

0223

A

Total No. of Questions - 21

Regd.

Total No. of Printed Pages - 2

No.

Part - III

## CHEMISTRY, Paper - II

(English Version)

Time : 3 Hours

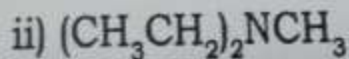
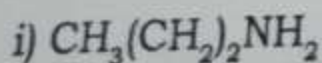
Max. Marks : 60

SECTION - A

10 × 2 = 20

- Note:**(i) Answer **ALL** Questions  
(ii) Each Question carries **TWO** marks  
(iii) All are very short answer type questions.

1. What are isotonic solutions?
2. Explain the terms gangue and slag.
3. Calculate the 'spin only' magnetic moment of  $\text{Fe}^{2+}_{(\text{aq})}$  ion.
4. What are food preservatives? Give example.
5.  $\text{NH}_3$  forms hydrogen bonds but  $\text{PH}_3$  does not - Why?
6. What is addition polymer? Give example.
7. What are antacids? Give example.
8. What is metallic corrosion? Give one example.
9. What is Ziegler-Natta catalyst?
10. Write the IUPAC names of the following compounds and classify them into primary, secondary and tertiary amines.



**SECTION - B****6 × 4 = 24**

- Note:** (i) Answer **ANY SIX** questions.  
(ii) Each question carries **FOUR** marks.  
(iii) All are of short answer type questions.

11. Derive Bragg's equation.
12. Explain the terms
  - (i) Ligand
  - (ii) Coordination number
  - (iii) Coordination entity
  - (iv) Central metal atom/ion
13. Give the sources of the following vitamins and name the diseases caused by their deficiency (a) A (b) D (c) E and (d) K
14. A solution of glucose in water is labeled as 10% w/w. What would be the molarity of the solution?
15. Explain the formation of micelles with a neat sketch.
16. Explain the extraction of zinc from zinc blende.
17. Explain the structures of a)  $\text{XeF}_6$  and b)  $\text{XeOF}_4$
18. (a) What are Enantiomers?  
(b) What are ambident nucleophiles?

**SECTION - C****2 × 8 = 16**

- Note:** (i) Answer **ANY TWO** questions.  
(ii) Each question carries **EIGHT** marks.  
(iii) All are long answer type questions.

19. (a) State and explain Kohlrausch's law of independent migration of ions.  
(b) What is "molecularity" of a reaction? How is it different from the 'order' of a reaction? Name one bimolecular and one trimolecular gaseous reactions.
20. How is ozone prepared from oxygen? Explain its reaction with
  - a)  $\text{C}_2\text{H}_4$
  - b) KI
  - c) Hg
  - d) PbS
21. Describe the following.
  - i) Acetylation
  - ii) Cannizaro reaction
  - iii) Cross aldol condensation
  - iv) Decarboxylation

