

31/1/24

Seat Number

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DAGDU-14

BP-102T

Pharmaceutical Analysis-I
(711102)

Total Pages : 7]

Time : 3 Hours

Max. Marks : 75

Note : (1) Do not write anything on question paper except Seat No.

(2) Draw well labelled diagram wherever necessary.

(3) Students should note, no supplement will be provided.

1. Answer the following multiple choice questions : 20

(i) % w/w express the :

(a) Number of gram of solute in 1000 gm of product

(b) Number of gram of solute in 100 gm of product

(c) Number of ml of solute in 100 ml of product

(d) Number of gm of solute in 100 ml of product

(ii) Which analytical technique is used for determining the amount of oxidizing agent ?

(a) Redox titration

(b) Bromometry

(c) Complexometry

(d) None of the above

P.T.O.

(iii) The following are the type of systemic error *except* :

- (a) Error of methods
- (b) Instrumental methods
- (c) Personal error
- (d) Random error

(iv) The following are example of reducing agent *except* :

- (a) Alkali earth metal
- (b) Formic acid
- (c) Peroxydisulfuric acid
- (d) Sulfite compounds

(v) Non-aqueous titrations are based on :

- (a) Arrhenius theory
- (b) Lewis theory
- (c) Bronsted-Lawry theory
- (d) None of the above

(vi) method is based on precipitation of adsorption indicators.

- (a) Fajan's method
- (b) Mohr's method
- (c) Volhard's method
- (d) None of the above

(vii) masking agent is used for masking the aluminium and iron.

- (a) Thioglycol
- (b) Aluminium fluoride
- (c) Potassium cyanide
- (d) Triethanolamine

(viii) The following are the example of oxidizing agent *except* :

- (a) Hydrogen peroxide
- (b) Sulfuric acid
- (c) Nitric acid
- (d) Formic acid

(ix) SI unit of conductance is :

- (a) Mho
- (b) Volt
- (c) Siemens
- (d) None of the above

(x) Solubility of sparingly soluble salts can be determined by :

- (a) Polarography
- (b) Potentiometry
- (c) Conductometry
- (d) IR spectroscopy

- (xi) Potentiometry is an method of analysis.
- (a) Spectroscopic
 - (b) Electroanalytical
 - (c) Analytical
 - (d) All of the above
- (xii) Antimony electrode is an :
- (a) Indicator electrode
 - (b) Reference electrode
 - (c) Secondary reference electrode
 - (d) None of the above
- (xiii) Polarograph is :
- (a) Current Vs. volt graph
 - (b) Instrument
 - (c) DME
 - (d) Volt Vs. current graph
- (xiv) Diffusion current can be correlated with different condition by :
- (a) Nernst equation
 - (b) Ilkovic equation
 - (c) Bragg's equation
 - (d) Beer's equation

(xv) Equivalent conductance is related with concentration.

- (a) Inversely
- (b) Not
- (c) Directly
- (d) Logarithmically

(xvi) The reagent which undergoes reduction is an agent, the reagent which undergoes oxidation is a agent.

- (a) Oxidizing, Reducing
- (b) Reducing Oxidizing
- (c) Complexing, Reducing
- (d) None of the above

(xvii) Which method is used in water analysis ?

- (a) Fajan's method
- (b) Mohr's method
- (c) Volhard's method
- (d) None of the above

(xviii) Weakly acidic and weakly basic substances analyzed by reacting with acids :

- (a) Aqueous titration
- (b) Non-aqueous titration
- (c) Redox titration
- (d) Complexometric titration

(xix) are basic in nature and form solvated protons by reacting with acids.

- (a) Protogenic solvent
- (b) Protophilic solvents
- (c) Amphiprotic solvent
- (d) A protic solvent

(xx) relates to the quality of a results.

- (a) Precision
- (b) Accuracy
- (c) Standard deviation
- (d) Significant figure

2. Write any two of the following :

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- (a) Discuss Mohr's method and Fajan's method for precipitation titration.
- (b) Discuss the principle, types and applications of complexometric titrations.
- (c) Write theories of acid-base titration. Discuss Handerson-Hasselbach equation.

3. Write answers of any *seven* of the following :

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- (a) Write methods of expressing concentration.
- (b) Discuss theories of indicators for acid-base titration.
- (c) Discuss various steps involved in gravimetric analysis.
- (d) Discuss the principle and types of diazotization titrations.
- (e) Write a note on redox reaction.
- (f) Draw the conductometric titration curves for acid-base titration. Write applications of conductometric titration.
- (g) Write limit test of Arsenic.
- (h) Write construction and working of DME. Give advantages and disadvantages of DME.
- (i) Define errors and give its types. Enlist suitable methods for minimization of errors.

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