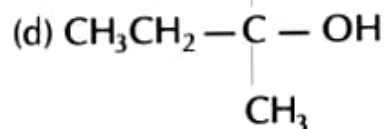
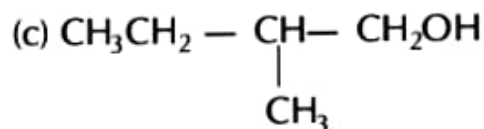
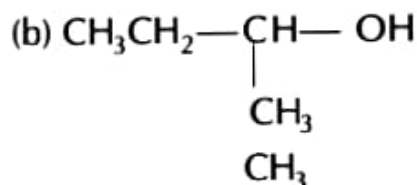
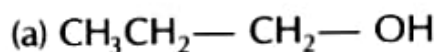


2 Which of the following alcohols will yield the corresponding alkyl chloride on reaction with concentrated HCl at room temperature?



💡 Thinking Process

To solve this problem, students keep in mind that tertiary alcohol being most reactive react at room temperature.

(d) When alcohols are treated with conc., HCl at room temperature than alkyl chloride is formed. This reaction follows $\text{S}_{\text{N}}1$ mechanism. $\text{S}_{\text{N}}1$ mechanism completes in two steps. In first step, a carbocation is formed and this carbocation is attacked by nucleophile in second step.

The attack of nucleophile to the carbocation is possible only if the carbocation is stable. Compound present in option (d) will give tertiary carbocation in step I. Tertiary carbocation is most stable so it is further attacked by Cl^- nucleophile as follows

