

SSLC Model Exam 2021- Chemistry

Answer Key- English Medium

- 3d
- Tetra fluoroethene
- Al
- $C_n H_{2n - 2}$
- 6.022×10^{23}
- Mg
- NH_3
- Negative terminal
- (a) Froth floatation
(b) ZnS
- a. Sodium (Na)
b. $Na^{+} + e^{-} \rightarrow Na$ (Reduction)
- a. Hydroxyl (-OH)
b. Propan - 1 - ol
- a. $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 4s^1$
b. Half filled configuration of 'd' sub shell is more stable.
- a. AD
b. b. Because at equilibrium, forward reaction and backward reaction occur simultaneously at the same rate.
- a. Treating methanol with carbon monoxide in the presence of catalyst
b. $CH_3 - OH + CO \rightarrow CH_3 - COOH$
- a. (ii) $Zn \rightarrow Zn^{2+} + 2e^{-}$
b. Oxidation number increases
- a.
$$\begin{array}{c} CH_3 - CH - CH_3 \\ | \\ CH_3 \end{array}$$

- b. 2 – Methylpropane
17. a. $\text{FeCl}_2 - \text{Fe}^{2+}$
 $\text{FeCl}_2 - \text{Fe}^{3+}$
 b. In d Subshell
18. (a) 2
 (b) Methyl
 (c) 2- Methyl pentane
19. a. Volume and pressure are Inversely proportional
 b. Boyle's law
 c. 50 L (When pressure is doubled, volume will be halved)
20. a. Barium Sulphate
 b. Test for Sulphate ion
 c. $\text{Na}_2\text{SO}_4 + \text{BaCl}_2 \rightarrow \text{BaSO}_4 + 2\text{NaCl}$
21. a. Zinc
 b. It is due to the decrease of the concentration of Cu^{2+} ions in the solution.
 c. $\text{CuSO}_4 + \text{Zn} \rightarrow \text{Cu} + \text{ZnSO}_4$
22. a. Distillation
 b. Liquation
 c. Electrolysis.
23. Statements b, c and e are the correct ones.
24. a. **Roasting** - Heating the concentrated ore in the presence of a current of air at a temperature below its melting point.
Calcination - Heating the concentrated ore in the absence of air at a temperature below its melting point.
 b. Carbonate ores
25. a. 10
 b. 85
 c. 44
 d. 44.8
26. a. Chemical energy changed to electrical energy
 b. Anode (Cu) \rightarrow cathode (Ag)
 c. Silver (Ag) (low reactive metal acts as cathode)
 d. $\text{Cu} \rightarrow \text{Cu}^{2+} + 2\text{e}^-$ (Oxidation)
27. a. Forward reaction increases
 b. Forward reaction increases

- c. Forward reaction increases
- d. Forward reaction increases

28. Chain isomerism – (a) and (d)
 Functional isomerism – (b) and (e)

29.

Liquid state	Gaseous state
Low energy	High energy
Attractive force between molecules is high.	Attractive force between molecules is very low.
Freedom of movement is less than that of in Gaseous state	Freedom of movement is Very High

30. a. Coke/ Carbon (C)
 b. $\text{Fe}_2\text{O}_3 + 3\text{CO} \rightarrow 2\text{Fe} + 3\text{CO}_2$
 c. CaO
 d. Pig iron

31. a. $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 4s^2$
 b. Group – 7 Period - 4
 c. $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5$

32. a. Addition reaction
 b. Combustion
 c. Thermal cracking
 d. Substitution reaction