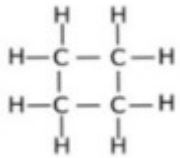
# SSLC EXAMINATION: 2024

## CHEMISTRY

**Max. Score:40** **Time: 1½ hrs**

---

1. Actinoids **1**
2. Glycerol **1**
3. Froth floatation **1**
4. Ammonia ($NH_3$) **1**
5. $H_2$ **1**
6. a.Nichrome. b. Stainless steel & Nichrome **2**
7. a. +3 **2**
   b. In d block elements, there is only a small difference of energy between outermost s sub shell and penultimate d sub shell. So under suitable condition, electrons in the penultimate d sub shell also take part in chemical reaction along with the outer most s electrons.
8. a.Alkene **2**
   b.



9. a.Pressure = 2/2 = 1 atm 2
   b. Boyle's law
10. a. $CH_3$ - $CH_2$ – COO – $CH_3$ 2
    b.Compounds ii & v
    That is, $CH_3$ - $CH_2$ – COOH & $CH_3$ - OH
11. a. Contact processes **3**
    b.Vanadium pentoxide
    c. Dehydration: It is the ability of a substance to absorb chemically combined water or to remove hydrogen & oxygen from a substance in the ratio corresponding to that of water. Sulphuric acid is a strong dehydrating agent.
12. a. Copper bangle **3**
    b. Silver nitrate solution. ( Or mixture of silver nitrate and Silver cyanide solution)
    c. $Ag \rightarrow Ag^+ + 1e$
13. a. 6 **3**
    b. Methyl radical
    c. 3 – methyl hexane
14. a. Bauxite 3
    b. b. i. Powdered bauxite is added to hot concentrated NaOH solution. Then it is converted to Sodium aluminate solution.
    ii. After filtering out impurities, a small amount of Aluminium Hydroxide [$Al(OH)_3$] is added and well diluted with water. Subsequently, a large amount of aluminium hydroxide precipitates.
    iii. The $Al(OH)_3$ crystals are separated and heated thoroughly, leading to its decomposition into $Al_2O_3$ which is called Alumina.
    $2Al(OH)_3 + heat \rightarrow Al_2O_3 + 3H_2O$
15. a. $CH_3 – CH_3$ 3
    b. $CH_3 – CHCl – CH_2Cl$
    c. $CH_2 = CH_2$
16. a.26 b.3d **4**
    c. Period:4 Group: 8



Ebrahim Vathimattom.Ph:9495676772

17. a.Ether **4**
    b.$C_3H_8O$
    c.Methoxy ethane
    d. $CH_3 – CH_2 – CH_2 – OH$
18. a. 22.4 L **4**
    b. Number of moles = 68/17 = 4
    Volume of 68 g Ammonia = 4x22.4 = 89.6 L
    c. Number of molecules = $4x6.022x10^{23}$
19. a.When rate of forward reaction and rate of backward reaction becomes equal. **4**
    b.i. Product decreases.
    ii. Product increases.
    Iii. Product increases.
20. a. Cu & Ag **4**
    b. Mg & Zn
    c.i.Zn
    c.ii.$Fe^{2+} + 2e \rightarrow Fe$