HSE2KROXI

9318 - B

CHEMISTRY

(Long Answer Type Questions)

1. What are colligative properties? Name the various colligative properties ? Derive a relation between relative towering in vapour pressure and mole fraction of the solute ?

Or

Define Normality Molality. Molarity Mole fraction and mass fraction.

2. How is sulphuric acid manufactured by contact process ? Name the basic raw material used for it? With the help of chemical equation explain in brief the principle of this process.

Or

Give the electronic configuration of the elements of group 15 Why nitrogen shows anomalous behaviour ? Explain with examples the various oxidation states of Nitrogen.

3. Explain the following.

(a) Why transitional elements form coloured compounds ?

(b) Why transitional elements for complex compounds ?

Or

Define Lanthanide contraction ? What is its cause and wha are its consequences ? What is the most common oxidatior state exhibited by lanthanides?

4. How is Acetone prepared from:

(i) Acid chloride

(ii) Alkynes

(iii) Calcium acetate

What happens when acetone is treated with:

(i) Sodium bisulphite

(ii) Grignards reagent

Or

Starting from Acetaldehyde how will you get:

(i) 1. 1 -Dichloroethane

(ii) Acetal

(iii) Actal diamine

(iv) Ethane

(v) Acetal oxime

(Short Answer Type Questions)

5. What is meant by Hexagonal close packing in three dimensions?

6. Explain Kohlrausch's Law

7. What is Arhenius equation? What is its importance?

8. Explain Electrophoresis.

9. Define Geometrical isomerism? Explain it with reference to squar planner complexes of M_2A_2BC type

10. How chloroalkanes are prepared from Alcohols and Thiony! chloride? What is the function of anhydrous $ZnCl_2$?

11. Describe the secondary structure of proteins.

12. What are Bio-degradable polymers ? Write the structural formulae of a biodegradable polymer.

(Very Short Answer Type Questions)

13. what is a fuel cell ? Write the equation which occurs at the electrode in a fuel cell that uses Hy and O; to produce electricity

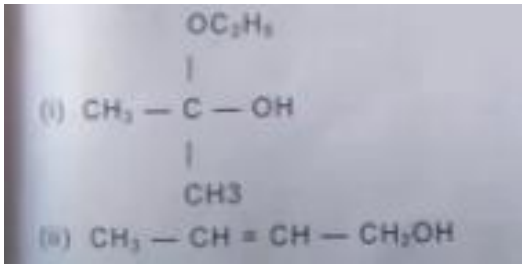
14. Give the units of First and Zero order reaction.

15. Give the various reactions which take place in the blast furnace during the extraction of Iron

16. Explain why fluorine shows an anomalous behaviour

17. What are antihistamines ? Give an example.

18. Give the IUPAC names of



19. Give a method with reactions by which all the three types of alcohol can be prepared.

20. How is methyl amine prepared from Hofmann's Bromide reaction? Give its reaction with Grignard's reagent

(Objective Type Questions)

21. (a) Fill in the blanks

(i) The co-ordination number of each sphere in a body centred close packed structure is.....

(ii) Acid chlorides are reduced to aldehydes by ..... reaction

(b) Tick mark the True/False statement given below:

(i) Benedicts solution is used to determine glucose in Blood. (True/False)

(ii) Oxygen shows an oxidation state of +4 and +6 like sulphur. (True/False)

(c) Give one word substitution to the following:

(i) The substance which do not help in the formation of Froth in Froth floatation process is called ..... https://www.jkboseonline.com

(ii) The sweetner which is 600 times sweetner than sucrose is known as.....

(d) (i) Name the most common refrigerant and give its formula

(ii) Write the structure of N-Methylpropan-2-amine,

(e) Choose the correct/most appropriate answer given below against each and write it in your answer book:

(i) Which type of property is Brownian moment in a colloidal solution ?

(a) Electrical (b) Optical (c) Mechanical (d) Colligative

(ii) Reaction of $C_6H_4N_2CI$ with CuCl gives :

(a) C_4H_3CI (b) C_6H_6 (c) Glycine (d) Acetamide