

Name : AGBD HELEN CECILIA

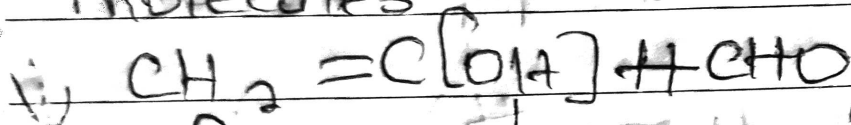
Matric No : 19/NAHS02/007

Department : Nursing

Course Code : CHM 102

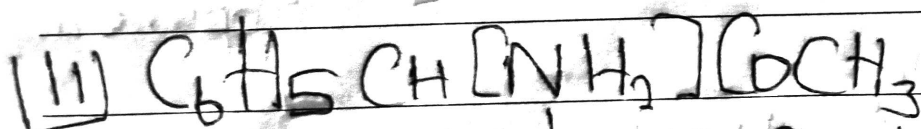
Assignment

1. Name the functional groups present in each of the following molecules:



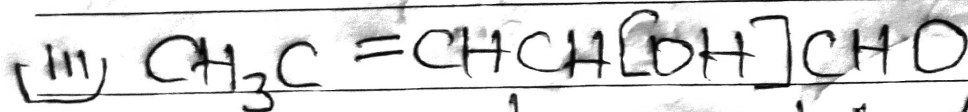
functional group :

- (i) aldehyde $[\text{CHO}]$
- (ii) alcohol $[\text{OH}]$
- (iii) alkene $[\text{=}]$



functional group :

- (i) amides $[\text{NH}_2]$
- (ii) ketones $[\text{C=O}]$



functional group :

- (i) Alkene $[\text{=}]$
- (ii) Alcohol $[\text{OH}]$
- (iii) Aldehydes $[\text{CHO}]$

② Solution

Observed rotation = 1.0°
 Concentration = $\frac{0.856 \text{ g}}{10 \text{ cm}^3} = 0.0856 \text{ g cm}^{-3}$

Length of sample cell (polarimeter) = 1.0 dm

Specific rotation = $\frac{\text{Observed rotation (degrees)}}{(\text{Conc. in } \text{g cm}^{-3}) \times \text{Path length of sample in dm}}$

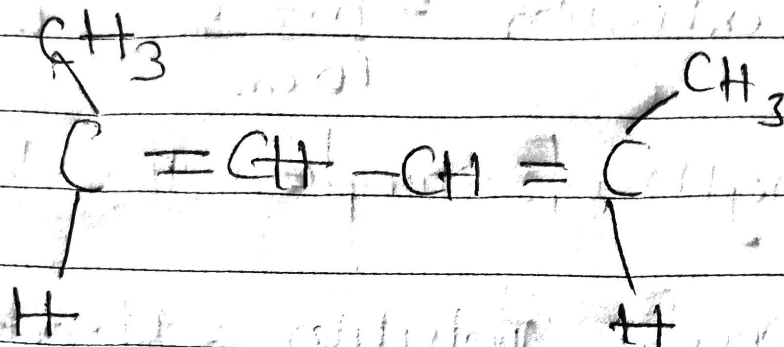
$$\text{Specific rotation of the sample} = \frac{1}{0.0856 \times 1} = 11.68 \text{ g}^{-1} \text{ cm}^3 \text{ dm}^{-1}$$

③ Draw the possible geometric isomers (where possible) for each of the following compounds:

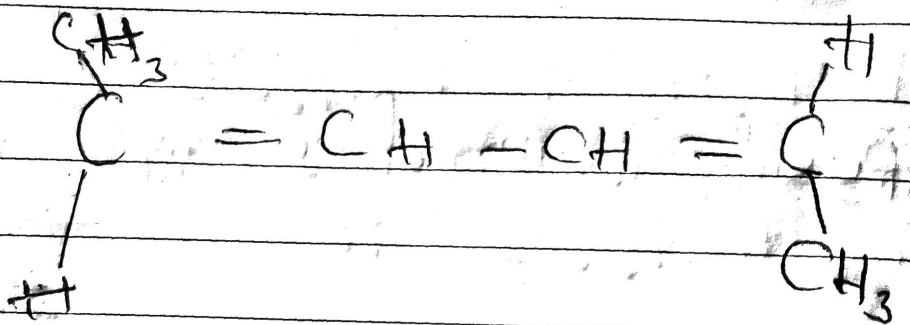
- (i) Hexa-2,4-diene
- (ii) 2,3-Dimethylbut-2-ene.

Solution,

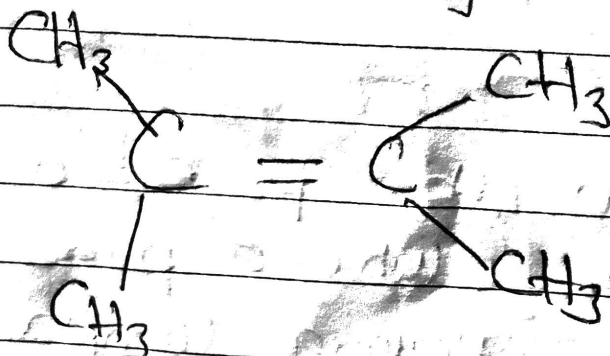
I: Hepta-2,4-diene



cis Hepta-2,4-diene



II: 2,3-Dimethylbut-2-ene



Geometric isomers is not possible for 2,3-Dimethylbut-2-ene