

BOARD OF INTERMEDIATE EDUCATION

SENIOR INTER CHEMISTRY

MODEL PAPER (English Version)

Time: 3 Hours

Max. Marks: 60

SECTION – A

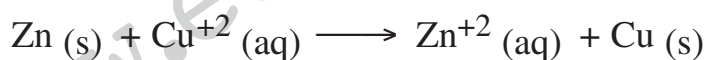
I. (i) Very Short Answer Type questions.

(ii) Answer ALL questions.

(iii) Each question carries TWO Marks.

10 × 2 = 20

1. What is Croscopic Constant?
2. The standard emf of Daniell cell is 1.1 V. Calculate the standard Gibbs energy for the cell reaction



3. How does PCl_3 react with

- a) Water b) $\text{C}_2\text{H}_5\text{OH}$

4. H_2O is neutral while H_2S is acidic. Explain.
5. What is mischmetal? Give its composition and use.
6. What are "Matte" and Blister Copper"?
7. A polymer contains 10 molecules with molecular mass 10000 and 10 molecules with molecular mass 1,00,000. Calculate number average molecular mass.
8. What are thermoplastic polymers? Give 2 examples.
9. Ortho nitrophenol is more acidic than ortho methoxy phenol. Explain Why?
10. Complete the following conversions:
 - i) $\text{CH}_3\text{NC} + \text{HgO} \longrightarrow$
 - ii) $? + 2\text{H}_2\text{O} \longrightarrow \text{CH}_3\text{NH}_2 + \text{HCOOH}$

SECTION – B

II. (i) Short Answer Type questions.

(ii) Answer any SIX questions.

(iii) Each question carries FOUR Marks.

6 × 4 = 24

11. Describe 2 main types of Semi Conductors. Classify the following as p - type or n -type semi conductor.

- a) Ge doped with In b) Si doped with B

12. What are different types of adsorption? Give any four differences between these types.

13. What is mole fraction? Calculate the mole fraction of Benzene in solution containing 30% by mass in CCl_4 .

14. Write any 2 ores with formulae of the following metals.

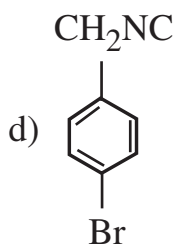
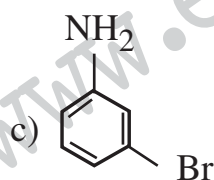
- a) Al b) Zn c) Fe d) Cu

15. Explain Wernar's theory of coordination compounds with suitable examples.

16. Write a short note on functions of different hormones in the body.

17. Write IUPAC names of the following compounds.

- a) $C_2H_5NHC_3H_7$ b) $PhCH_2CN$



18. Explain

- a) Antiseptics b) Food preservatives

SECTION – C

III. (i) Long Answer Type questions. Draw labelled diagrams wherever necessary.

(ii) Answer any TWO questions.

(iii) Each question carries EIGHT Marks.

$2 \times 8 = 16$

19. Give a detailed account of the collision theory of reaction rates of bimolecular gaseous reactions.

20. a) How Cl_2 is prepared in laboratory? How does it react with the following.

- i) Iron ii) hot, Conc. NaOH iii) $Na_2S_2O_3$

b) How are XeO_3 and $XeOF_4$ prepared? Describe their molecular shapes.

21. a) Explain the following reactions.
- i) Reimer - Tiemann reaction.
 - ii) Williamson's ether synthesis.
- b) What are ambident nucleophiles?
- c) What are enantiomers?

Writer : A.N.S. Sankara Rao,
Senior Lecturer in Chemistry