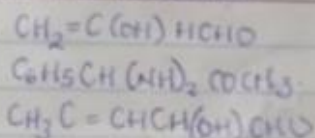


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1. ORGANIC MOLECULE



FUNCTIONAL GROUP PRESENT

Aldehyde $[-\text{CHO}]$; Hydroxyl $[-\text{OH}]$
 Carbonyl group $[-\text{CO}]$; Amine $[-\text{NH}_2]$
 Hydroxyl group $[-\text{OH}]$; Aldehyde $[-\text{CHO}]$

2. Specific Rotation = $\frac{\text{Observed rotation in degrees}}{\text{Concentration in } \text{g cm}^{-3} \times \text{path length of sample cell in dm}}$

Observed rotation = $+1.0^\circ$

concentration in g cm^{-3} :- 0.0856 g cm^{-3}

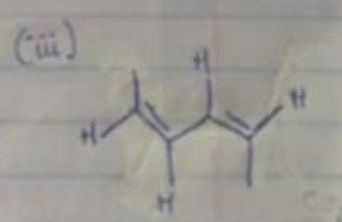
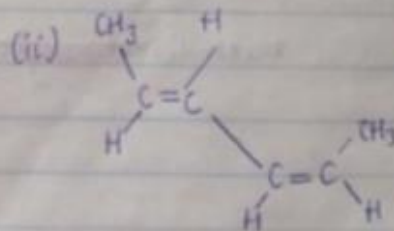
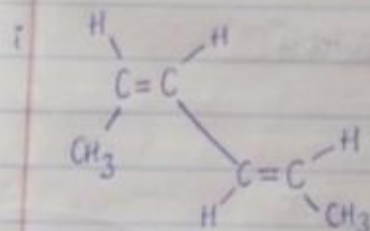
$0.856 \text{ g in } 10 \text{ cm}^3$

$\therefore \text{in } 1 \text{ cm}^3 (\text{per cm}^3) = 0.856 \text{ g} \div 10 \text{ cm}^3 = 0.0856 \text{ g cm}^{-3}$

path length of sample cell in $\text{dm}^3 = 1.0 \text{ dm}$

$$\therefore \text{Specific Rotation} = \frac{+1.0^\circ}{0.0856 \text{ g cm}^{-3} \times 1.0 \text{ dm}} = +11.682 \text{ g}^{-1} \text{ cm}^2 \text{ dm}^{-1}$$

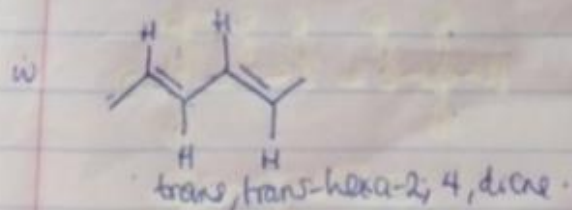
3. Isomers of Hexa-2,4-diene [Geometric isomers]



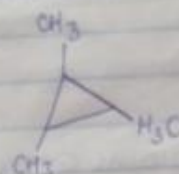
(ii) Trans-1, cis-4-dimethylbut-2-ene

(i) Cis-1, trans-4-dimethylbut-2-ene

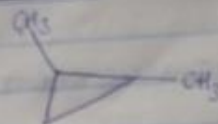
(iii) cis, cis-hexa-2,4-diene



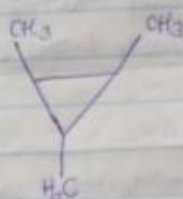
Geometric Isomers of 2,3-dimethyl but-2-ene



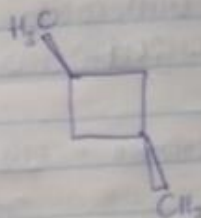
1-cis-2-trans-3-trimethylcyclopropane



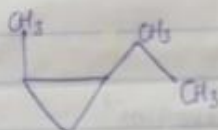
1-methyl-trans-2-ethylcyclopropane



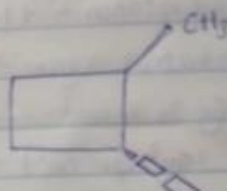
cis-1,2,3-trimethylcyclopropane



cis-1,3-dimethylcyclobutane



cis-1-methyl-2-ethylcyclopropane



trans-1,2-dimethylcyclobutane



trans-1,3-dimethylcyclobutane

