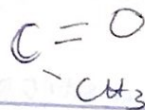
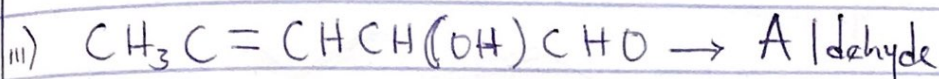
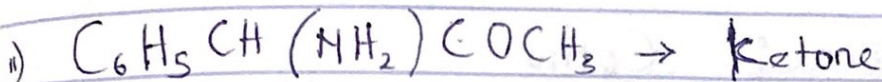
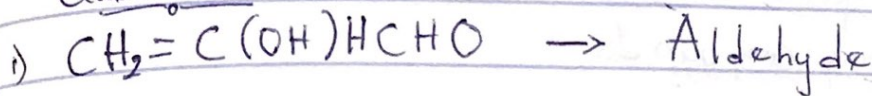


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ASSIGNMENT.



Question 1



Question 2

$$\text{Specific rotation} = \frac{\text{Observed rotation}}{(\text{Conc. g/cm}^3) \times \text{path length of sample cell (dm)}}$$

$$\text{Observed rotation} = +1.0^\circ, \text{ length of sample cell} = 1.0 \text{ dm.}$$

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

$$\therefore \text{Specific rotation of (2R, 3R-) tartaric acid} =$$
$$= \frac{+1.0^\circ}{(0.0856 \text{ g/cm}^3)(1.0 \text{ dm})}$$

$$\text{Specific rotation} = \frac{+1.0^\circ}{0.0856 \text{ g/cm}^3 \cdot \text{dm}}$$

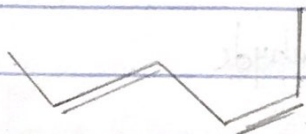
$$\text{Specific rotation} = 11.682^\circ \text{ g}^{-1} \text{ cm}^3 \text{ dm}^{-1}$$

$$\therefore \text{Specific rotation of (2R, 3R-) tartaric acid} = \underline{\underline{11.682^\circ \text{ g}^{-1} \text{ cm}^3 \text{ dm}^{-1}}}$$

### Question 3.

Draw the possible geometric isomers (where possible) for each of the following compounds

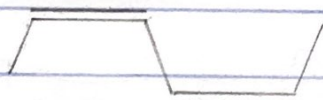
i) Hexa-2,4-diene:  $C_6H_{10}$



2,4-Hexadiene (E,Z)



2,4-Hexadiene (E,E)



2,4-Hexadiene (Z,Z)

ii) 2,3-Dimethylbut-2-ene  $C_6H_{12}$  (No stere)

