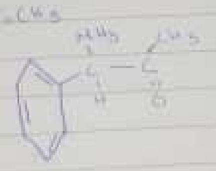
[illegible]
MBBS
19/MHS01/180
CHM 102

ASSIGNMENT

1 i) $CH_2 = C(OH)CHO$
The structure formulae: $H - \overset{H}{C} = \underset{OH}{\overset{H}{C}} - C(=O)H$

Functional groups present - Double bond carbon (Alkene)
- OH (hydroxyl group)
- $C(=O)H$ (aldehyde)

ii $C_6H_5CH(NH_2)COCH_3$
structure:



Functional groups present - phenyl group (C_6H_5) with double bonds
- Amine
- Aldehyde / ketone ($C=O$)

iii $CH_3C = CHCH(OH)CHO$
structure: $H - \underset{H}{\overset{H}{C}} - C = \overset{H}{C} - \underset{OH}{\overset{H}{C}} - C(=O)H$

Functional groups present - Alkene ($C=C$)
- Hydroxyl group (OH)
- Aldehyde ($C(=O)H$)

2 Recall: $[\alpha]_\lambda^T = \frac{\alpha}{l \times c}$

where, l = length of sample

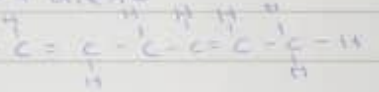
$c = \frac{\text{mass}}{\text{volume}}$ ($g\,dm^{-3}$) or (g/mol)

α = observed rotation

$S_c = \frac{1 \cdot 0}{\cdot 0 \times (0 \cdot 8564)}$

$S_c = \frac{1}{0 \cdot 0856} = 11 \cdot 68$

31 Hexa-2-4 diene



11 2,3 - Dimethylbut-2-ene