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19/MHS01/002
Medicine and Health sciences
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CHM 102 Assignment (Stereochemistry and Functional group)

1) Functional groups present in each of them;

i) $CH_2=C(OH)HCHO$
- Double bond chain (Alkene)
- OH Chydroxy (group)
- C^{O}_{-H} (Alkanol)

ii) $C_6H_5CH(NH_2)COCH_3$
- Phenyl group (C_6H_5) with double bond
- Amine
- Alkanone/ketone ($C^{C}_{O}-R$)

iii) $CH_3C=CHCH(OH)CHO$
- Alkene (C=C)
- Hydroxyl group (OH)
- Alkanol ($C^{=O}_{-H}$)

2) Recall;

$$[\alpha]^{T}_{\lambda} = \frac{\alpha}{l \times c}$$ where l = length of sample

$c = \frac{\text{mass}}{\text{volume}} \left(\frac{g}{dm}\right)$ or (g/mol)

α = observed rotation

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

$$S_\lambda = \frac{1}{0.0856} = 11.68$$

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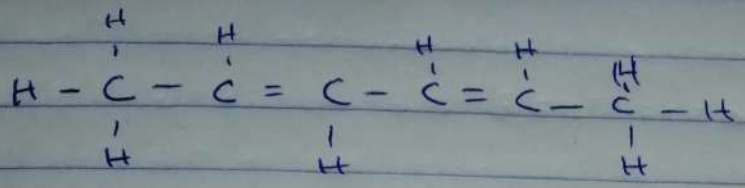
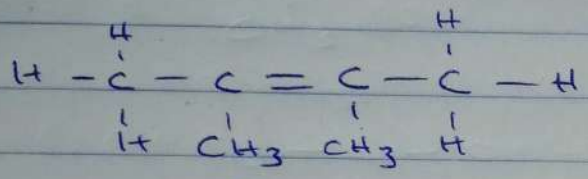
3) Geometric isomers for each of the following compounds;

i) Hexa-2,4-diene



ii) 2,3-Dimethylbut-2-ene



OR