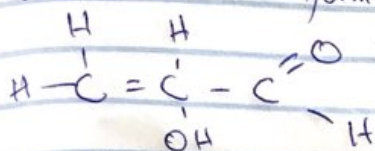


NAME: UDECHUKWU CHINONSO IFENNA
 DEPT: COMPUTER ENGINEERING
 MATRIC NO: 19/ENG02/067
 ASSIGNMENT TITLE: Stereochemistry and Functional Group

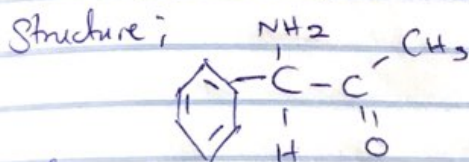
1.) (i) $\text{CH}_2 = \text{C}(\text{OH})\text{HCHO}$
 The structural formula



Functional groups present are

- Double bond chain = (Alkene)
- OH (hydroxyl group)
- $\text{C}=\text{O}$ (Alkanal)

(ii) $\text{C}_6\text{H}_5\text{CH}(\text{NH}_2)\text{COCH}_3$

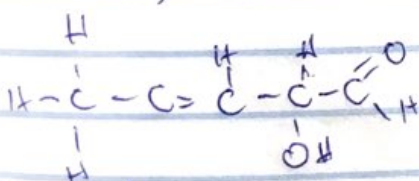


Functional groups present are

- phenyl group (C_6H_5) with double bonds
- Amine
- Alkanone / ketone ($\text{C}=\text{O}$)

(iii) $\text{CH}_3\text{C}=\text{CHCH}(\text{OH})\text{CHO}$

Structure;



Functional groups present

- Alkene ($\text{C}=\text{C}$)
- Hydroxyl group (OH)
- Alkanal ($\text{C}=\text{O}$)

2.) Recall,

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

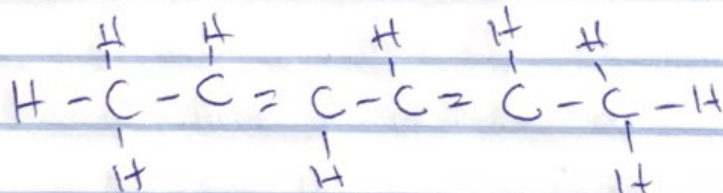
l = length of sample fuse
 c = $\frac{\text{mass}}{\text{volume}}$ (g/dm³) or (g/mol)

α = observed rotation

$$S_r = \frac{1.0}{\frac{1.0 \times (0.856)}{10}}$$

$$S_r = \frac{1}{0.0856} = 11.68$$

3 ① Hexa-2,4-diene



② 2,3-Dimethylbut-2-ene

