1.Write IUPAC names of the products obtained by addition reactions of HBr to hex-1-ene:(i) in the absence of peroxide and(ii) in the presence of peroxide.

(i) In the absence of peroxide. Hexene reacts with HBr in the absence of organic peroxide to form 2-Bromohexane. Addition takes place according to Markownikoffs rule.

$$CH_2 = CH - CH_2 - CH_2 - CH_2 - CH_3 + H - Br$$

$$Hex - 1 - ene$$

No peroxide M. rule  $CH_3 - CH - CH_2 - CH_2 - CH_2 - CH_3$  |Br 2-Bromohexane

(ii) In the presence of peroxide. Hex-1-ene reacts with HBr in the presence of peroxide to form 1bromohexane.

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CH_{2} = CH - CH_{2} - CH_{2} - CH_{2} - CH_{3} + H - Br
\xrightarrow{\text{Hex}-1-\text{ene}} CH_{2} - CH_{2} - CH_{2} - CH_{2} - CH_{2} - CH_{2} - CH_{2}
|
Br
1-Bromohexane
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## <sup>2</sup> An alkene A on ozonolysis gives a mixture of ethanal and pentan - 3 - one. Write structure and IUPAC name of A.



A)

The alkene A is 3-Ethylpent-2-ene. On ozoloysis, it gives a mixture of ethanal and pentan-3-one. 3. Convert Propene to propan-2-ol.

To convert from Propene to Propan-2-ol, the addition of H<sub>2</sub>SO<sub>4</sub> takes place in accordance with Markovnikov 's rule i.e.

 $\begin{array}{c} \text{CH}_{3}\text{CH}=\text{CH}_{2}+\text{H}_{2}\text{SO}_{4} \xrightarrow{\text{H}_{2}\text{O}} \text{CH}_{3}-\text{CH}_{2}-\text{CH}_{3} \\ & | \\ & | \\ & | \\ & | \\ & | \\ & \text{OH} \\ & \\ & \text{Propan-2-ol} \end{array}$