

**Class : 11**Register  
Number**UNIT TEST -1, JULY - 2024**

Time Allowed : 1.30 Hours]

**CHEMISTRY**

[Max. Marks : 35

**PART - I****I. Choose the correct answer.****5x1=5**

- Which one of the following is used as a standard for Atomic mass?
  - ${}_6\text{C}^{12}$
  - ${}_7\text{C}^{12}$
  - ${}_6\text{C}^{13}$
  - ${}_6\text{C}^{14}$
- The total number of Orbitals associated with the Principal quantum number  $n = 3$  is -----
  - 9
  - 8
  - 5
  - 7
- Maximum deviation from Ideal gas is expected from -----
  - $\text{CH}_{4(g)}$
  - $\text{NH}_{3(g)}$
  - $\text{H}_{2(g)}$
  - $\text{N}_{2(g)}$
- The general formula for Alkadiene is -----
  - $\text{C}_n\text{H}_{2n}$
  - $\text{C}_n\text{H}_{2n-1}$
  - $\text{C}_n\text{H}_{2n-2}$
  - $\text{C}_n\text{H}_{n-2}$
- The equivalent mass of a Trivalent metal element is  $9 \text{ g eq}^{-1}$ . The molar mass of its anhydrous oxide is -----
  - 102 g
  - 27 g
  - 270 g
  - 78 g

**PART - II****II. Answer any three questions. Q.No. 8 is Compulsory.****3x2=6**

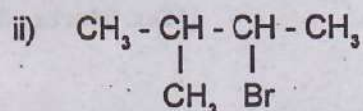
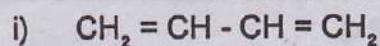
- Define Relative Atomic Mass?
- State Boyles's Law?
- How many Orbitals are possible for  $n = 4$ ?
- Calculate the equivalent mass of Sulphuric Acid?
- Write a note on Homologous Series?

**PART - III****III. Answer any three questions. Q.No. 15 is compulsory.****3x3=9**

- Distinguish between Oxidation and Reduction.
- Describe the Aufbau Principle?
- Derive Ideal gas Equation.
- Give the Electronic Configuration of  $\text{Mn}^{2+}$  and  $\text{Cr}^{3+}$ ?

CH/11/Che/1

15. Give the IUPAC names of the following Compounds.



PART - IV.

3x5=15

IV. Answer all the questions.

16. a) Calculate the Empirical and molecular formula of the compound containing 76.6% Carbon, 6.38% hydrogen and rest Oxygen. Its Vapour density is 47. (5)

(OR)

b) Write a short note on

i) Principal Quantum number

ii) Azimuthal Quantum number (5)

17. a) Derive the values of Critical constants in terms of Vander Waals Constants. (5)

(OR)

b) i) Derive De - Broglie Equation? (3)

ii) Calculate the Oxidation number of underlined elements (2)



18. a) i) Give the General Characteristics of Organic Compound. (3)

ii) What is meant by a Functional Group? (2)

(OR)

b) Give the Structure of the following Compound (5)

i) 3 - Chlorobutanol

ii) 3 - Ethyl - 2 - methyl 1 - pentene

iii) 3 - methyl butan 2 - ol

iv) Acetaldehyde

v) Tertiary butyl iodide

CH / 11 / Che / 2