

② Recall

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

where

$l$  = length of Sample tube

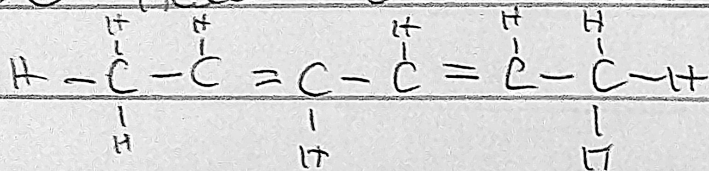
$c$  =  $\frac{\text{mass}}{\text{Volume}}$  (g/dm<sup>3</sup>) or (g/ml)

$\alpha$  = observed rotation

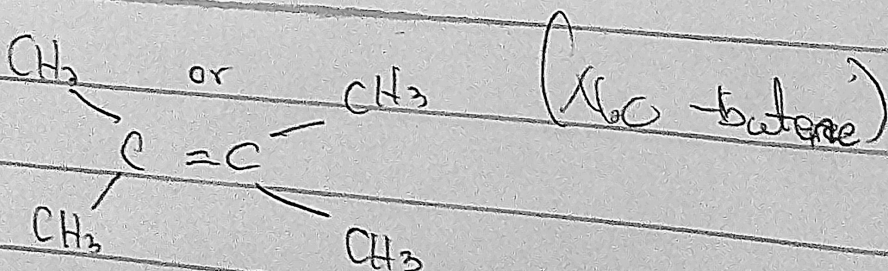
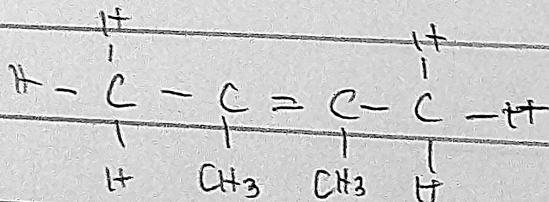
$$S_r = \frac{1.0}{1.0 \times \left(\frac{0.856}{10}\right)}$$

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

③ (i) Hexa-2,4-diene



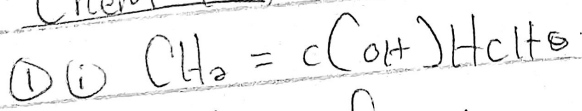
(ii) 2,3-Dimethylbut-2-ene



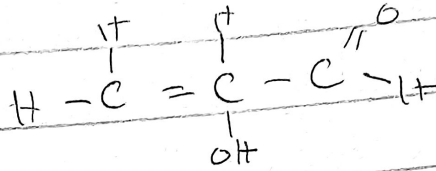
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Chem 102

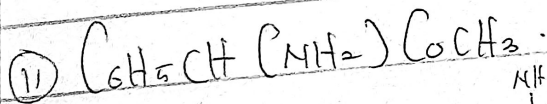


The structural formula

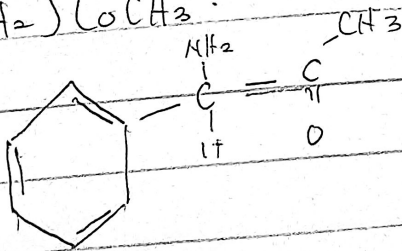


Functional present as:

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



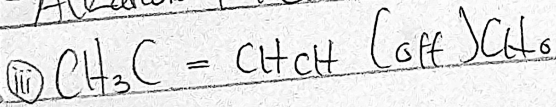
Structure:



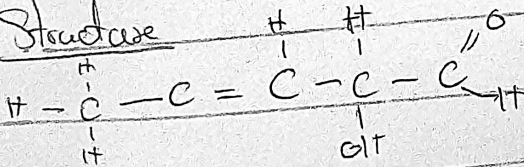
Functional present

- Phenyl group ( $\text{C}_6\text{H}_5$ ) with double bond

- Amine
- Alkanone / ketone ( $\text{C}=\text{O}$ )



Structure



Functional present

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