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1) $\text{CH}_2 = \text{C}(\text{OH})\text{CH}_2\text{CHO}$: Aldehyde
Alkanol
Alkene.

2) $\text{C}_6\text{H}_5\text{COCH}_2\text{COCH}_3$: Ketone
Amine

3) $\text{CH}_3\text{C} = \text{CHCH}_2\text{CHO}$: Aldehyde
Alkanol.
Alkene

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

Conc (g cm^{-3}) = $0.856 \text{ g in } 10 \text{ cm}^3$
In $1 \text{ cm}^3 = 0.0856 \text{ g}$.

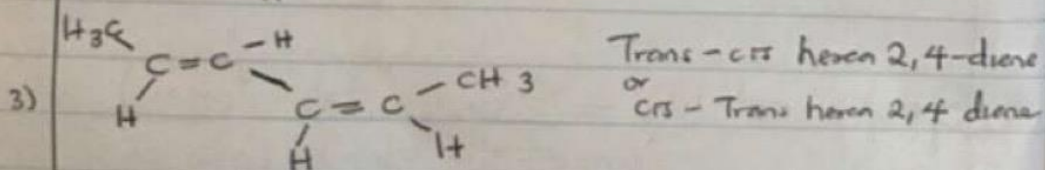
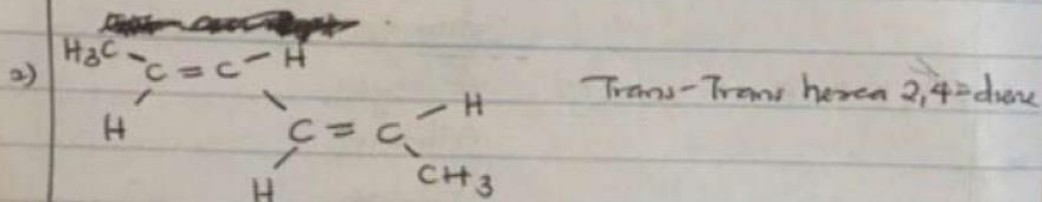
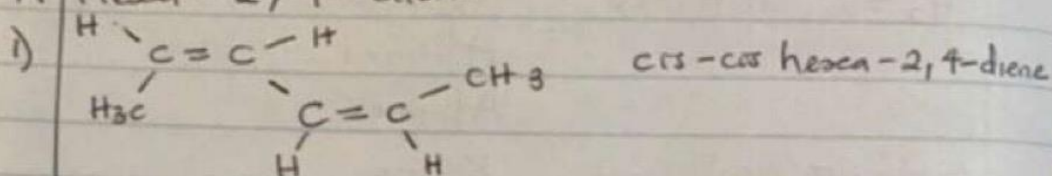
= $\frac{+1.0^\circ}{0.0856 \text{ g cm}^{-3} \times 1 \text{ dm}}$
= $+11.68^\circ \text{ g}^{-1} \text{ cm}^3 \text{ dm}^{-1}$

3) Possible geometric isomers for

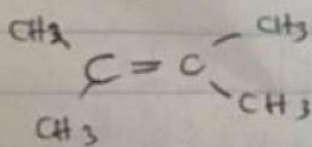
A Hexa-2,4-diene

B 2,3-Dimethyl but-2-ene

A Hexa-2,4-diene



B 2,3-Dimethyl but-2-ene



can not form geometric isomers. Each double bonded carbon has identical groups

