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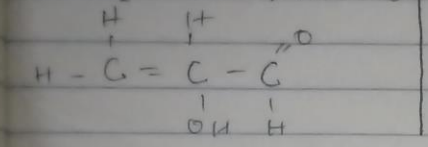
Matric no: 19/MHS01/227
Course code: CHM 102

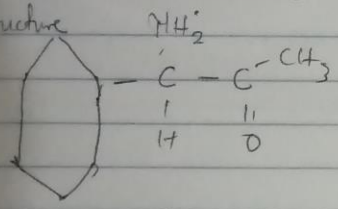
i) $CH_2=(OH)HCHO$



Functional group present are
- Double bond chain = (Alkene)
- OH (hydroxyl group)
- $C(=O)H$ (alkanol)

ii) $C_6H_5CH(NH_2)COCH_3$

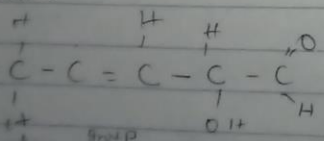
Structure



Functional group present:
- Amine
- Alkanol / Ketone $C(=O)R$

iii) $CH_3C=CHCH(OH)CHO$

Structure



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

2) Recall

$$[\alpha]_\lambda = \frac{\alpha}{l \times c}$$

where, l = length of sample pure

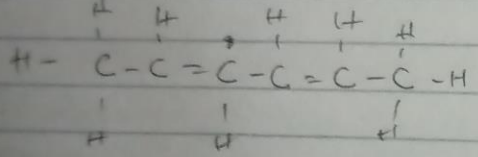
$c = \frac{\text{mass}}{\text{volume}}$ g/dm or g/mol

α = observed rotation

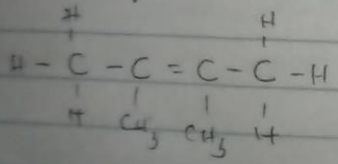
$$S_r = \frac{1.0}{1.0 \times \left(\frac{0.856}{10}\right)}$$

$$S_r = \frac{1}{0.0856} = 11.682$$

3) i) Hexa - 2, 4 diene



ii) 2,3 dimethyl but - 2-ene



or