SSLC 2022
CHEMISTRY ANSWER KEY
by
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1	C_2H_2
2	3d
3	Leaching
4	H_2- Hydrogen
5	Avogadro Number (6.022×10^{23})
6	At equilibrium point, the rate of forward reaction is equal to rate of backward reaction.
7	Sodium
8	1
9	Cathode
10	a. ammonia gas and hydrogen chloride gas are formed b. NH_3 (g) + HCl (g) → NH_4Cl(s)
11	Molar mass of ammonia (NH_3) = 14 + 3 = 17 gm In 22.4l of NH_3 = 17gm 1 l of NH_3 = 17/22.4 44.8l = 17/22.4 of 44.8 = 17 x 2 = 34 gm
12	a. The process of obtaining coating of metal over another metal using electrolysis is known s electroplating. b. Copper sulphate ($CuSO_4$)
13	a. $1s^2 2s^2 2p^6 3s^2 3p^5$. b. Group No: 17, period No: 3
14	a. Pig iron b. Alnico c. Even though alloy steels contain the same components they possess different properties because the ratio of the component elements are different.
15	a. Amount of product increases b. Amount of product increases c. Amount of product increases
16	a. $CH_4 + 2O_2 \rightarrow \underline{CO_2} + 2H_2O$ b. Polymerisation c. For coating on the inner surface of non-stick cookware.
17	a. compound (ii) & (iii) b. Functional isomerism c. One

18	a. The gas pressure in cylinder B is higher than cylinder A b. Boyle's law c. PV=20, V 20L so P= 20/20= 1 atm
19	a. Fe_2O_3 b. CO (Carbon Monoxide) c. Calcium carbonate decomposes to give calcium oxide and carbon dioxide at high temperature in the furnace, this calcium oxide (flux) reacts with SiO2 (gangue) in the ore to form easily melting calcium silicate(slag). d. $CaO + SiO_2 \rightarrow CaSiO_3$
20	a. 5 b. Methyl c. 2 d. 2 – Methylpentane
21	a. contact process b. Vanadium (V) oxide (V_2O_5) c. The sugar turns into black color. Concentrated sulphuric acid is a dehydrating agent and it burns the orqanic compounds like sucrose, so the colour of the solution turns black.
22	a. $CH_3 – COOH$ (acetic acid) b. $CH_3 – COO – CH_2 – CH_3$ (Ethyl Ethanoate) c. $CH_3 – CH_2 – OH$ d. $C_{12}H_{22}O_{11}$ (Sucrose)
23	a. $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^6\ 3d^5\ 4s^2$ b. d Block c. Transition element d. +4 e. $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^6\ 3d^5\ 4s^0$
24	a. Chemical energy to electrical energy b. Zinc rod (Zn) c. $Zn \rightarrow Zn^{2+} + 2^{e-}$ d. Anode (Zn) e. $Zn + Cu^{2+} \rightarrow Zn^{2+} + Cu$