

ADEBIYI ADEOLUWA EMMANUEL

19/MHS/021

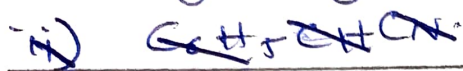
MHS-MBBS.

1. Name the functional groups present in each of the following molecules.



ROH and RCOH/RCHO

(hydroxyl) (aldehyde/alkanal)



RCR'

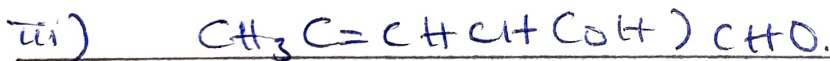
R-NH_2

RCOCH_3

(Ketone)

(Amine group)

(methyl group)



RCH_3

-ROH

RCHO

(methyl group)

(hydroxyl group)

(Alkanal/

alkanol)

aldehyde)

2. A 0.956g sample of pure (2R, 3R)-tartaric acid was

diluted to 10cm^3 with water

and placed in a 1.0dm polarimeter

tube. The observed rotation at 20°C

was $+11.0^\circ$. Calculate the specific rotation of (2R, 3R-) tartaric acid.

Solution

$$[\alpha]_D^{25} = \frac{\alpha}{L \times C}$$

where α = observed rotation.

L = path length in dm

C = concentration in g/ml

$$\alpha = +11.0$$

$$L = 1 \text{ dm}$$

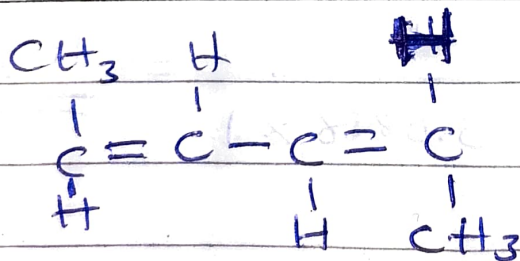
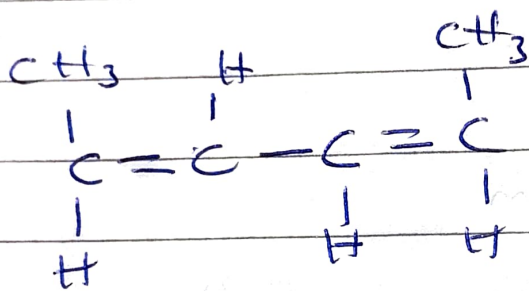
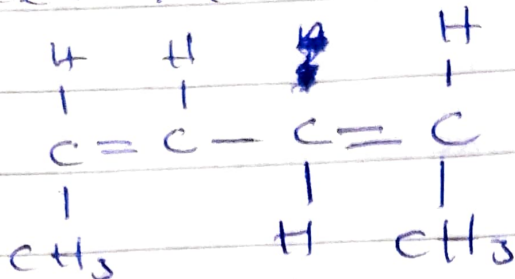
$$C = \frac{\text{mass}}{\text{volume}} = \frac{0.856 \text{ g}}{10 \text{ cm}^3} = \frac{0.856}{10 \text{ mL}}$$

$$= 0.0856$$

$$[\alpha]_D^{25} = \frac{+11.0}{0.0856 \times 1} = \underline{\underline{11.68}}$$

3. Draw the possible isomers for each of the following

Hexa 2,4 diene.



(ii) 2,3-dimethyl but-2-ene.

Does not have geometric isomerism
due to identical groups attached
to the same carbon of the double
bond