

11. Why is the bond angle $\text{C}-\text{O}-\text{H}$ in alcohols is slightly less than the tetrahedral angle?

Ans: It is due to the repulsion between the unshared electron pairs of oxygen atom.

12. Why is the bond angle $\text{C}-\text{O}-\text{C}$ slightly greater than the tetrahedral angle in ethers?

Ans: It is due to the repulsive interaction between the two bulky – R groups or alkyl groups.

13. Name the product obtained when propene is subjected to acid catalysed hydration.

Ans: Propan-2-ol or 2-propanol

14. In the reaction, $\text{H}_2\text{C}=\text{CH}_2 + \text{H}_2\text{O} \xrightarrow{\text{H}^+} \text{X}$. Identify X.

Ans: Ethanol

15. In a reaction, $\text{CH}_3-\text{CH}=\text{CH}_2 \xrightarrow[\text{H}_2\text{O} / \text{NaOH}]{\text{diporane}} \text{X}$. Name the product X formed in the reaction.

Ans: Propan-1-ol.

16. Write the chemical name of cumene.

Ans: Isopropyl benzene.

17. The boiling point of alcohols is much higher than ethers and other classes of compounds with similar molecular masses. Give reason.

Ans: Due to intermolecular hydrogen bonding in alcohols.

18. Give reason: Lower alcohols are soluble in water.

Ans: Due to the formation of hydrogen bonds with water molecules.

19. Name the compound which is also known as carbolic acid.

Ans: Phenol