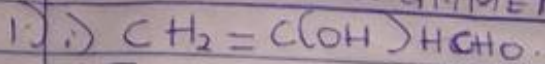


NAME: OBUKOFE OKEOGHENE FAVOUR.  
MATRIC NUM: 19/MH501/275.

CHM 102 ASSIGNMENT

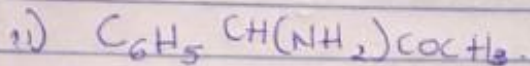


Functional groups present are!

⇒ Alkene.

⇒ Hydroxyl group.

⇒ Alkanal.

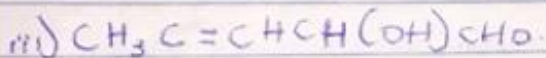


Functional groups present are!

⇒ Amine.

⇒ Alkaneone.

⇒ Phenyl group.



Functional groups present are!

⇒ Alkene.

⇒ Alkanal.

⇒ Hydroxyl group.

2) Specific rotation =  $\frac{\text{observed rotation (degrees)}}{\text{concentration (g cm}^{-3}) \times \text{path length of sample in each dm}}$

Observed rotation =  $+1.0^\circ$ .

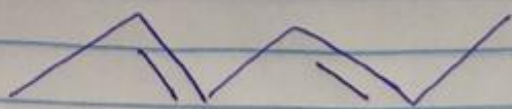
concentration =  $\frac{0.856 \text{ g}}{10 \text{ cm}^3} = 8.56 \times 10^{-2} \text{ g cm}^{-3}$ .

path length =  $1.0 \text{ dm}$ .

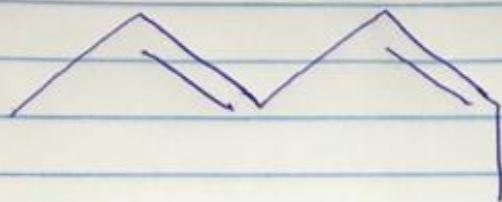
∴ Specific rotation =  $\frac{1.0^\circ}{8.56 \times 10^{-2} \text{ g cm}^{-3} \times 1 \text{ dm}}$

Specific rotation =  $11.68^\circ \text{ g}^{-1} \text{ cm}^3 \text{ dm}^{-1}$ .

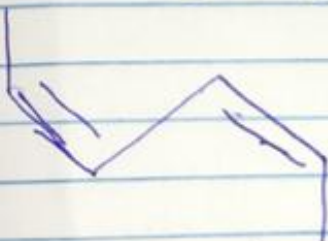
3. a) Hexan-2,4-diene has 3 geometric isomers.



(2E, 4E) - hexan-2,4-diene.



(2E, 4Z) - hexan-2,4-diene.



(2Z, 4Z) - hexan-2,4-diene.

b) 2,3-dimethyl but-2-ene.

This compound does not contain two different atoms or groups on the doubly bonded atom instead it has only methyl ( $\text{CH}_3$ ) group present. Therefore, it does not have any geometric isomer.

