ANNAI VIOLET ARTS AND SCIENCE COLLEGE

DEPARTMENT OF CHEMISTRY

CONTINUOUS INTERNAL ASSESSMENT – II

(ODD SEM-2022-2023.)

SUBJECT : GENERAL CHEMISTRY-I

Class :I Bsc CHEMISTRY **Date : 1.11.22**

Max.Marks : 75 **Sub. Code: SD21A**

PART A (10 × 2 = 20 Marks)

Answer any TEN questions

1.What are quantum numbers?
2.Define Compton effect.
3.State Aufbau principle.
4.Define Paulis exclusion principle.
5.What is electronegativity?
6.Noble gases are otherwise called as inert gases.Why?
7.Transition elements show variable oxidation states.Give a reason.
8.Electron affinity of sulphur is greater than oxygen.Why?
9.Provide IUPAC name for the following.
(a)$Cl\text{-}CH_2\text{-}CH\text{-}CH_2\text{-}NH_2$
(b)$CH{\equiv}C\text{-}CH{=}CH\text{-}CH{=}CH_2$
10.What are carbanions?
11.Comment on electromeric effect.
12.Write a short note on homologous series.

PART B – (5 × 5 = 25 Marks)

Answer any FIVE questions

13.State &explain Heisenberg's uncertainity principle.
14.Give a account on Schrodinger wave equation
15.Lithium&Magnesium have similar chemical properties-Explain.
16.Justify the position of hydrogen in periodic table.
17.Give the structure for the following compounds.
(a)1-Chloro-1-alkene-4-yne
(b)3-hepten-5-yl-2-ol
(c)5-oxohexanoic acid
18Which is more stable?Why?
(a)$(C_6H_5)_3C^{\cdot}$
(b)$(CH_3)_3C^{\cdot}$
19.Classify organic compounds based on structure.

PART C – (3 × 10 = 30 Marks)

Answer ANY THREE questions

20. Explain Bohr's theory of hydrogen atom
21. Discuss the extrastability ofhalf-filled &completely filled orbitals.
22. How does electron affinity vary along the groups &periods in the periodic table.Why?
23.Explain the difference between electrophile &nucleophile with example.
24.Account on the stability of primary,secondary and tertiary free radicals.