

XIIARKDN20

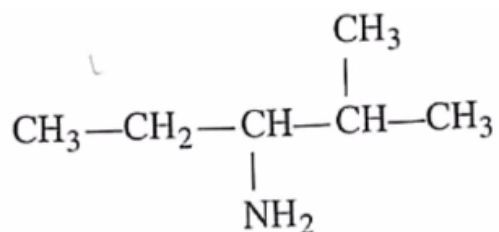
2002–A

CHEMISTRY

Section-A

(Very Short Answer Type Questions)

1. Define crystal lattice.
2. Colloidal dispersion of a liquid in a gas is called
3. What is IUPAC name of $[\text{Co}(\text{NH}_3)_6]\text{Cl}_3$?
4. Phenol reacts with bromine in CS_2 to give :
(A) o-bromophenol (B) m-bromophenol
(C) o- and p-bromophenol (D) 2,4,6-tribromophenol
5. The IUPAC name of :



is 2-methylpentan-3-amine. (True/False)

6. Vinegar is a dilute solution of
7. Which of the following vitamins is water soluble ?
(A) Vitamin E (B) Vitamin K (C) Vitamin A (D) Vitamin B

Section-B

(Short Answer Type Questions-I)

8. Define Corrosion. What is the chemical formula of rust ?

9. Show that for the reaction of first order half-life period is independent of initial concentration.

10. Write down the electronic configuration of :

(i) Cr^{3+} (ii) Cu^+

Or

Why does a transition series contain 10 elements ?

11. What are unidentate and bidentate ligands?

Or

Give an example of linkage isomerism in coordination compounds.

12. Discuss Wurtz reaction.

13. Give two uses of DDT.

Section-C

(Short Answer Type Questions-II)

14. Describe Schottky 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?

17. What do you understand by the terms ? <https://www.jkboseonline.com>

(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.

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 :

-A-A-A-A-A-

(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:

(i) Antipyretics (ii) Antiseptics

Or

What are Detergents? Why are detergents preferred over soaps ?

Section-D

(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 75g 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 :

(i) Aldol condensation

(ii) Wolf-Kashner reduction

(iii) Rosenmund reduction