Name: Osasenaga Hero-Douglas Agheda
Matric No: ~~AHS0~~ 19/MHS01/054

CHM 102 ASSIGNMENT

1. i) Alkanal (C-COH)
   ii) Amide (C-C=O, NH2)
   iii) Alkanal (C-COH)

2. $[\alpha] = \frac{\alpha_{observed}}{c \times l}$ — ~~observed rotation~~ / specification / concentration / path length

$$\text{Concentration} = \frac{0.856}{10} = 0.0856\ g/cm^3 \text{ or } g/m$$

~~C = 0.0856 g/cm~~
Path length = $1.0\ dm^3$
Observed rotation = $+11.0^\circ$

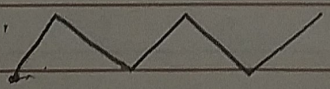
$$[\alpha] = \frac{1}{0.08681}$$

$$= 11.682^\circ$$

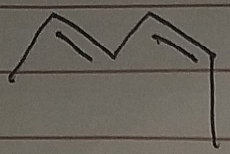
3. i) Hexa-2,4-diene

The four possibilities are (E,E), (E,Z), (Z,E) and (Z,Z). However, (E,Z) and (Z,E) are identical.

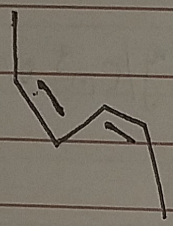
(2E, 4E)



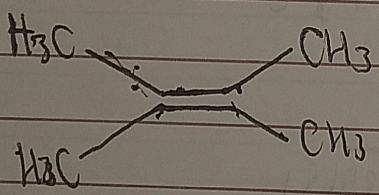
(2E, 4Z)



(2Z, 4Z)



ii) 2, 3 - Dimethylbut-2-ene



It has no geometric isomers because there are two identical groups attached to the same carbon of the double bond