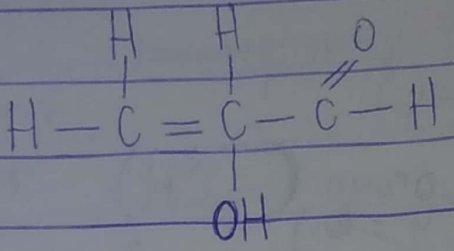
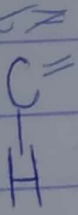
ADESOYE ADEDOLAPO ADEDOYIN
19/MHS 11/014
PHARMACY
CHEM102

16(a) $CH_2=(COH)HCHO$

Structural formula

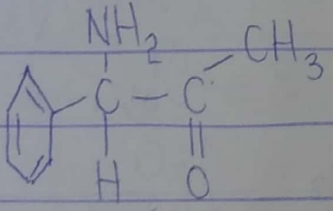


Functional groups present

I Hydroxyl group ($-OH$)
II Double Bond chains (Alkene)
III  (Alkanol)
IV Aldehyde ($-CHO$)

(b) $C_6H_5CH(NH_2)COCH_3$

Structural formula:

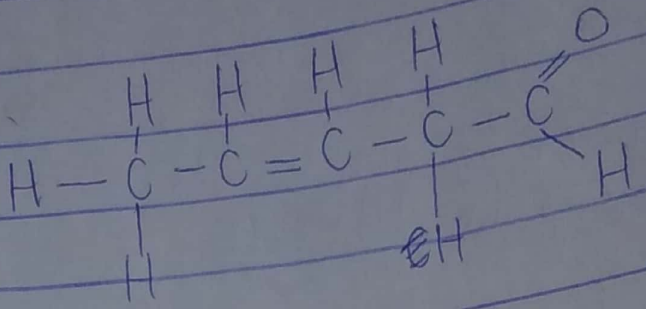


Functional groups present are

(i) Amine ($-NH_2$)
(ii) Alkanone/Ketone ($-\overset{O}{\overset{\|}{C}}-R$)
(iii) Phenyl group (C_6H_5) with double bonds

c $CH_3CH=CHCH(OH)CHO$

Structural formula :



Functional group present

(i) Alkene ($C=C$)

(ii) Hydroxyl group ($-OH$)

(iii) ~~Alkanol~~ ~~($C(=O)H$)~~

(iii) Alkanol ($C(=O)H$)

(iv) Aldehyde ($-CHO$)

2 Recall,

$[\alpha]$ ~~$[\alpha]$~~ $[\alpha]_\lambda^T = \dfrac{\alpha}{l \times c}$

where l = length of sample

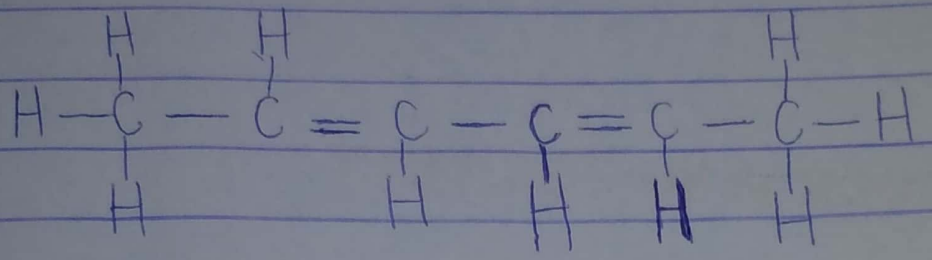
c = Mass/Volume (g/mol)

α = Observed rotation

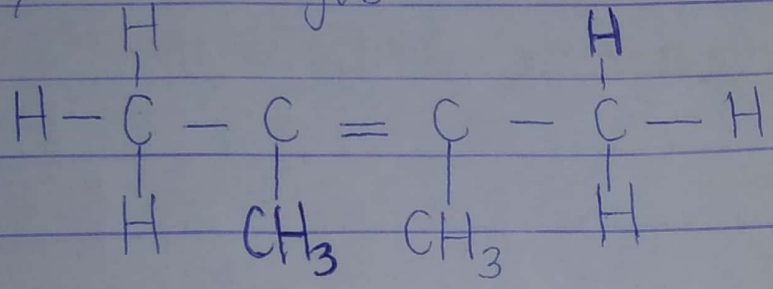
$$S_\gamma = \frac{1.0}{1.0 \times \left(\frac{0.856}{10}\right)}$$

$$S_\gamma = \frac{1}{0.0856} = 11.68°$$

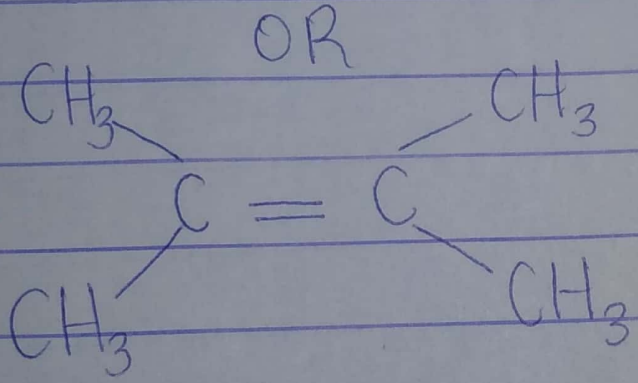
3 (i) Hexa-2,4-diene



(ii) 2,3-Dimethylbut-2-ene



OR



(Neobutene)