BOARD OF INTERMEDIATE EDUCATION

SENIOR INTER CHEMISTRY

MODEL PAPER (ENGLISH VERSION)

TIME: 3 Hours **Max. Marks: 60**

SECTION – A

I. **i) All are very short answer type questions.**

ii) Answer ALL the questions.

iii) Each question carries TWO marks. **10 × 2 = 20**

1. Calculate Λ°_m for HAC. Λ°_m values for NaC*l*, HC*l* and Na AC are 126.4, 425.9 and 91.0 S cm^2 mol^{-1} respectively.

2. What are "isotonic", "hypertonic" solutions?

3. What is the role of graphite rod in the metallurgy of aluminium?

4. pH_3 is weaker base than NH_3 – Explain.

5. How many moles of AgC*l* is precipitated when 1 mole of $CoCl_3$. 6 NH_3 is treated with $AgNO_3$ solution.

6. What is "Sandmeyer reaction"?

7. Write the possible chain isomers of the compound halving molecular formula C_4H_9Br.

8. Arrange the following bases in increasing order of their basic strength Aniline, p – Nitro aniline and p – toluidine

9. Write the structures of the following

a) 1 – Chloro 4 – Ethyl cyclohexane

b) 1, 4 dibromo but – 2 – ene

10. Give the hybridisation of sulphur in the following

a) SO_2 b) SO_4^{-2} c) S_8 d) SF_6

SECTION – B

II. **i) Short answer type questions.**

ii) Answer any SIX from the following.

iii) Each question carries FOUR marks. **6 × 4 = 24**

11. State Raoults law. Calculate the mass of a non volatile solute (molar mass 40 $g.mol^{-1}$) which should be dissolved in 114 g Octane to reduce its vapour pressure to 80%.

12. What are 'Frenkel defects' and 'Schottky defects'? Name the compound that exhibits both the defects.

13. Give any 4 differences between "Physisorption" and "Chemisorption".

14. Explain the purification of sulphide ores by froth flotation method. What is the use of depressants?

15. Explain Werner's theorem of coordination compounds with suitable examples.

16. Write the names of the monomers of the following polymers.

a) Bakelite b) Teflon c) Polystyrene d) Poly Vinyl Chloride

17. a) What are "essential amino acids"? Give one example

b) What is "denaturation of proteins"? Give one example

18. Write notes on "antiseptics" and "disinfectants".

SECTION – C

III. i) Long Answer type questions

ii) Answer any TWO questions

iii) Each question carries EIGHT marks **2 × 8 = 16**

19. a) What are Galvanic Cells? Explain the working of Galvani Cell with a neat sketch taking Daniel Cell example.

b) What is molecularity of a reaction? How is it different from the order of a reaction? Name one bimolecular and trimolecular gaseous reactions.

20. a) How is Cl_2 prepared by Deacon's process? How does Cl_2 reacts with the following

i) hypo solution ii) hot and conc. NaOH

b) How are XeF_6 and $XeOF_4$ prepared? Give their structures.

21. Explain the following with one example.

a) Cross aldol condensation

b) Decarboxylation

c) Williamson's synthesis of ethers

d) Haloform reaction

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