

**S.Y.B.PHARM. SEMESTER-IV (2011 COURSE) : SUMMER - 2018**

**SUBJECT : PHARMACEUTICAL ANALYSIS – II**

Day : **Tuesday**  
Date : **24/04/2018**

**S-2018-3958**

Time : **02.00 PM TO 05.00 PM**  
Max. Marks : 80

**N.B.:**

- 1) **Q.No.1 and Q.No.5 are COMPULSORY.** Out of the remaining questions attempt **ANY TWO** questions from each section.
- 2) Answers to both the sections should be written in **SEPARATE** answer books.
- 3) Figures to the right indicate **FULL** marks.

**SECTION – I**

- Q.1** Attempt **ANY FIVE** of the following: [10]
- a) State Ilkovic equation.
  - b) How pH meters are calibrated, write composition of buffers?
  - c) State merits and demerits of instrumental analysis.
  - d) Define Migration current and diffusion current.
  - e) Classify indicator electrodes used in potentiometry.
  - f) Why nitrogen gas is bubbled in polarographic apparatus?
- Q.2** a) What is half wave potential? How it is calculated? Explain factors affecting diffusion current. [08]  
b) Describe Polarographic apparatus. [07]
- Q.3** a) Explain theory, principle involved in potentiometry. Discuss instrumentation in detail. [08]  
b) Discuss about ion selective electrodes used in potentiometry. [07]
- Q.4** Write short notes on **ANY THREE** of the following: [15]
- a) Dropping mercury electrode
  - b) Rotating platinum electrode
  - c) Potentiometric titrations
  - d) Applications of Amperometry

**SECTION – II**

- Q.5** Attempt **ANY FIVE** of the following: [10]
- a) Give significance of inorganic precipitants in gravimetry.
  - b) Write about cell constant and its significance.
  - c) Define: **i) Plane polarized light**      **ii) Circularly polarized light**
  - d) Explain the terms specific refraction and molar refraction.
  - e) Explain factors affecting refractive index.
  - f) Write about cotton effect.
- Q.6** a) State principle involved in measurement angle of refraction and give its application. [08]  
b) Explain the theory of optical activity. Discuss about polarimeters. [07]
- Q.7** a) Explain principle involved in gravimetric analysis. Discuss various steps involved in gravimetric analysis. [08]  
b) Discuss in detail conductometric titration curves. [07]
- Q.8** Write short notes on **ANY THREE** of the following: [15]
- a) High frequency titration
  - b) Dipping refractometer and Pulfrich refractometer
  - c) Circular Dichroism
  - d) Occlusion and Mixed crystal formation

\* \* \* \*