* R C - 1 3 2 7 - 2 8 / 1 3 0 0 *

RC-1327-28

Second Year B. Pharm. Examination

April / May – 2010

PH-205 : Pharmaceutical Analysis

Time : **3** Hours] [Total Marks : **70**

RC-1327

Instruction :

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ **Second Year B. Pharm.**

Name of the Subject :

☛ **PH-205 : Pharmaceutical Analysis**

☛ Subject Code No. : **1 3 2 7** ☛ Section No. (1, 2,.....) : **1**

Seat No. :

Student's Signature

1 Attempt any **five** : **11**

(i) Define assay

(ii) Why acidic condition is required for the assay of phenol?

(iii) What is leveling effect?

(iv) Give two examples of aprotic solvents.

(v) What are self indicating reagents?

(vi) Define accuracy and precision.

(vii) Give the bases for HSO_4^- and HCl.

(viii) Calculate the volume strength of 0.5% w/v of H_2O_2.

(ix) Define oxidation and reduction in terms of electrons.

(x) Define solubility product.

(xi) What is equivalence point?

(xii) What is the advantage of adsorption indicator?

2 Write brief notes on any **three** : **12**

(i) Ostwald theory of indicators.

(ii) Write a short note on gasometry.

(iii) Discuss in detail the different solvents used in non-aqueous titrations.

(iv) Neutralization curve of strong acid *vs* strong base.

3 Attempt any **two** : **12**

(i) What is meant by hydrolysis of salt? Give the expression for pH of a salt obtained from strong base and weak acid.

(ii) What is pH scale or Sorenson's scale? Explain law of Mass Action. What is autoprotolysis of water?

(iii) Write a note on Diazotisation titration.

RC-1328

Instruction :

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ **Second Year B. Pharm.**

Name of the Subject :

☛ **PH-205 : Pharmaceutical Analysis**

☛ Subject Code No. : **1 3 2 8** ☛ Section No. (1, 2,.....) : **2**

Seat No. :

Student's Signature

4 Attempt any **three** : **9**

(i) How the end point is detected in oxidation reduction titrations?

(ii) Write in brief about the significance of apparent indicator constant.

(iii) What is replacement or substitution type complexometric titration? Give one example.

(iv) What is co-precipitation? How will you minimize errors due to co-precipitation?

5 Attempt any **five** : **10**

(i) Comment : HNO_3 and Nitrobenzene to be added in Volhard's method.

(ii) What is the use of nitrometer in gravimetry?

(iii) Find the hydrogen ion concentration corresponding to pH = 4.67.

(iv) Comment : Heating is essential for standardization of potassium permanganate using oxalic acid.

(v) Give the primary standards for disodium EDTA and perchloric acid.

(vi) Comment : Na_2CO_3 is used and not NaOH in assay of glucose by hypoiodide method.

6 Attempt any **four** : **16**

(i) Distinguish masking and demasking with suitable examples.

(ii) Discuss the factors affecting choice of solvent in non aqueous titration.

(iii) Calculate the molar solubilities in water of

(a) $Al(OH)_3$, $K_{sp} = 5 \times 10^{-33}$ and

(b) $Mg(OH)_2$, $K_{sp} = 1 \times 10^{-11}$.

(iv) What are buffer solutions? Give their applications in pharmacy.

(v) Describe in brief the Kjheldahl method of nitrogen estimation.