SECOND REVISION TEST - 2024	11 - STD	
CHEMISTRY	Marks 70	Time 3.00 Hrs.

I. Answer all the questions. **15 x 1 = 15**

1. Which of the following compounds have percentage of carbon same as that in ethylene (C_2H_4)
   a) propene b) ethyne c) benzene d) ethane
2. What is the maximum numbers of electrons that can be associated with the following set of quantum numbers? $n = 3, l = 1$ and $m = 1$.
   a) 4 b) 6 c) 2 d) 10
3. What would be the IUPAC name for an element with atomic number 222.
   a) bibiblium b) bibidium c) didibium c) bibibium
4. Use of hot air balloon in Sprots at meteorological observation is an application of
   a) Boyle's law b) Newton's law c) kelvin's law d) Brown's law
5. Which of the following has highest hydration engery?
   a) $MgCl_2$ b) $CaCl_2$ c) $BaCl_2$ d) $SrCl_2$
6. What is the density of N_2 gas at 227°C and 5 atm pressure.
   a) 1.40 g/L b) 2.81 g/L c) 3.41 g/L d) 0.29 g/L
7. The amount of heat exchanged with the surrounding at constant temperature and pressure is given by the quantity
   a) ΔE b) ΔH c) ΔS d) ΔG
8. The isomer of ethanol is
   a) acetaldehyde b) dimethyly ether c) acetone d) methyl carbinol
9. Which one of the following gases has the lowest value of Henry's Law constant?
   a) N_2 b) He c) CO_2 d) H_2
10. Which of the following molecule contain no π bond?
    a) SO_2 b) NO_2 c) CO_2 d) H_2O
11. The general formula for alkadiene is
    a) C_nH_{2n} b) C_nH_{2n-1} c) C_nH_{2n-2} d) C_nH_{n-2}
12. Homolytic fission of covalent bond leads to the formation of
    a) electrophile b) nucleophile c) carbocation d) Free radical
13. Ionic hydrides are formed by
    a) halogens b) chalcogens c) inert gases d) group one elements
14. C-X bond is strogest in
    a) Chloromethane b) Iodonethane c) Bromomethane d) Fluoromethane
15. The pH of normal rain water is
    a) 6.5 b) 7.5 c) 5.6 d) 4.6

II. Answer any six questions. Q.No.24 is compulsory **6 x 2 = 12**

16. What is oxidation number.
17. How many orbitals are possible for n = 4?
18. Write the uses of plaster of paris.
19. State Dalton's partial pressure law.
20. Define Normality.
21. What is σ and π bonds?
22. What is Markow Nikoff's rule?
23. Write Dow process.
24. Write the preparation of CCl_4 and Fereon.

III. Answer any six questions. Q.No.33 is compulsory **6 x 3 = 18**

25. What are Quantum number. Write the types.
26. Calculate the molor mass of $KMnO_4$, $K_2Cr_2O_7$ and $C_{12}H_{22}O_{11}$.
27. Differentiate Hardwater and Softwater.
28. What is meant by efflorescence?
29. State Thermodynamic Third law.
30. What is bond energy?
31. How is acid rain formed?
32. What are colligative properties?
33. Write the Fischer projection formula of Tartaric acid.

IV. Answer all the questions **5 x 5 = 25**

34. a) i) Calculate the oxidation number of oxygen in H_2O_2
    ii) A compound having the emprical formula C_6H_6O has the vapourdensity 47. Find its molecular formula. (OR)
    b) i) State Hund's rule.
    ii) Explain Bohr model of atom.
35. a) Write the various statement of second law of Thermodynamics. (OR)
    b) i) State Graham's law of diffusion.
    ii) What are the methods of liquefaction of gases?
36. a) Explain the salient features of molecular orbital theory. (OR)
    b) Discuss the similarities between Be and Al.
37. a) i) What is Cairal Carbon.
    ii) Explain Thinlayer chromatography (OR)
    b) Explain inductive effect with suitable example.
38. a) i) Write Sandmayer reaction.
    ii) Write the equation for the following.
    a) Phenol → Benzene b) Benzene → Toluene c) Benzene → BHC (OR)
    b) i) Define smog.
    ii) Write note on Ozone Layer depletion.