

**B-22-Y**

Roll No. ....

Total No. of Questions : 28]

[Total No. of Printed Pages : 7

**XIIARJKUT23**

**9122-Y**

**CHEMISTRY**

Time : 3 Hours]

[Maximum Marks : 70

**SECTION-A**

1 each

1. Define Unit Cell.
2. Colloidal solution has <sup>two</sup> ..... phases.
3. Phenols are :  
  
(A) Basic  
  
☒ (B) Acidic  
  
(C) Neutral  
  
(D) None of these

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Turn Over

4. Primary amines give carbylamine reaction.

(True/False)

5. What is IUPAC name of  $[\text{Cu}(\text{NH}_3)_4\text{SO}_4]$  ?

6. Sunshine Vitamin is :

(A) Vitamin A

☒ (B) Vitamin D

(C) Vitamin E

(D) Vitamin K

7. Ketones have :

☒ (A)  $>\text{C}=\text{O}$  group

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

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

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

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**SECTION-B**

2 each

✓ 8. State Faraday's 1st law of Electrolysis.

✓ 9. Define order of Reaction.

✓ 10. Define *d*-Block elements.

*Or*

Why *d*-Block elements form complexes ?

✓ 11. Define Ligand. Name its types.

*Or*

What is Linkage Isomerism ? Give an example.

✓ 12. Define Haloalkanes.

✓ 13. Give *two* uses of Chloroform.

**SECTION-C**

3 each

✓ 14. Explain Frankel defect.

✓ 15. Draw a labelled diagram of Galvanic cell.

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- ✓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 nutrition 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.

- ✓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  $\text{NH}_3$  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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