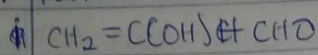
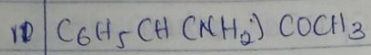


NAME: MUBOH BIN EUM EMILIA
 MATRICULATION NUMBER: 1911MHS011245
 COURSE CODES: CHEM 102
 ASSIGNMENT

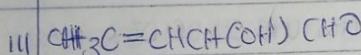
1. FUNCTIONAL GROUP PRESENT IN THE FOLLOWING COMPOUNDS



- Functional group present:
- a) Double bond chain = (Alkene)
 - b) OH hydroxyl group
 - c) single bond chain = (Alkane)
 - d) $\text{C}(\text{OH})\text{H}$ Carbinol group



- Functional group present:
- a) NH_2 (amine group)
 - b) $\text{C}=\text{O}$ Alkanone/ketone
 - c) Phenyl group with double bonds
 - d) single bond chain = (Alkane)



- Functional group present:
- a) Double bond chain = (Alkene)
 - b) single bond chain (Alkane)
 - c) OH hydroxyl group
 - d) CHO Aldehyde

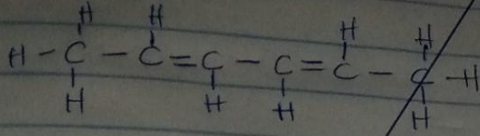
2.
$$\text{Specific rotation} = \frac{\text{observed rotation (degrees)}}{(\text{concentration } \text{g/cm}^3) \times (\text{path length of sample cell in dm})}$$

observed rotation = ~~20.2~~ 11.0°

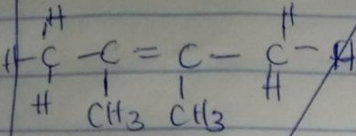
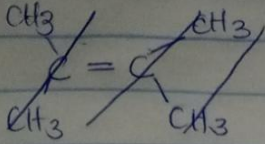
concentration (g/cm^3) = $\frac{\text{mass}}{\text{volume}} = \frac{0.856 \text{ g}}{10 \text{ cm}^3} = 0.0856 \text{ g/cm}^3$

path length of sample cell in dm = 1.0 dm

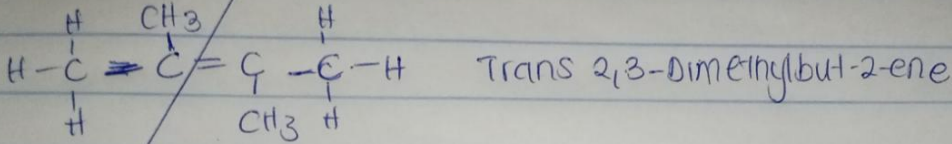
$\therefore \text{specific rotation} = \frac{11.0}{0.0856 \times 1} = 12.85 \text{ g}^{-1} \text{ cm}^3 \text{ dm}^{-1}$



ii 2,3-Dimethyl but-2-ene



cis 2,3-Dimethyl but-2-ene

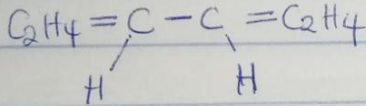


Trans 2,3-Dimethyl but-2-ene

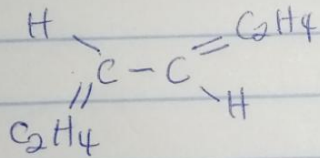
3 POSSIBLE GEOMETRIC ISOMERS

i Hexa-2,4-diene

c.



cis-Hexa-2,4-diene



Trans-Hexa-2,4-diene

i 2,3-Dimethyl but-2-ene

