

## HSEIKROXII

45018-C

### CHEMISTRY

(Long Answer Type Questions)

1. Define Elevation in boiling point and derive its relation with the molecular mass of non-volatile solute

Or

State Raoult's law and calculate the relative lowering of vapour pressure in case of a solution of non-volatile solute.

2. Discuss the manufacture of  $\text{NH}_3$  by Haber's process.

Or

With the help of flow diagram discuss the manufacture of  $\text{H}_2\text{SO}_4$  of contact process.

3. Discuss the formation of coloured ions and complex compounds by d-block elements.

Or

How is  $\text{KMnO}_4$  prepared from pyrolusite and give its three oxidising properties ?

4. Give five methods of preparation of carboxylic acids.

Or

Explain:

(i) Aldol condensation

(ii) Cannizzaro reaction

(Short Answer Type Questions)

5. Explain Frenkel defect

6. What is Nernst equation and give its significance?

7. Differentiate between order of reaction and molecularity of reaction Give three points

8. Explain Froth Floatation process <https://www.jkboseonline.com>

9. Discuss Tyndall effect

10. Give the sources of Vitamins A, C and E.

11. Give the preparation and uses of Nylon 6.6

12. Write the electronic configuration of Noble gases.

(Very Short Answer Type Questions)

13. State Faraday's 1st law of Electrolysis

14. How rate of reaction depends upon concentration?

15. Define Linkage Isomerism Give one example

16. How racemic mixture is formed?

17. Give Luca's test to differentiate between primary, secondary and tertiary alcohols

18. Give one coupling reaction of Benzene diazonium chloride.

19. Write the reaction of Ethyl alcohol with  $\text{H}_2\text{SO}_4$  at 413 K and 443 K.

20. What are Antifertility Drugs?

(Objective Type Questions)

21. (A) Fill in the blanks.

(i) Total number of atoms per unit cell in fcc is .....

22 (ii) Two types of Geometric Isomerism in co-ordination compounds are cis and..... isomers

(B) Tick marks the True/False statements given below.

(i) DDT is not an insecticide. (True/False)

(1) The formula of chloroform is  $\text{CHCl}_2$  (True/False)

(C) Give one word substitution to the following:

(i) The precipitation of dispersed phase of colloidal sol is called as

(ii) The chemical which relieves the body from pain is called as

(D) (i) Write the structure of Butanone

(ii) Write the structure of Glucose

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

(i) Aniline reacts with  $\text{Br}_2/\text{H}_2\text{O}$  to give

(a) Acetanilide

(b) o-Bromo Benzene

(c) p-Bromo Benzene

(d) 2, 4, 6 Tribromo Aniline

(ii) Benzene diazonium chloride reacts with phenal give :

(a) p-hydroxy azo-benzene (b) Phenol (c) Chloral (d) Nitro benzens