

**S.Y.B.PHARM. SEMESTER-IV (2011 COURSE) : WINTER -  
2017**

**SUBJECT : PHARMACEUTICAL ANALYSIS – II**

Day : **Saturday**  
Date : **11/11/2017**

**W-2017-3825**

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) Write difference between polarography and amperometry.
  - b) What is operational definition of pH? What is its significance?
  - c) State types of currents involved in polarography.
  - d) Write about non-reducible ions determination by amperometry.
  - e) Why supporting electrolytes and nitrogen is used in polarography?
  - f) Classify instrumental methods of analysis.
- Q.2** a) State Ilkovic equation explain polarographic apparatus. [08]  
b) Write about amperometric titration curves. [07]
- Q.3** a) What are reference electrodes? Explain in detail. [08]  
b) Explain methods of detecting end point in potentiometric titrations. [07]
- Q.4** Write short notes on **ANY THREE** of the following: [15]
- a) Calomel Electrodes
  - b) Merits and demerits of instrumental analysis
  - c) Instrumentation of potentiometric
  - d) Polarography applications

**SECTION – II**

- Q.5** Attempt **ANY FIVE** of the following: [10]
- a) What is cotton effect? State its significance.
  - b) Write the relationship between RI and optical rotatory power.
  - c) The RI of acetic acid at 20<sup>0</sup>C is 1.3698 the density at 20<sup>0</sup>C is 1.3968 the density at 20<sup>0</sup>C is 1.046 g/cm<sup>3</sup>. Calculate the specific and molar refraction.
  - d) How cell constant at conductivity cell is determined?
  - e) Define Equivalent and Specific Conductance.
  - f) What is ORD and CD?
- Q.6** a) Draw a neat labeled diagram of Abbe's refractometer. Explain working and functioning of each part. [08]  
b) Discuss the theory and applications of conductometric titrations. [07]
- Q.7** a) Explain instrumentation of polarimeter with its applications. [08]  
b) Describe unit operations involved in gravimetric analysis. [07]
- Q.8** Write short notes on **ANY THREE** of the following: [15]
- a) Applications of Refractometry
  - b) Pharmaceutical application of Gravimetric analysis
  - c) Saccharimeter
  - d) Conductometer instrumentation

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