

AST V (30.05.15)

Total No. of printed pages = 6

PY 132203

Roll No. of candidate

LIBRARY																			
---------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Accession No.

2015

Date

B. Pharm. 2nd Semester End-Term Examination

PHARMACEUTICAL ANALYSIS-I

Full Marks - 100 Pass Marks - 35 Time - Three hours

The figures in the margin indicate full marks for the questions.

1. Choose the correct answers : $2 \times 10 = 20$

(a) Hydrogen peroxide can be used as

(i) Oxidising agent

(ii) Reducing agent

(iii) Both the above

(iv) None of the above

(b) pH of 1M acetic acid is

(i) > 1

(ii) < 1

(iii) 0

[Turn over

(c) Sodium chloride is assayed by

- (i) Gravimetry
- (ii) Precipitation titration
- (iii) Acid base titration
- (iv) Redox titration

(d) Oxidation number of oxygen is

- (i) -4 (ii) +2
- (iii) -2 (iv) +4

(e) K_a value for acetic acid is

- (i) 1.8×10^{-5}
- (ii) 4.76
- (iii) Acetic acid does not have K_a value

(f) 1M sulphuric acid is equal to

- (i) 0.5 N (ii) 1.5 N
- (iii) 2 N (iv) 1 N

(g) Iodometry is defined as

- (i) Indirect titration of iodine
- (ii) Direct titration of iodine

(h) Ammonium chloride is

- (i) a basic salt
- (ii) an acidic salt
- (iii) a neutral salt

(i) The colour of litmus paper at pH 7 is

- (i) Violet (ii) Red (iii) Blue

(j) Diphenylamine is

- (i) an acid base indicator
- (ii) a redox indicator
- (iii) an indicator used in precipitation titration
- (iv) not an indicator.

2. Answer any *ten* questions : $3 \times 10 = 30$

(a) Why HCl is preferred over H_2SO_4 in permanganet titration ?

- (b) Explain the term precision and accuracy with example.
- (c) State the rules for retaining significant digits.
- (d) Explain the different methods of expressing concentration.
- (e) Write the general equation for the calculation of oxidation reduction potentials.
- (f) How 'rider' is used in analytical balance ?
- (g) State the principle of gravimetric method.
- (h) Explain the principle of Volhard's method of titration with example.
- (i) Write a brief note on determination of end point in redox titration.
- (j) What are the fundamentals of volumetric analysis ?
- (k) Derive an equation for solubility product.
- (l) Explain with example about weight by transfer method.

62/PY132203

(4)

130(P)

3. Answer any *ten* questions : 5×10=50

- (a) Discuss the method of preparation of 1M sodium thiosulphate solution.
- (b) What is buffer solution ? How buffer solutions are prepared ?
- (c) What is mixed indicator ? Explain a method where mixed indicator can be used.
- (d) State the principle followed to choose an indicator in acid base titration.
- (e) Explain a method involving ceric sulphate with relevant chemical reaction.
- (f) Discuss the theory for redox indicators.
- (g) Explain the effects of acid, temperature and solvent upon the solubility of the precipitate.
- (h) Enumerate the difference between Gay-lussac, Mohr's, Volhard's and Fajan's method.

62/PY132203

(5)

[Turn over

- (i) State the different types of precipitation techniques used in gravimetric analysis.
- (j) What do you mean by hydrolysis of salts ? Derive an equation for calculation of pH for acidic salt.
- (k) Discuss the significance of quantitative analysis in quality control.