SUM-2023
12/05/23

Seat Number | | | | | | |

PANKH-51

BP-102-T

Pharmaceutical Analysis-I

(711102)

Total Pages : 6]

Time : 3 Hours **Max Marks : 75**

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

(2) Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.

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

(4) Figures to the right indicate full marks.

1. Multiple choice questions : 20

(*i*) What is the molality of a solution that contains 68.09 of NaOH in 500 g of solution ?

(*a*) 3.40 m (*b*) 0.0034 m

(*c*) 0.68 m (*d*) 6.8 m

(*ii*) Number of significant figures in value 0.0891 is :

(*a*) Four (*b*) Five

(*c*) Two (*d*) Three

(*iii*) Titrations based on the use of silver nitrate are called ..... titration.

(*a*) Argentometric (*b*) Complexometric

(*c*) Conductometric (*d*) Amperometric

P.T.O.

(*iv*) When titrating a strong acid with strong base, the equivalence point :

(*a*) will be below a pH of 7.0

(*b*) will be above a pH of 7.0

(*c*) will be at a pH of 7.0

(*d*) will be either at above or below a pH of 7.0

(*v*) Protogenic solvents enhances the .....

(*a*) Acidity of weak acids

(*b*) Basicity of weak acids

(*c*) Basicity of weak bases

(*d*) Acidity of weak bases

(*vi*) ..... is acting as a self-indicator.

(*a*) Potassium permagnate (*b*) Oxalic acid

(*c*) Perchloric acid (*d*) EDTA

(*vii*) EDTA has ..... binding sites and therefore it is also called multidentate ligand.

(*a*) Four (*b*) Five

(*c*) Six (*d*) Three

(*viii*) The agents which cause the oxidation are called as :

(*a*) Oxidizing agents (*b*) Reducing agents

(*c*) Chelating agents (*d*) None of these

(*ix*) The graph obtained in polarography is called as .....

(*a*) Chromatogram (*b*) Polarogram

(*c*) UV spectrum (*d*) IR spectrum

(*x*) Diazotization titration is also called as .....

(*a*) Nitrite titration

(*b*) Complexometric titration

(*c*) Gravimetric analysis

(*d*) Precipitation titration

(*xi*) The pM indicator is used in ..... type of titration.

(*a*) Redox (*b*) Precipitation

(*c*) Diazotization (*d*) Complexometry

(*xii*) Oxidation is .....

(*a*) Loss of electron (*b*) Gain of electron

(*c*) Both loss and gain (*d*) None of these

(*xiii*) Gravimetric analysis means amount of analyte (ion) can be determined through :

(*a*) Measurement of ions

(*b*) Measurement of density

(*c*) Measurement of weights

(*d*) All of the above

(*xiv*) Phenolphthalein indicator is .....

(*a*) Weak acid (*b*) Weak base

(*c*) Strong acid (*d*) Strong base

(*xv*) Phenolphthalein indicator changes colour in .....

(*a*) Acid (*b*) Alkali

(*c*) Water (*d*) Salt solution

(*xvi*) The current remains zero and graph is plotted between Ecell versus volume of titrant in .....

(*a*) Amperometric titration

(*b*) Potentiometric titration

(*c*) Conductometric titration

(*d*) Voltametry

(*xvii*) Advantages of conductometric titration are .....

(*a*) No need of indicator

(*b*) Coloured or dilute solutions or turbid suspensions can be used for titration

(*c*) Temperature is maintained constant throughout the titration

(*d*) All of the above

(*xviii*) Dropping mercury electrode is used in .....

(*a*) Polarography (*b*) Potentiometry

(*c*) Conductometry (*d*) Both (*b*) and (*c*)

(xix) Co-precipitation is a problem usually occurred in .....

(a) Gravimetric analysis

(b) Conductometric titration

(c) Complexometric titration

(d) Non-aqueous titration

(xx) Which of the following indicators can be used to determine the end point in precipitation titration ?

(a) Adsorption indicators

(b) Acid-base indicators

(c) Metallochromic indicators

(d) Mixed indicator

20

2. Attempt any *two* :

(i) What is gravimetric analysis ? Discuss the steps involved in gravimetric analysis.

(ii) Write the principle of Polarography. Write the construction and working of DME.

(iii) Explain Mohr's and Volhard's methods.

35

3. Attempt any *seven* :

(i) Define error and how will you eliminate it ?

(ii) Write a note on diazotization titration.

(iii) Discuss various types of EDTA titration.

(*iv*) Discuss solvents used in non-aqueous titration.

(*v*) Give the reaction, principle and procedure for the assay of sodium benzoate.

(*vi*) Write a note on iodometry.

(*vii*) Write the principle and procedure involved in limit test for chloride.

(*viii*) Write a short note on rotating platinum electrode.

(*ix*) Write a note on masking and demasking agents.