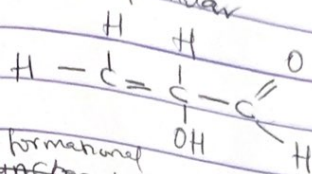


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 19/06/2024 / 039
 CHEM 102

1.) i) $\text{CH}_2 = \text{C}(\text{OH})\text{CH}_3$
 The structural formula

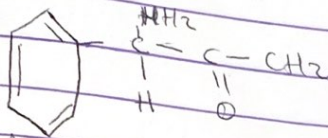


functional groups present are:

- Double bond chain = (Alkene)
- OH (Hydroxyl group) (Alcohol)

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

Structure

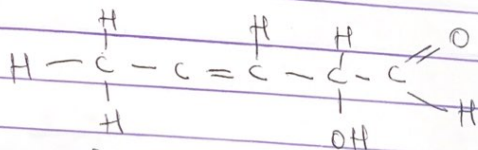


functional groups present

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

iii.) $\text{CH}_3\text{C}(\text{OH})=\text{CHCH}_2\text{CHO}$

Structure:



functional groups present

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

2.) Real Recall;

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

where

l = length of sample tube

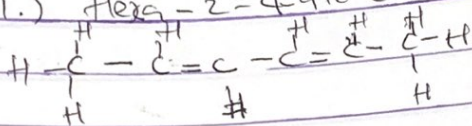
c = mass (g/dm) or (g/mol)
volume

α = observed rotation

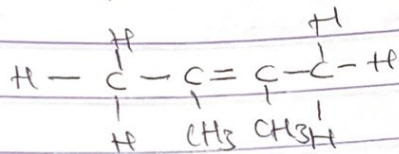
$$S_f = \frac{1.0}{1.0 \times \left(\frac{0.856}{10}\right)}$$

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

3.) i.) Hexa-2,4-diene



ii.) 2,3-dimethylbut-2-ene



OR

