Submit response?

Your username (**pp0783@srmist.edu.in**) and responses will be recorded when you submit this form.

SWITCH ACCOUNT SUBMIT

University Practical Examination - Batch 2

pp0783@srmist.edu.in Switch account

Your email will be recorded when you submit this form

* Required

50 x 1 = 50 marks

What is the role of chromate ions in chloride estimation? *

- ○ It acts as a reducing agent
- ○ It acts as a buffer
- ◉ It acts as an indicator
- ○ It acts as an oxidizing agent

What happens when a base is added to an acid? *

- ◉ the pH value increases
- ○ the pH value decreases
- ○ no change in pH
- ○ the pH value becomes zero

The electrolyte solution within the glass electrode (reference) of the pH meter is *

- (●) saturated KCl
- ( ) concentrated HCl
- ( ) dilute HCl
- ( ) dilute NaCl

When mixture of sodium carbonate and sodium hydroxide solution is titrated against HCl solution, the Phenolphthalein end point correspond to *

- ( ) Neutralization of OH^- ions and CO_3^{2-} ions
- ( ) Neutralization of OH^- ions only
- ( ) Neutralization of CO_3^{2-} ions only
- (●) Neutralization of OH^- ions and half of CO_3^{2-} ions

The equivalent weight of Sodium Carbonate [Na2CO3] is *

- ( ) 40
- (●) 53
- ( ) 55.85
- ( ) 63

Which of the following chemical agent is added during the estimation of Fe(II) ions by potentiometry to avoid the hydrolysis reaction during the titration? *

- ○ FAS
- ○ Phenolphthalein
- ◉ dil. H2SO4
- ○ dil. HCl

A plot of ηsp / C (reduced viscosity) vs C is a ..... for dilute polymer solutions *

- ○ "S" shape curve
- ○ Triangle
- ◉ Straight line
- ○ "V" shape curve

A precipitation reaction is a double displacement reaction taking place between *

- ○ Acids and bases
- ◉ two aqueous ionic compounds
- ○ two bases
- ○ two acids

A buffer solution is used with pH measuring instruments to *

- ○ protect the equipment
- ◉ standardize the equipment
- ○ clean the electrodes
- ○ plantinize the reference electrode

When NaOH is added to HCl after the neutralization point the conductance increases rapidly *

- ◉ because of fast moving OH^- ions
- ○ because of fast moving H^+ ions
- ○ because of fast moving Na^+ ions
- ○ because of fast moving Cl^- ions

Which one of the following equations is used to calculate the relative viscosity? *

- ◉ $\eta/\eta_o = t/t_o$
- ○ $\eta_{sp} = \eta/\eta_o - 1$
- ○ $\eta_{red} = \eta_{sp}/C \times 100$
- ○ $\eta_i = K(M)^a$

Which of the following is not a unit of hardness? *

- ○ Parts per million
- ◉ Degree centigrade
- ○ Degree clarke
- ○ Degree French

In determination of mixture of bases by titration method, the amount of Sodium Hydroxide is calculated as _____. *

- ○ N x Equivalent mass of Sodium Carbonate / 10
- ○ N [OH and CO_3^{2-} portion] x Equivalent mass of Sodium Hydroxide and Sodium carbonate / 10
- ◉ N [OH portion] x Equivalent mass of Sodium Hydroxide / 10
- ○ N [CO_3^{2-} portion] x Equivalent mass of Sodium carbonate /10

The color of phenolphthalein indicator in acid solution is *

- ○ Pink
- ○ Yellow
- ◉ Colourless
- ○ Orange

The pH of a liquid solution is a measure of *

- ○ dissolved salt content
- ◉ hydrogen ion activity
- ○ hydroxyl ion molarity
- ○ electrical conductivity

Hardness of water is conventionally expressed in terms of equivalent amount of _____. *

- ○ H_2CO_3
- ○ $MgCO_3$
- ◉ $CaCO_3$
- ○ Na_2CO_3

The end point in the conductometric titration of strong acid Vs strong base can be determined by plotting *

- ○ Conductance Vs Volume of acid
- ◉ Conductance Vs Volume of base
- ○ pH Vs volume of acid
- ○ pH Vs volume of base

Conductance of a solution depends upon *

- (●) mobility of ions
- ( ) charge of the ions
- ( ) size of the ions
- ( ) colour of the ions

Viscosity is due to one of the following *

- ( ) Potential energy stored in fluid
- (●) Resistance to fluid motion
- ( ) Roughness of the surface
- ( ) The pressure difference between the two fluids

In order to get accurate values in titration of HCl Vs NaOH, the NaOH is added in increments of *

- ( ) 2 ml near and beyond the end point
- ( ) 1 ml near and beyond the end point
- (●) 0.2 ml near and beyond the end point
- ( ) 0.5 ml near and beyond the end point

Oxidation states of Cr in Potassium Dichromate and Fe in FAS are _____ respectively. *

- [x] (+VI) and (+II)
- [ ] (+V) and (+II)
- [ ] (+VI) and (+III)
- [ ] (+VII) and (+III)

The significance of first derivative and second derivative plot in potentiometric titration is _____. *

- [ ] To get additional information about the redox reaction
- [ ] To get the voltage of reference electrode
- [ ] To get the value of standard electrode potential
- [x] To get more accurate equivalence point in case of colored and dilute solutions

In condutometric titration when KOH is titrated against mixture of H2SO4 and malonic acid, which one will be reacting first? *

- [ ] Malonic acid
- [ ] Sodium malonate
- [ ] Disodium malonate
- [x] H2SO4

Estimation of chloride reaction is *

- ○ Redox reaction
- ○ Equilibrium reaction
- ◉ Precipitation reaction
- ○ Catalytic reaction

Estimation of Fe(II) ions by potentiometry is _____ titration. *

- ◉ Redox
- ○ Acid-base
- ○ Precipitation
- ○ Complexometric

Which type of reaction occurs in the following reaction $AgNO_3 + NaCl \rightarrow AgCl + NaNO_3$? *

- ○ Displacement reaction
- ○ Single replacement
- ○ Decomposition
- ◉ Double displacement reaction

What is the advantage of Mohr's method? *

- ○ A very clear colour change
- ○ Simple method
- ◉ Capability for different pH
- ○ Must be 1M nitric acid solution.

Which of the following is the formula for pH calculation? *

- ○ $\log_{10}[H^+]$
- ◉ $-\log_{10}[H^+]$
- ○ $\log_2[H^+]$
- ○ $-\log_2[H^+]$

Measurement of solution viscosity offers a simple and convenient method for molecular weight determination if *

- ○ Polymer is insoluble in solvent
- ◉ Polymer is soluble in solvent
- ○ Polymer is sparingly soluble in solvent
- ○ Polymer is used as neat

When basic solution is titrated against HCl in the burette with Methyl orange indicator, the end point is the color change from *

- ○ Yellow to Violet
- ○ Orange to Yellow
- ○ Appearance of Pink color
- ◉ Yellow to Orange

If the ion size decreases in solutions then *

- ○ conductance decreases
- ◉ conductance increases
- ○ does not affect the conductance
- ○ first decreases and then increases

Volume of different concentrations of polymer solution used (0.1, 0.2, 0.3 , 0.4 and 0.5 %) for each viscosity measurement *

- ○ Varies with respect to concentration
- ○ Varies with respect to the size of the Ostwald viscometer
- ○ Varies with respect to polymer used
- ◉ Remains fixed

In EDTA method, the purpose of adding buffer is _____. *

- ○ to maintain the pH of 6-8 range
- ◉ to maintain the pH of 8-10 range
- ○ to maintain the pH of 4-6 range
- ○ to maintain the conc. of the reagent

Name the reference electrode and working electrode used in the estimation of Fe(II) ions by potentiometry *

- ○ Platinum electrode and Standard Calomel Electrode
- ◉ Standard Calomel Electrode and Platinum electrode
- ○ Standard Calomel Electrode and Glass electrode
- ○ Glass electrode and Platinum electrode

What is the SI unit of viscosity? *

- ○ Candela
- ◉ Poiseiulle
- ○ Newton/m
- ○ No units

Temporary hardness in water can be removed by: *

- ○ adding soda
- ○ distillation
- ◉ boiling
- ○ adding lime-soda

Conductivity cell is made up of _____ *

- ○ Two silver rods
- ◉ Two parallel sheets of platinum
- ○ Glass membrane of Ag/AgCl
- ○ Sb-Sb_2O_3

At the same concentration and temperature, dilute aqueous solution of strong acid will conduct electricity _____ *

- ◉ better than dilute aqueous solution of weak acid
- ○ as much as dilute aqueous solution of weak acid
- ○ lower than the dilute aqueous solution of weak acid
- ○ two-fold higher than the weak acid

Which of the following represents the equivalence point in the graph of EMF vs volume of titrant? *

- (●) Point at the highest EMF
- ( ) Point at the lowest EMF
- ( ) Point at the greatest magnitude of the slope of the curve
- ( ) Point at the least magnitude of the slope of the curve

When pH is below 8.5 the indicator _____ is colourless. *

- ( ) EBT
- ( ) Methyl orange
- (●) Phenolphthalein
- ( ) K2CrO4

Among the following applications for which the conductometry titration is not used? *

- (●) To determine of moisture
- ( ) Purity of water
- ( ) Ionic product of water.
- ( ) Precipitation titration

When sodium hydroxide is added to HCl, the H+ ions are replaced by *

- slow moving Na+ ions
- fast moving Na+ ions
- slow moving OH- ions
- fast moving OH- ions

The Staudinger – Mark-Houwink equation is *

- $\eta_i = K(M)^a$
- $I = \eta / p$
- $E = mc^2$
- $E = \eta u$

In the pilot titration of NaOH Vs HCl by conductometry, the base is added in increments of *

- 0.1 ml
- 0.2 ml
- 1 ml
- 2 ml

In conductometric titration, after both the acids are consumed, there is a steep increase in conductivity due to _____ *

- ○ increase in total volume of solution
- ○ increase in temperature
- ◉ increase in OH^- ions
- ○ increase in H^+ ions

Soft water + Buffer + EBT -------> *

- ○ Appearance of wine-red colour
- ◉ Appearance of steel blue colour
- ○ Formation of weak complex
- ○ Formation of brown precipitate

Which of the following is not a primary standard? *

- ○ NaCl
- ○ Anhydrous Na_2CO_3
- ○ $AgNO_3$
- ◉ Oxalic acid

Which of the following does not cause the permanent hardness in water? *

- ○ Nitrates
- ○ Sulphates
- ○ Chlorides
- ◉ Bicarbonates

When a strong base is added to a strong acid after the neutralization point *

- ○ conductance decreases
- ◉ conductance increases
- ○ conductance remains constant
- ○ conductance decreases initially and then increases gradually

What is the working principle of conductometry? *

- ○ measurement of potential.
- ◉ measurement of conductivity of solution.
- ○ measurement of emf.
- ○ measurements of pH

Back Submit Clear form