

B-22-Z

Roll No.

Total No. of Questions : 28]

[Total No. of Printed Pages : 7

XIIARJKUT23

9122-Z

CHEMISTRY

Time : 3 Hours]

[Maximum Marks : 70

SECTION-A

1 each

1. ✓ Define Tetrahedral Void.

2. ✓ Colloids show motion.

3. ✓ Alcohols have :

(A) $-\text{OH}$ group

(B) $-\text{NO}_2$ group

(C) $-\text{CHO}$ group

(D) $>\text{C}=\text{O}$ group

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Turn Over

4. ✓ Primary amines react with HNO_2 to give primary alcohol.

(True/False)

5. ✓ Give the IUPAC name of $\text{K}_3[\text{Fe}(\text{CN})_6]$.

6. ✓ Which of the following Vitamins is fat soluble ?

(A) Vitamin B complex

(B) Vitamin D

(C) Vitamin A

(D) Vitamin E

7. ✓ Ketones have :

(A) $>\text{C}=\text{O}$ group

(B) $-\text{CHO}$ group

(C) $-\text{COOH}$ group

(D) $-\text{OH}$ group

SECTION-B

2 each

8. ✓ State Kohlrausch's law.
9. ✓ Discuss the effect of concentration on rate of reaction.
10. ✓ Explain variable oxidation states in transition metals.

Or

What are inner transition elements ?

11. ✓ Give *two* applications of co-ordinate compounds.

Or

- ✓ Define co-ordination sphere.
12. ✓ Give *two* chemical reactions of Haloalkanes.
13. ✓ Give *two* harmful effects of Freon.

SECTION-C

3 each

14. ✓ Discuss electrical properties of solids.
15. ✓ Draw a labelled diagram of Galvanic cell.

- 16✓ Calculate Half-life period for 1st order reaction.
- 17✓ Explain Tyndal effect.
- 18✓ Explain Zone refining.
- 19✓ Give the electronic configuration of group 15 elements.
20. ✓ Give *three* oxidising properties of $K_2Cr_2O_7$.
- 21✓ Discuss the nitration of phenol with conc. HNO_3 in presence of conc. H_2SO_4 .
22. ✓ How Benzene diazonium chloride is prepared ?

Or

- ✓ What are Amines ? Give their classification.
23. ✓ Define Carbohydrates and give their classification.

Or

What are Enzymes ? Give their importance.

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24\✓ What are Polymers ? How are they classified on the basis of structure ?

Or

Give the preparation and two uses of polythene.

25\✓ Define Analgesics, Antiseptics and Antibiotics.

Or

Why detergents are preferred over soaps ?

SECTION-D

5 each

26\✓ Define elevation in B.P. How can you calculate the molecular mass of a non-volatile solute with it ?

Or

Define Osmotic Pressure. How is it determined by Berkeley-Hartley method ?

27. ✓ Discuss the oxidation states of group 16 elements.

Or

Discuss the manufacture of NH_3 by Haber's process.

28. (a) Show how each of the following compounds can be converted into benzoic acid ? <https://www.jkboseonline.com>

(i) Ethyl benzene

(ii) Acetophenone

(iii) Bromobenzene

(b) Account for the following :

(i) Electrophilic substitution in benzoic acid takes place at meta position

(ii) Chloroacetic acid is stronger than acetic acid

(7)

Or

✓ Explain the following :

(a) ✓ Aldol condensation

(b) ✓ Cannizzaro's reaction

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