

Question One- Complete the table

| Name | Structure | Functional group(s) |
|---------------------|--|---------------------|
| 2-methyl Pentane | | Alkane |
| | $ \begin{array}{c} \text{OH} \quad \text{OH} \\ \quad \\ \text{H}-\text{C}-\text{C}-\text{H} \\ \quad \\ \text{H} \quad \text{H} \end{array} $ | |
| | $ \begin{array}{cccc} \text{H} & \text{NH}_2 & \text{H} & \text{H} \\ & & & \\ \text{H}-\text{C}-\text{C}-\text{C}-\text{C}-\text{H} \\ & & & \\ \text{H} & \text{H} & \text{H} & \text{H} \end{array} $ | |
| Propanoic acid | | |
| 1,1-dichloro ethane | | |
| | $ \begin{array}{c} \text{H} \quad \text{H} \\ \quad \\ \text{H}_3\text{C}-\text{C}=\text{C}-\text{CH}_3 \end{array} $ | |
| Ethyne | | |

Question Two- Complete the table

| Reaction | Type of reaction | Reagents |
|--|-------------------------|--|
| Example: Ethene → Ethanol | Addition | H ₂ O/H ⁺ (or H ₂ SO ₄ (aq)) |
| Ethanol → Ethanoic acid | | |
| Ethene → Ethan-1,2-diol | | |
| Ethene → 1,2-dichloro ethane | | |
| Ethanol → 1-chloro ethane | | |
| 1-chloroethane → 1-amino ethane | | |
| 1-chloroethane → Ethene | | |
| 1-chloroethane → Ethanol | | |
| Ethanol → Ethene | | |
| Ethanoic acid → sodium ethanoate | | |
| 1-amino ethane → ethyl ammonium chloride | | |