Show how are the following alcohols prepared by the reaction of a suitable Grignard reagent on methanal?

(ii)

Answer

(i)

HCHO + CH<sub>3</sub> - CH - MgBr 
$$\longrightarrow$$
 CH<sub>3</sub> - CH - CH<sub>2</sub>

| CH<sub>3</sub>
| CH<sub>3</sub>
| H<sup>+</sup>  $\downarrow$  H<sub>2</sub>O

| Mg(OH)Br + CH<sub>3</sub> - CH - CH<sub>2</sub> - OH

(ii)

## Question 11.5:

Write structures of the products of the following reactions:

(i)

$$CH_3 - CH = CH_2 \xrightarrow{H_2O/H^+}$$

(ii)

## i. Reimer-Tiemann reaction

## ii. Kolbe's reaction