

HSEIRKO - 13

81018-P

CHEMISTRY

Section - A

(Long Answer Type Questions)

1. What are colligative properties ? Show that relative lowering of vapour pressure is a colligative property How is it related to molar mass of a solute?

Or

Define osmotic pressure. Describe Berkley and Hertley's method for the determination of osmotic pressure.

2. What are Galvanic cells ? Describe the construction of Daniel cell and write the reactions involved. How is it represented ?

Or

What is electrolytic conductance ? How is it measured experimentally? Give its SI Units.

3. Name the elements of group-16. Discuss the trends in the elements of group-16 in terms of:

(i) Ionisation Energy

(ii) Oxidation States

(iii) Catenation

(iv) Allotropy

Or

(a) Name oxides of Nitrogen. What is the nature of these oxides? Give their structures.

(b) Write the structure of Pyrophosphoric acid

4. Give two methods of paration of Ketones. Give the reactions of acetone with.

(i) Conc. H_2SO_4 (ii) PCl_2 (iii) Hydrazine

Or

Give a brief account of the following reactions.

- (i) Aldol condensation
- (ii) Cannizzare's reaction
- (iii) Hell Volhard Zelensky (HVZ) reaction

Section - B

(Short Answer Type Questions)

5. Discuss dielectric properties of solids.
6. What is the difference between order and molecularity of a reaction ? Explain with the help of examples.
7. Differentiate Lyophilic colloids from Lyophobic colloids
8. What are p block elements ? Briefly discuss their magnetic behaviour.
9. What are Hydrate isomers? Explain with suitable examples.
10. How will you convert ethyl bromide into.
 - (i) Ethoxy ethane.
 - (ii) Ethanol
 - (iii) ethyl methyl sulphide?

Ethyl methyl sulphide

Method of preparation of ethyl methyl sulphide and its conversion to ethyl methyl sulphide ? How are they classified?

Section Very Short Answer Type Questions Factors which affect the rate of reaction

Comparison between ethyl methyl sulphide and ethyl methyl sulphide has higher boiling point than PH, Explain giving suitable reasons. Why do transition elements form coloured compounds?

Order of reaction ? How does benzene react with

N

e

D

-

Substitution reaction and chemical reaction for the preparation of Nylon 6.5 are tranquilizers ? Give examples. Define

Section - D

(Objective Type Questions)

21. (i) Define unit cell.

(ii) The reaction rate constant k for a given reaction varies directly as the rate varies (True / False)

(iii) The electrical charge on a colloidal particle is indicated by

(a) Brownian movement

(b) Electrophoresis

(c) Ultramicroscope

(d) Molecular sieves

(iv) Malachite is an ore of :

(a) Iron (b) Zinc (c) Copper (d) Mercury

(v) Alkyl chlorides are generally heavier than water whereas bromides and iodides are lighter (True/False)

(vi) Phenols on hydrogenation in presence of Ni as catalyst at 430 give..... (Fill in the blank) <https://www.jkboseonline.com>

(vii) Formic acid is stronger than acetic acid. (True/False)

(viii) Which of the following is a sweetest sugar.

(a) Sucrose (b) Glucose (c) Fructose (d) Maltose

(ix) Synthetic polymer prepared by using ethylene glycol and terephthalic acid is known as:

(a) Teflon (b) Terylene (c) Nylon (d) PVC

(x) Name the medicine which act as analgesic as well as antipyretic.

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