

Total No. of Questions :6]

SEAT No. :

**P1447**

**[5049]-404**

[Total No. of Pages : 2

**S.Y.B. Pharmacy**

**PHARMACEUTICAL ANALYSIS - II**

**(2013 Pattern) (Semester-IV)**

*Time : 3 Hours]*

*[Max. Marks : 70*

*Instructions to candidates:*

- 1) *All questions are compulsory.*
- 2) *Answers to the two sections should be written in separate answer books.*
- 3) *Figures to the right indicate full marks.*

**SECTION - I**

**Q1)** Write principle of Potentiometry. Discuss in detail different types of electrodes. **[10]**

OR

Explain in detail types of polarographic techniques. Write applications of polarography. **[10]**

**Q2)** Attempt any five of the following: **[15]**

- a) Explain conductometric titration curve for weak acid vs strong base.
- b) Explain effect of dilution on specific, molecular and equivalent conductance.
- c) Define pH and discuss measurement of pH.
- d) Write about biamperometric titrations.
- e) Write advantages of high frequency titrations over conventional titrations.
- f) Draw neat labeled diagram of electrochemical cell. Explain terms associated with Nernst equation.
- g) What is half wave potential? Explain different parts of polarogram.

**Q3)** Write notes on any two of the following: **[10]**

- a) Rotating platinum electrode
- b) Conductivity meter
- c) Dropping mercury electrode
- d) Applications and advantages of amperometry.

*P.T.O.*

## SECTION - II

**Q4)** Give an account on theory of optical activity and discuss in detail about spectropolarimeter used for measurement of plane polarized light. [10]

OR

What is coulometric analysis? Discuss in detail about constant current coulometric analysis. [10]

**Q5)** Attempt any five of the following: [15]

- a) Explain the terms specific and molar refraction.
- b) Add a note on silver coulometer.
- c) Give an account of cotton effect.
- d) Explain the effect of concentration, solvent and temperature on optical activity.
- e) Write about factors affecting angle of rotation.
- f) Write the applications of coulometric analysis.
- g) Discuss in brief oxygen combustion flask techniques.

**Q6)** Write notes on any two of the following: [10]

- a) Determination of nitrogen by Kjeldahl's method.
- b) Karl Fisher titration apparatus.
- c) ORD and CD curve.
- d) Construction and working of Abbe refractometer.

