[Total No. of Questions - 9] [Total No. of Printed Pages - 3]
(2123)

1547

B. Pharmacy 1st Semester Examination

Pharmaceutical Analysis-I (O.S.)

HBP-101

Time : 3 Hours **Max. Marks : 80**

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt five question in all, selecting one question from each sections A, B, C and D. Section E is compulsory.

SECTION - A

1. (a) What do you mean by systematic/determinate errors? How we can minimize systematic errors? **(10)**

   (b) Calculate the mean and standard deviation for the values

   (x) : 7.08, 7.21, 7.12, 7.09, 7.16, 7.14, 7.07, 7.14, 7.18, 7.11 **(6)**

2. (a) Discuss the various concepts for acids and bases, with suitable examples. **(7)**

   (b) Briefly, Explain, the Neutralization Titration of Polyprotic Acid by Strong base. **(9)**

SECTION - B

3. (a) How the end points of oxidation-reduction titration is detected? **(6)**

   (b) Give the method of preparation and standardization of Ceric (IV) Sulphate. **(10)**

4. (a) Differentiate between the iodimetric and iodometric titrations. **(6)**

   (b) Give the method of preparation and standardization of potassium permanganate solution. **(10)**

SECTION - C

5. (a) Give the basic theory of precipitation reactions. **(8)**

   (b) Give the basic principle, procedure and use of volhard's method. **(8)**

6. (a) Discuss about the indicators used in precipitation titration. **(8)**

   (b) Differentiate between Mohr's method and Volhard's method of analysis. **(8)**

SECTION - D

7. (a) Discuss about precautions to be taken during precipitation in gravimetric method of analysis. **(8)**

   (b) Discuss the basic theory and procedure of determination of calcium as calcium oxalate. **(8)**

8. (a) Discuss the theory and instrumentation of thermogravimetric method of analysis with suitable examples. **(8)**

   (b) Discuss, briefly about the organic precipitants used in gravimetric analysis. **(8)**

SECTION - E

9. Fill in the blanks:

   (i) _____ is an example of primary standard used in oxidation-reduction reaction.

(ii) In a neutralization titration, the stoichiometric point is called as _____ point.

(iii) Generalised form of Henderson-Hesselbach equation in terms of conjugate acid and conjugate base can be written as _____.

(iv) In iodometric titration, the end point is detected using _____ as indicator.

(v) During standardization of silver nitrate solution _____ is used as an adsorption indicator.

(vi) For sparingly soluble salt, silver chloride, solubility product Ks can be expressed as Ks(AgCl)_____

(vii) During gravimetric analysis, the contaminant either adsorb or occlude at the surface of the precipitate during the process of crystal growth from the primary particles, the phenomenon is called as _____.

(viii) The process of dispersing a gel or a flocculated solid to form a sol is called as _____. **(2×8=16)**