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DEPT: MEDICINE AND SURGERY
MATRIC NO: 19/MHS01/055
COURSE CODE: CHM 102

ASSIGNMENT

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

i) $CH_2 = C[OH]HCHO$

Functional group = Aldehyde, Alcohol and Alkene

ii) $C_6H_5CH[NH_2]COCH_3$

Functional group = Amide

iii) $CH_3C=CHCH[OH]CHO$

Functional group = Aldehyde, Alcohol and Alkene.

2 - Specific rotation = observed rotation [in degrees]
path length of sample cell in dm [conc g/cm³]

Conc, $g/cm^3 = \frac{0.858g}{10cm^3}$

$= 0.0856 g/cm^3$

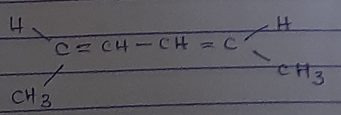
Observed rotation = +1.0°

Path length of sample = 1dm

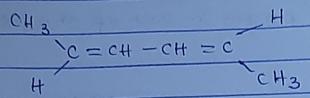
∴ Specific rotation = $\frac{+1}{[0.0856][1]}$

$= 11.68 g^{-1} cm^3 dm^{-1}$

3. (i) Hexa-2,4-diene $[CH_3-CH=CH-CH=CH-CH_3]$

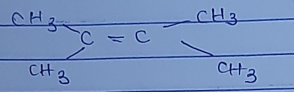


Cis: Hexa-2,4-diene



Trans hexa-2,4, diene

(iv) 2,3-dimethyl but-2-ene $[CH_3-C(CH_3)=C(CH_3)CH_3]$



Geometric isomerism is not possible for 2,3-dimethyl but-2-ene