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MATRIC NO. 19/MHS011/041

DEPARTMENT: MBBS



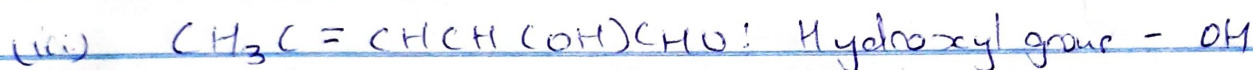
Functional groups: Double bond - $\text{C}=\text{C}$

Hydroxyl group - OH

Carbonyl group - $\text{C}=\text{O}$



Carbonyl group - $\text{C}=\text{O}$



Carbonyl group - $\text{C}=\text{O}$

2. Specific rotation = $\frac{\text{Observed rotation (degrees)}}{(\text{conc. in g/cm}^3) \times (\text{Path length of sample cell in dm})}$

Observed rotation = $+1.0^\circ$

Path length = 1.0 dm

Conc. in g/cm^3 : $0.856 \text{ g} \rightarrow 1 \text{ cm}^3$

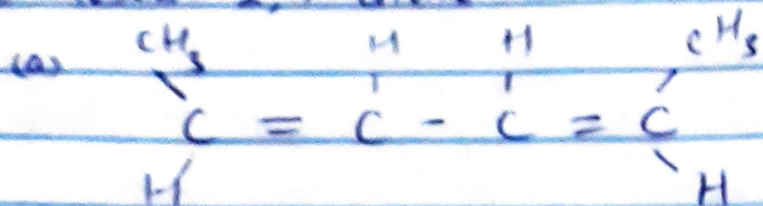
$x \text{ g} \rightarrow 1000 \text{ cm}^3$

$x = 8.56 \text{ g/cm}^3$

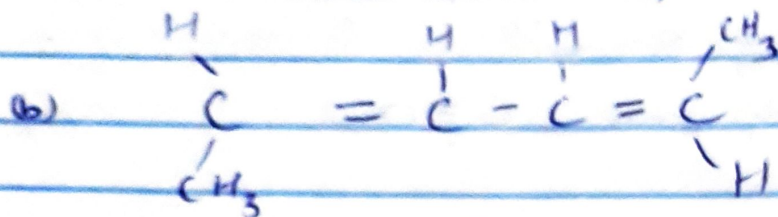
Specific rotation = $\frac{+1.0^\circ}{8.56 \text{ g/cm}^3 \times 1.0 \text{ dm}}$

$= 0.1168 \approx \underline{\underline{0.117^\circ \text{ g}^{-1} \text{ cm}^3 \text{ dm}^{-1}}}$

3. (i) Hexa-2,4-diene:

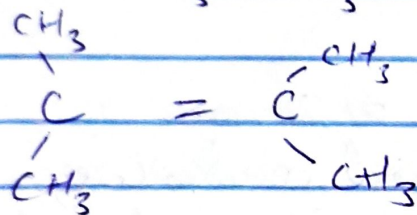
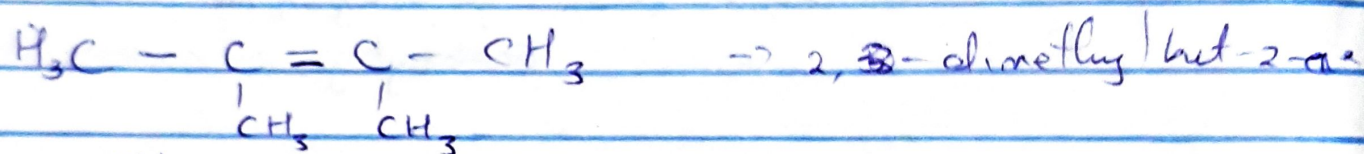


Cis-hexa-2,4-diene



Trans-hexa-2,4-diene

(ii) 2,3-Dimethylbut-2-ene:



Neo-butene