

BOARD OF INTERMEDIATE EDUCATION
JUNIOR 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. Define T.L.V.
2. Name two adverse effects caused by Acid rains.
3. What is Boltzmann constant? Give its value.
4. Calculate the oxidation numbers of carbon in the following
a) $C_6H_{12}O_6$ b) $C_{12}H_{22}O_{11}$
5. What is mortar?
6. Write the two uses of NaCl.
7. What are Silicones?
8. What is producer gas?
9. What is Homogeneous equilibrium? Give one example.
10. State Markovnikov rule.

SECTION – B

II. i) Short Answer Type questions.

ii) Answer any SIX questions.

iii) Each question carries FOUR marks.

6 × 4 = 24

11. Define R.M.S. speed. Find the R.M.S. speed of CO_2 at $27^\circ C$.
12. Describe the preparation of Hydrogen peroxide by electrolytic method.
13. Chemical analysis of a carbon compound gave the following percentage composition by weight of the elements present. Carbon = 10.06%, Hydrogen = 0.84%, Chlorine = 89.10% Calculate the empirical formula of compound.
14. Explain borax bead test with a suitable example.
15. Give the MOED of N_2 .
16. Explain the formation of coordinate covalent bond with one example.

17. What is heat capacity? Derive $C_p - C_v = R$
18. Define pH find the pH of 0.05 m NaOH Solution.

SECTION – C

III. i) Long Answer Type questions.

ii) Answer any TWO questions.

iii) Each question carries EIGHT marks.

2 × 8 = 16

19. What are the Postulates of Bohr's model of an atom? What are the limitations of Bohr's model of an atom?
20. Define IE_1 and IE_2 . Why $IE_2 > IE_1$ for a given atom? Discuss any 4 factors that effect IE of an element.
21. Describe two methods of preparation of ethylene. How does it react with the following?
- a) Ozone
 - b) Hypohalous acid
 - c) Cold, dil.alk $KMnO_4$
 - d) Water