

D-2-B

Roll No.....

Total No. of Questions : 28]

[Total No. of Printed Pages : 4

XIIARKDN20

2002-B

CHEMISTRY

Time : 3 Hours]

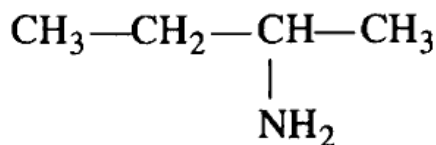
[Maximum Marks : 70

Section-A

1 each

(Very Short Answer Type Questions)

1. What is a 'Semiconductor' ?
2. Colloidal dispersion of a solid in a liquid is called
3. What is IUPAC name of $K_3[Fe(CN)_6]$?
4. When phenol is heated with HI in presence of red phosphorus it give :
(A) ethyl iodide (B) ethane
(C) ethylene (D) ether
5. The IUPAC name of :



is butane-2-amine.

(True/False)

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Turn Over

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(2)

6. Vinegar is a dilute solution of

7. Vitamin 'C' is :

(A) Paracetamol

(B) Lactic acid

(C) Citric acid

(D) Ascorbic acid

Section-B

2 each

(Short Answer Type Questions-I)

8. What is a fuel cell ? State two advantages of H_2-O_2 fuel cell over ordinary cell.

9. Derive the equation for a rate constant for a first order reaction.

10. Write down the electronic configuration of :

(i) Cu^+

(ii) Co^{3+}

Or

Why are transition metals called *d*-block elements ?

11. What are ambidentate ligands ? Give examples.

Or

Give an example of ionization isomerism in coordination compounds.

12. Discuss Fittig's reaction.

13. Give uses of Chloroform.

Section-C

3 each

(Short Answer Type Questions-II)

14. Describe Frankel defect in crystals.

15. State and explain Faraday's laws of electrolysis.

16. What is the difference between order of a reaction and its molecularity ?

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17. What do you understand by the terms ?
- (i) Roasting
 - (ii) Calcination
 - (iii) Smelting
18. What are lyophobic and lyophilic sols ? Give their chief characteristics.
19. What are interhalogen compounds ? How are they classified ?
20. Explain the following :
- (i) Transition metals act as catalysts
 - (ii) Transition metals form coloured complexes
21. What are primary, secondary and tertiary amines ? Give *one* example of each.

Or

Explain why aromatic amines are less basic than ammonia and aliphatic amines. <https://www.jkboseonline.com>

22. What are Alcohols ? Give any *two* methods of preparation of alcohols.
23. What are Carbohydrates ? How are they classified ?

Or

Give sources and deficiency diseases of Vitamin A, Vitamin C and Vitamin D.

24. (i) Identify the type of polymer :



- (ii) Write the structure of Dacron.
- (iii) Define addition polymer.

Or

Give preparation and uses of Nylon 66.

25. Describe the following with suitable examples of chemicals :
- Antipyretics
 - Antiseptics

Or

What are Detergents ? Why are detergents preferred over soaps ?

Section-D

5 each

(Long Answer Type Questions)

26. What are colligative properties ? Derive the relationship between the elevation in boiling point and molecular mass of a non-volatile solute in solution.

Or

Define molarity and molality. Calculate molality of 2.5 g of ethanoic acid (CH_3COOH) in 75 g of Benzene.

27. Name the elements of nitrogen family based on the electronic configuration explain the valence of N and P. Give common oxidation states of Nitrogen.

Or

How is sulphuric acid manufactured by contact process ? Why is sulphuric acid syrupy (viscous) ?

28. What are carboxylic acids ? Give any *four* methods of preparations of carboxylic acids.

Or

Explain the following reactions by giving an example :

- Aldol condensation
- Wolf-Kashner reduction
- Rosenmund reduction

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