

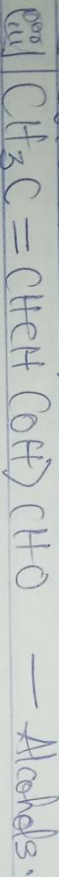
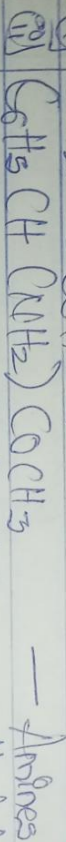
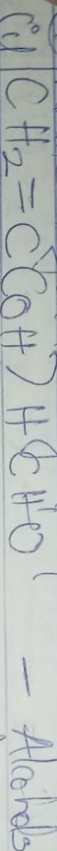
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Dept.: MBBS

Course: Chem 102.

1) Name the functional groups present in each of the following molecules;



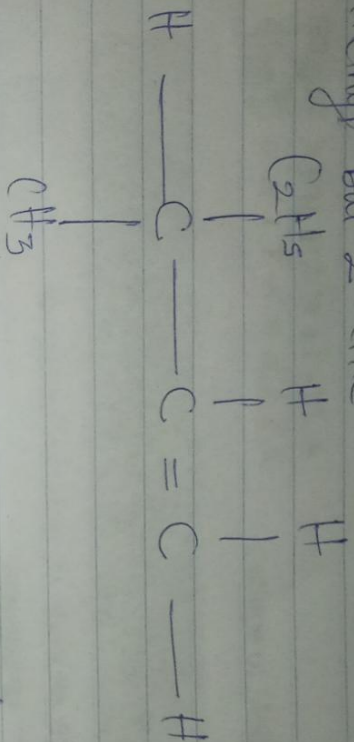
2) A 0.856 g sample of pure (2R, 3R) - tartaric acid was diluted to 10 cm<sup>3</sup> with water and placed in a 1.0 dm<sup>2</sup> polarimeter tube. The observed rotation at 20°C was +1.0°. Calculate the specific rotation of 2R, 3R - tartaric acid.

Solution

$$\text{Specific rotation} = \frac{[\alpha]_D}{d} \times l$$
$$0.856 \text{ g} / 10 \text{ cm}^3 = \frac{0.856}{10} = 0.0856 \text{ g}$$

$$\text{Specific rotation} = \frac{+1.0}{(0.0856) \times (1 \text{ dm})}$$
$$= 11.68 \text{ g}^{-1} \text{ cm}^3 \text{ dm}^{-1}$$

Q3) Draw the possible geometric isomers (where possible) for each of the following compounds, of the following compounds, (i) Dimethyl but-2-ene

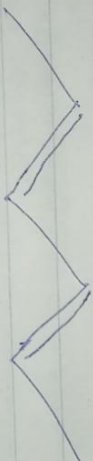


1 ethyl, 1 methyl propane.

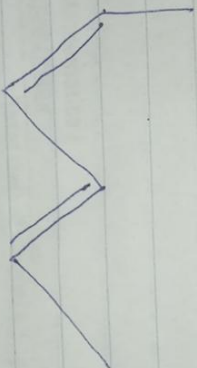
(ii) Hexa-2,4-diene

There are three possible isomers which are: (2E, 4E), (2E, 4Z) and (2Z, 4Z).

- (2E, 4E) -



- (2E, 4Z) -



- (2Z, 4Z) -

