductance, equivalent conductance, molecular conductance and cell constant.

(g) What is half wave potential ? Write significance of it. 20

2. What do you mean by thermal methods of analysis ? Explain types, instrumentation, factors affecting and applications of Thermogravimetry. 15

3. (a) Draw neat and well labelled diagram of Dropping Mercury Electrode. Write pharmaceutical applications of polarography. 8

(b) Explain various types of amperometric titrations with suitable examples. 7

4. (a) Write in short about various factors affecting angle of rotation. 7

(b) Explain instrumentation, working and pharmaceutical applications of polarimetry. 8

5. (a) What is reference and indicator electrode ? Explain with suitable diagram any two reference electrode. 8

(b) Add note on Ion Selective Electrode. 7

6. (a) Write principle, instrumentation and pharmaceutical applications of DTA. 7

(b) What is Coulometry ? What are its various types ? Describe its principle and instrumentation. 8

7. Write short notes on any **THREE** of the following :

(a) Electrogravimetry

(b) Pulse polarography

(c) High frequency titration

(d) Conductometer

(e) Optical rotatory dispersion. 15