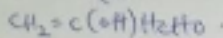


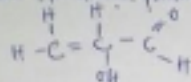
CHM 502

Solution

(1)
(i)



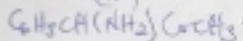
The structural formula:



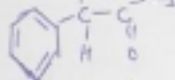
functional present are:

- Double bond chain = (Alkene)
- OH (hydroxyl group)
- $C=O$ (aldehyde)

(ii)



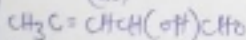
Structure:



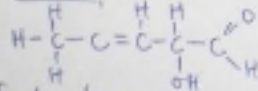
functional present

- phenyl group (C_6H_5) with double bond
- Amine
- Aldehyde / ketone ($C=O$)

(iii)



Structure:



functional present

- Alkene ($C=C$)
- Hydroxyl group (OH)
- Alkane ($C-H$)

(2)

Locals;

$$[\alpha]_D^{25} = \frac{\alpha}{l \times c}$$

where

l = length of sample tube

c = $\frac{\text{mass}}{\text{volume}}$ (g/ml) or (g/100ml)

α = observed rotation

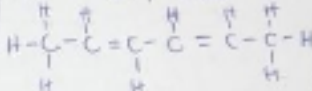
$$S_r = \frac{1.0}{1.0 \times 0.052}$$

$$S_r = \frac{1}{0.052} = \underline{\underline{19.68}}$$

(3)

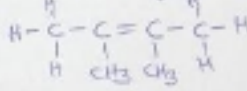
(i)

Hexa-2,4-diene

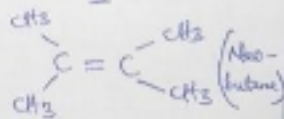


(ii)

2,3-Dimethylbut-2-ene



or



Name: Ekong, vivien Umoudoe
Matric no: 19/MHS01/148
Department: mbbs