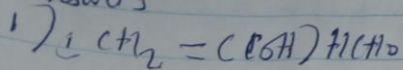
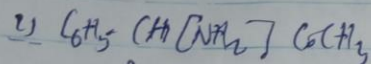


Name: Anyaarah Isanna Nche Kwabe
Department: Science
matric No: 19/Sci09/001
Course title: General chemistry or Stoichiometry

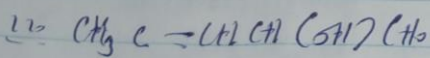
Answers



Functional group: Aldehyde, Alkene and Aromatic



Functional group: Amide



Functional group: Aldehyde, Alcohol and Ketone

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

$$\text{conc. g cm}^{-3} = \frac{0.856\text{g}}{10\text{cm}^3}$$

$$= 0.0856\text{g cm}^{-3}$$

$$\text{observed rotation} = +1.0^\circ$$

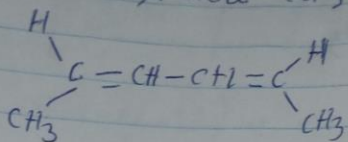
$$\text{path length of sample} = 1\text{dm}$$

$$\therefore \text{Specific rotation} = +1$$

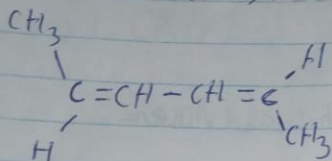
$$[0.0856]^{-1}$$

$$= 11.67\text{g}^{-1}\text{cm}^3\text{dm}^{-1}$$

3. i) Hexa-2,4-diene $(\text{CH}_3-\text{CH}=\text{CH}-\text{CH}=\text{CH}-\text{CH}_3)$

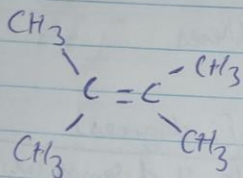


Cis: Hexa-2,4-diene



Trans Hexa-2,4-diene

ii) 2,3-dimethyl but-2-ene $(\text{CH}_3-\text{C}(\text{CH}_3)=\text{C}(\text{CH}_3)\text{CH}_3)$



Geometric isomerism is not possible for 2,3-dimethylbut-2-ene.