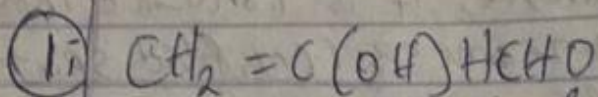


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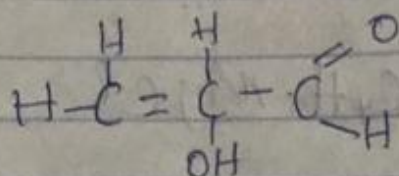
19/11/2019/389.

Chemistry Assignment #15/2019

Answers

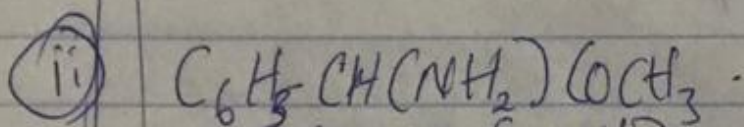


The structural formula:

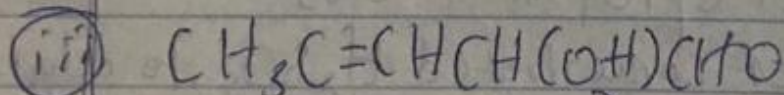


functional groups present

- Alkene ( $\text{C}=\text{C}$ )
- Alkanol ( $\text{OH}$ )
- hydroxyl group, Aldehyde  $\begin{array}{c} \text{O} \\ // \\ \text{C} \\ | \\ \text{H} \end{array}$

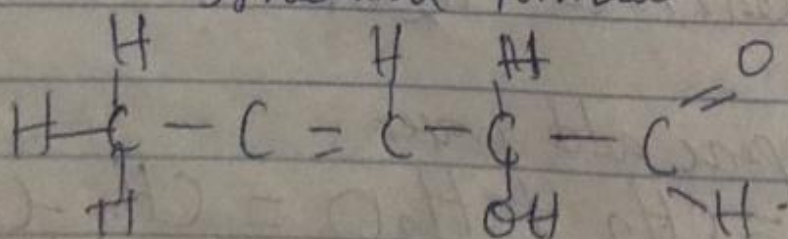


- Amine ( $-\text{NH}_2$ )
- Alkanone / Ketone  $\begin{array}{c} \text{O} \\ // \\ \text{C}-\text{R} \end{array}$
- phenyl or Aromatic group ( $\text{C}_6\text{H}_5$ )



- Alkene ( $\text{C}=\text{C}$ )
- hydroxyl group ( $\text{OH}$ )
- Alkanol / Aldehyde ( $\text{CHO}$ )

Structural formula:



(2) Mass of pure (2R, 3R) - tartaric acid = 0.886g  
Volume = 10 cm<sup>3</sup>, observed rotation = +1.0°, length of  
sample = 1.0 dm.

specific rotation?

$$\therefore \text{Conc. in g/cm}^3 = 0.886/10 = 0.0886 \text{ g/cm}^3,$$

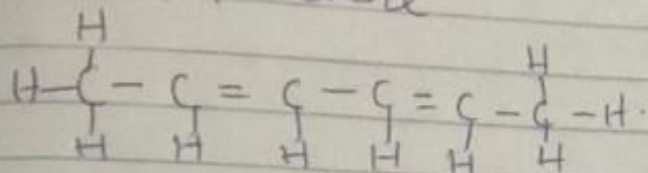
$$\text{specific rotation} = \frac{\text{observed rotation}}{(\text{conc}) \times (\text{length of tube})}$$

$$= +1.168 \times 10^{10} \text{ g}^{-1} \text{ cm}^3 \text{ dm}^{-1}$$

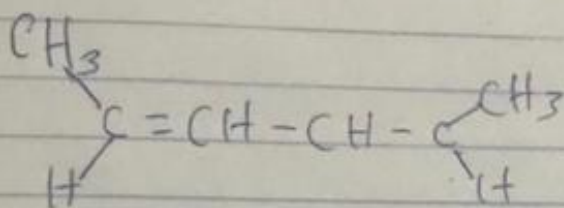
191 mhsol / 389.

∴ Answer for No 2 =  $11.68 \text{ g}^{-1} \text{ cm}^3 \text{ dm}^{-1}$

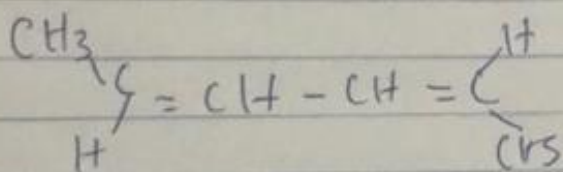
③ Hexa-2,4-diene



Isomers (Geometric).

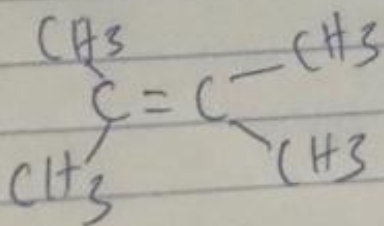
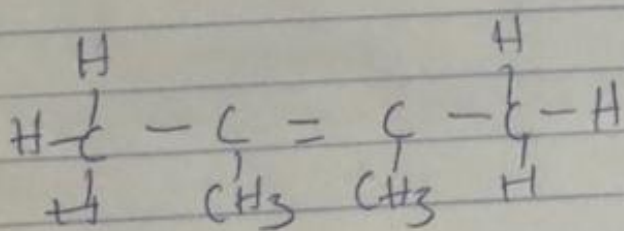


Cis-Hexa-2,4-diene.



Trans-Hexa-2,4-diene.

④ 2,3-dimethyl but-2-ene



It has no Cis-trans isomerism as all substituents are identical.