

DISA 22- CHEMISTRY- SET B ANSWER KEY

1. s
2. Gram molecular mass
3. Mg
4. CaO
5. High Solubility in water
6. carboxylic
7. Ante penultimate Shell
8. 6.022×10^{23}
9. +4
10. a) Froth floatation
b) Impurities are heavier and sulphide ore lighter
11. a) 2 mole
b) $2 \times 6.022 \times 10^{23}$
12. a) Methoxy ethane $\text{CH}_3\text{-O-CH}_2\text{-CH}_2\text{-CH}_3$
b) $\text{CH}_3\text{-CH}_2\text{-CH}_2\text{-OH}$ or $\text{CH}_3\text{-}\overset{\text{OH}}{\underset{|}{\text{CH}}}\text{-CH}_3$
13. a) 17
b) Period 3, Group 17
c) $1s^2 2s^2 2p^6 3s^2 3p^6$
14. a) $a = 400$, $b = 900$
b) Charle's Law
c) if an inflated balloon is kept in sunlight it will burst after sometime
15. a) $B < C < A$
b) $10 \times 6.022 \times 10^{23}$ molecules
16.
 $\text{CH}_3\text{-C}\equiv\text{CH}$ ---- Alkyne-----Tripple bond
 $\text{CH}_3\text{-CH}_2\text{-OH}$ ---- Alcohol--- Hydroxyl group
 $\text{CH}_3\text{-CH}_2\text{-O-CH}_3$ Ether--- Alkoxy group
17. a) Bauxite
b) Leaching
c) Alumina mixed with molten Cryolite
18. a) $1s^2 2s^2 2p^6 3s^2 3p^5$
b) 17
c) Period 3, Block – p
19. a) Haematite, coke, Calcium carbonate
b) Lime stone decomposes to give Calcium oxide which acts as a flux
c) Carbon monoxide (CO)

20. a) 6
b) Hex
c) Branch – Methyl
Position – 3
d) 3- Methyl hexane
21. a) Cathode – Sodium (Na)
b) $2\text{Cl}^- \rightarrow \text{Cl}_2 + 2\text{e}^-$
c) Electrical energy to chemical energy
d) For the production of metals , non metals, compounds and for refining metal
- 22 a) Contact process
b) The dissolution of SO_3 in water is an exothermic process. It may turn sulphuric acid initially formed into fine fog like particles which hinder further dissolution.
c) Oleum
23. a) Zinc
b) Zinc to Copper
c) Copper
d) Reduction
e) $\text{Zn} + \text{Cu}^{2+} \rightarrow \text{Zn}^{2+} + \text{Cu}$
24. a) $\text{N}_2(\text{g}) + 3\text{H}_2(\text{g}) \rightarrow 2\text{NH}_3(\text{g}) + \text{heat}$
b) Reactants – 4 moles
Products - 2 moles
c) a) Increase the concentration of reactants
b) Use high pressure (150- 300)