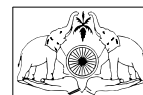




DIET MALAPPURAM & VIJAYABHERI MALAPPURAM
SSLC MODEL EXAMINATION , MARCH 2022



SET-2

Time: 1.45 Hrs

Max Score: 40

CHEMISTRY
PART 1

A Section

Answer any 4 questions from the following. Each question carries 1 Score (4x1=4)

1. Name the shell which contain one subshell only? (1)
2. Which metal ore is $Al_2O_3 \cdot 2H_2O$ (1)
3. $NH_4Cl + \dots \rightarrow CaCl_2 + 2 H_2O + 2NH_3$.
Which is the unknown reactant in the above question. (1)
4. Write the general formula of Alkanes? (1)
5. What is the IUPAC name of $CH_2=CH-CH_2-CH_3$ (1)
6. Write the monomer of Polyvinyl chloride? (1)

B Section

Answer all questions from 7 to 9 (3x1=3)

7. Lanthanide and actinides includes in which block? (1)
8. What is the molar volume in litres at STP? (1)
9. While electroplating copper on iron bangle, iron bangle is connected to which terminal of the battery? (1)

PART II

A Section

Answer the following questions 1x2=2

10. The subshell electronic configuration of $_{11}Na$ is given
 $1s^2 2s^2 2p^6 3s^1$
a) In which group this element belongs? (1)
b) Write the period number of the element? (1)

B Section

Answer any one question from 11 to 12 (2 Score) 1x2=2

11. Following is the subshell electronic configuration of $_{26}Fe$
 $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 4s^2$
a) Write the subshell electronic configuration of Fe^{2+} (1)
b) Write the subshell electronic configuration of Fe^{3+} (1)
12. Write the structural formula of the following? (2)
a) 2-Methyl Butane
b) Propanoic acid

PART III

A Section:

Answer any three from questions 13 to 16. (3Score each) 3x3=9

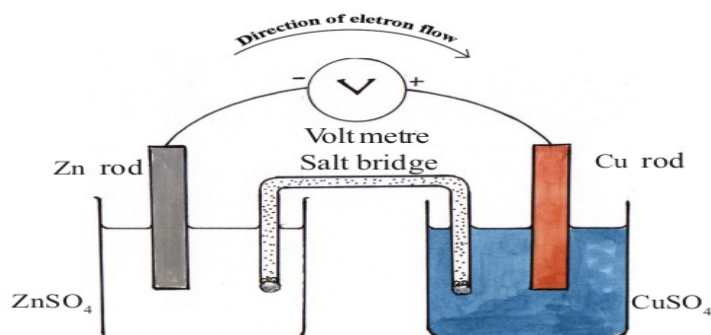
13. Write the subshell electronic configuration of the following (3)
a) $_{18}Ar$ b) $_{21}Sc$ c) $_{24}Cr$

14. Complete the table

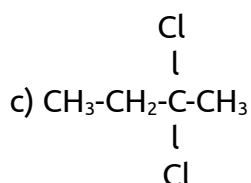
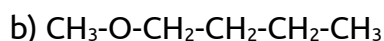
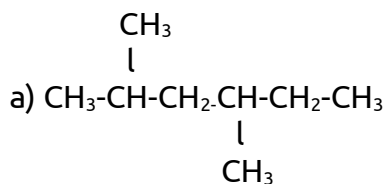
(3)

Element / Compound	Molecular Mass	Mass in grams	GMM	Number of Molecules
Oxygen	32	32gm	1Gmm	6.022×10^{23} Molecules
Chlorin	71(a).....	1Gmm	6.022×10^{23} molecules
Carbon Di Oxide(b)....	44 gm	1Gmm(c).....

15. Observe the figure and answer the questions that follows



- What is the energy change in the galvanic cell? (1)
 - Name the reaction taking place in the Anode? (1)
 - Write the equation of redox reaction taking place in this cell? (1)
16. Write the IUPAC Names of the following compounds? (3)



B Section

Answer the following question (3 Score) (1x3=3)

17. The industrial preparation of Aluminium is Hall- Heroult process.
- Name the process of concentration of Bauxite (1)
 - Name the anode during the extraction of aluminium from Alumina through electrolysis. (1)
 - Write the equation of reaction taking place at cathode? (1)

PART IV

A Section

Answer any two from questions 18 to 20 (4 Score each)

(2x4=8)

18. Molecular mass of CO_2 is 44 .
- a) Find the mass of 1GMM of CO_2 ? (1)
 - b) How many mol molecules are present in 132 gm CO_2 ? (1)
 - c) How many molecules are there in this much of CO_2 (1)
 - d) How many atoms are present in 1 mol CO_2 ? (1)
19. Zn rod is dipped in CuSO_4 solution.
- a) Write the observation? (1)
 - b) Justify your observation? (1)
 - c) Write the chemical equation of this reaction? (1)
 - d) Name the reaction taking place at Zn? (1)
20. $\text{CH}_2=\text{CH}_2+\text{H}_2 \rightarrow \text{CH}_3-\text{CH}_3$
- a) Name the reaction? (1)
 - b) Name the reaction of converting $\text{CH}_2=\text{CH}_2$ in to Polythene? (1)
 - c) What is the structural formula of polythene? (1)
 - d) $\text{CH}_2=\text{CH}_2+\text{Cl}_2 \rightarrow$ ----- (1)

PART IV

B Section

Answer any one from questions 21 to 22 (4 Score)

(1x4=4)

21. We can classify the cyclic compounds into alicyclic and Aromatic.
- a) Give one example for each? (2)
 - b) Write the structural formula for your example? (2)
22. Sulphuric acid is the king of chemicals
- a) Name the industrial preparation of H_2SO_4 ? (1)
 - b) Which is the catalyst used in the above process? (1)
 - c) What is the optimum temperature in the above process? (1)
 - d) Give two uses of sulphuric acid? (1)

PART V

A Section

Answer any one question from the following (5 Score) 1x5=5

23. The process of removing impurities from ore is known as concentration of ores.
- a) Name the impurities contained in an ore? (1)
 - b) What is the concentration process of oxide ores? (1)
 - c) If the impurities are denser than ore particles , Which method of concentration is adopting? (1)
 - d) What is the process of separating the magnetic impurities Iron tungstate from tin stone? (1)
 - e) Name the method of concentrating Zinc Blende? (1)