

**Chemistry Answer Key- English Medium**

1. 14
2.  $C_2H_4$
3. These metals are less reactive, so they are not forming into compounds and found in the native state
4.  $6.022 \times 10^{23}$
5. Isoprene
6. Quick Lime (Calcium Oxide)
7.  $AgNO_3$
8. Chemical Energy to Electrical Energy
9. a. Chlorine  
b.  $Na^+ + e^- \rightarrow Na$
10. a. (ii)  
b. Half Filled d orbitals
11. a. A -  $CH_3 - CH_3$  (Ethane)  
b. B -  $CH_3 - CH_2Cl$  (Chloroethane)
12. a.  $SO_2$  (Sulphur dioxide)  
b.  $H_2S_2O_7$  (Oleum)
13. a. Mg  
b. Hydrogen ( $H_2$ )
14. a.  $C_4H_6$   
b. But - 1 - yne
15. a. In Calcination, the heating is done in the presence of air and carbonate ores are used for the process, whereas in roasting the heating is done in the absence of air and sulfide ores are used.
16. a.  $C_6H_{14}$   
b.  $C_nH_{2n+2}$

17. a.  $\text{FeCl}_2$   
 b.  $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5$   
 c. The outermost electrons are in 3d and 4s, they are comparable energy or it have least energy difference.
18. a.  $\text{Fe}_2\text{O}_3$   
 b. CO- Carbon monoxide  
 c. CaO
19. a. 5  
 b. 3  
 c. 3-Methylpentane
20. Tin- Liquefaction  
 Copper- Electrolytic refining  
 Zinc- Distillation
21. a. 2  
 b. X  
 c.  $\text{XY}_2$
22. C:  $\text{N}_2 + 3\text{H}_2 \rightarrow 2\text{NH}_3$  - Forward reaction  
 D:  $2\text{NH}_3 \rightarrow \text{N}_2 + 3\text{H}_2$  - Backward reaction  
 Point A is equilibrium point where the rate of forward reaction and backward reaction becomes equal.
23. a.  $112 / 22.4 = 5$  moles  
 b.  $5 \times 44 = 220$  g  
 c.  $5 \times 6.022 \times 10^{23}$
24. a. Iron nail in  $\text{CuSO}_4$  (Copper sulphate) solution  
 b. Displacement reaction  
 c.  $\text{Fe} + \text{CuSO}_4 \rightarrow \text{FeSO}_4 + \text{Cu}$
25. a. 12  
 b. s block  
 c. Period number  $\rightarrow 3$   
 Group number  $\rightarrow 2$
26. a. Methoxyethane  
 b. They have same molecular formula  
 c. Functional isomerism  
 d.  $\text{CH}_3 - \text{CH} - \text{CH}_3$   
           |  
           OH
27. a. Anode - Zinc (Zn)

Cathode – Copper (Cu)

b. Zinc → Copper (From Anode to Cathode)

c.  $\text{Zn} \rightarrow \text{Zn}^{2+} + 2\text{e}^-$  (Oxidation)

28. a. Increases

b. Decreases

c. Increases

d. Increases

29. a. Levigation

b. Magnetic separation

c. Froth floatation

d. Leaching

30. a. As the pressure of water decreases when the bubble moving upwards, the size of the air bubbles rising from the bottom of an aquarium increases while going up.

b. Boyle's law

c. At a constant temperature, volume of a definite mass of a gas is inversely proportional to its pressure

31. Energy of molecules is very high

Distance between molecules is very high

As the collisions of molecules are perfectly elastic in nature, there is no lose of energy

When compared to the total volume, the real volume of molecules is very less

32.

Reactants (A)	Products (B)	Name of Reaction (C)
$\text{CH}_3 - \text{CH}_3 + \text{Cl}_2$	$\text{CH}_3 - \text{CH}_2\text{Cl} + \text{HCl}$	Substitution reaction
$\text{C}_2\text{H}_6 + \text{O}_2$	$\text{CO}_2 + \text{H}_2\text{O}$	Combustion
$n\text{CH}_2 = \text{CH}_2$	$[\text{CH}_2 - \text{CH}_2]_n$	Polymerisation
$\text{CH}_3 - \text{CH}_2 - \text{CH}_3$	$\text{CH}_2 = \text{CH}_2 + \text{CH}_4$	Thermal cracking