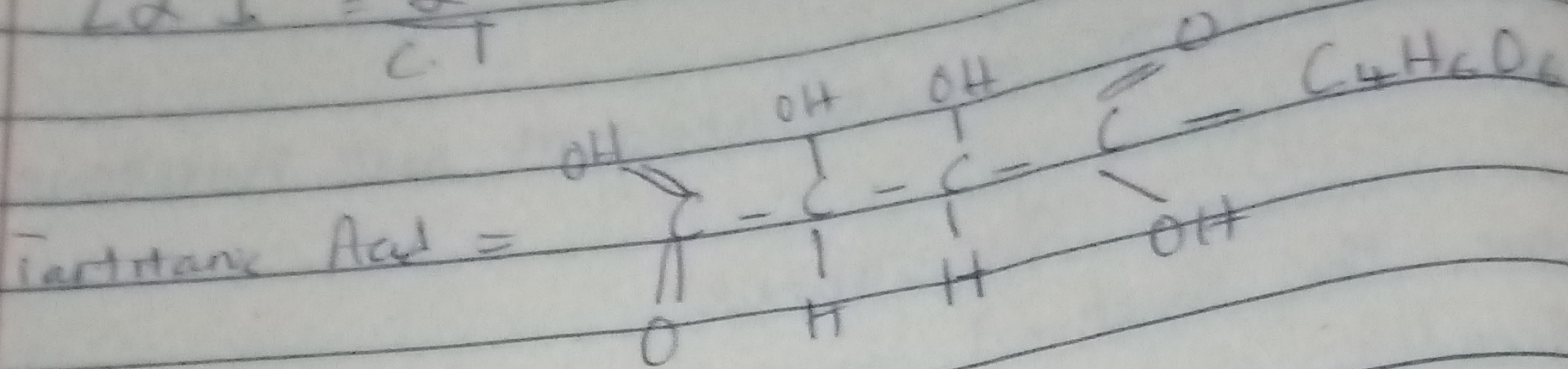


Answer to Number 2.
 Concentration $\Sigma \text{ mol l}^{-1} = \frac{\text{conc (g dm}^{-3})}{\text{molar mass (g mol}^{-1})}$

$$[\alpha] = \frac{\alpha}{c \cdot l}$$



$$\begin{aligned} \text{Molar mass} &= 150 \text{ g mol}^{-1} \\ 0.856 \text{ g} &\text{---} 10 \text{ cm}^3 \\ x \text{ g} &\text{---} 1000 \text{ cm}^3 \end{aligned}$$

$$\frac{0.856 \times 1000}{10} = 85.6 \text{ g dm}^{-3}$$

$$\text{Concentration in g cm}^{-3} = \frac{\text{conc (g dm}^{-3})}{1000}$$

$$\text{conc in g cm}^{-3} = \frac{85.6}{1000} = 0.0856 \text{ g cm}^{-3}$$

$$[\alpha] = \frac{\alpha}{c \cdot l}, \quad d = 4 \cdot 10^{-2}, \quad c = \frac{0.856}{10} = 0.0856 \text{ g cm}^{-3}$$

$$= \frac{4.0}{0.0856} = 11.68^\circ$$

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

i. Hexa-2,4-diene

ii. 2,3-Dimethylbut-2-ene

DATE: 17-05-2020

NAME: DEVIHATHI JESSICA . O. ENEPPE

COURSE: CHEM 102

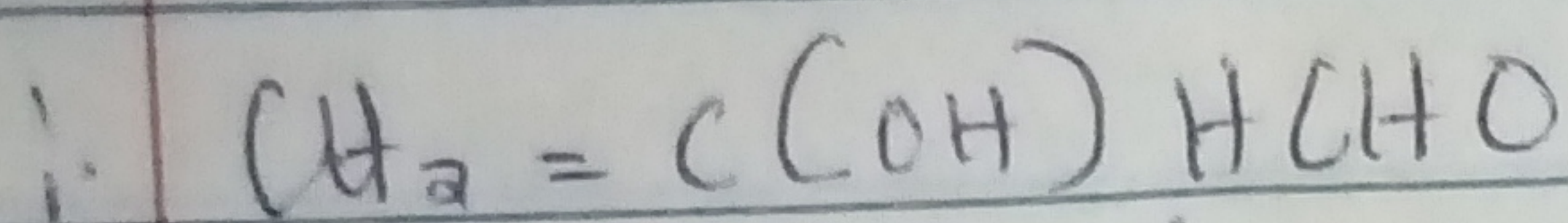
DEPARTMENT: F.B.S

MATRIC NUMBER: 19/19H301/136

ASSIGNMENT ON STEREOCHEMISTRY AND FUNCTIONAL GROUP.

QUESTIONS

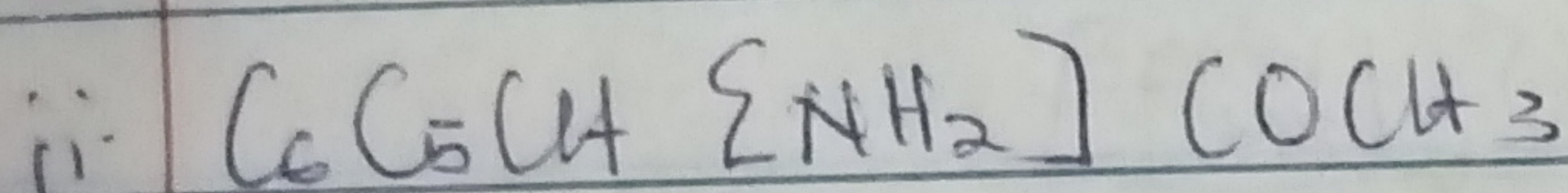
1. Name the functional group present in each of the following molecules:



a. Formyl group (Aldehyde) group (CHO)

b. Hydroxyl group (OH)

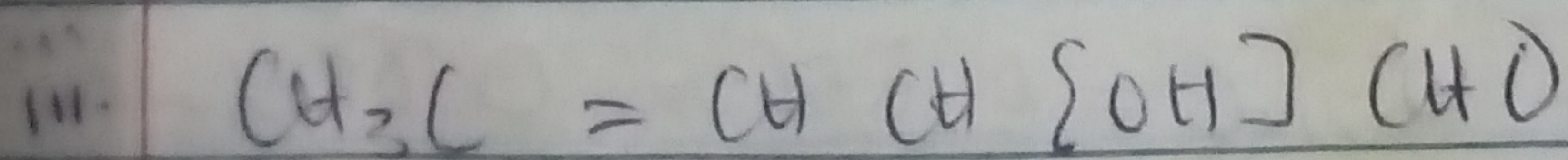
c. Alkene group (double bond)



a. Keto group (carboxyl group) $\text{C}=\text{O}$

b. Amino group (NH_2)

c. Aromatic group (Phenyl group)



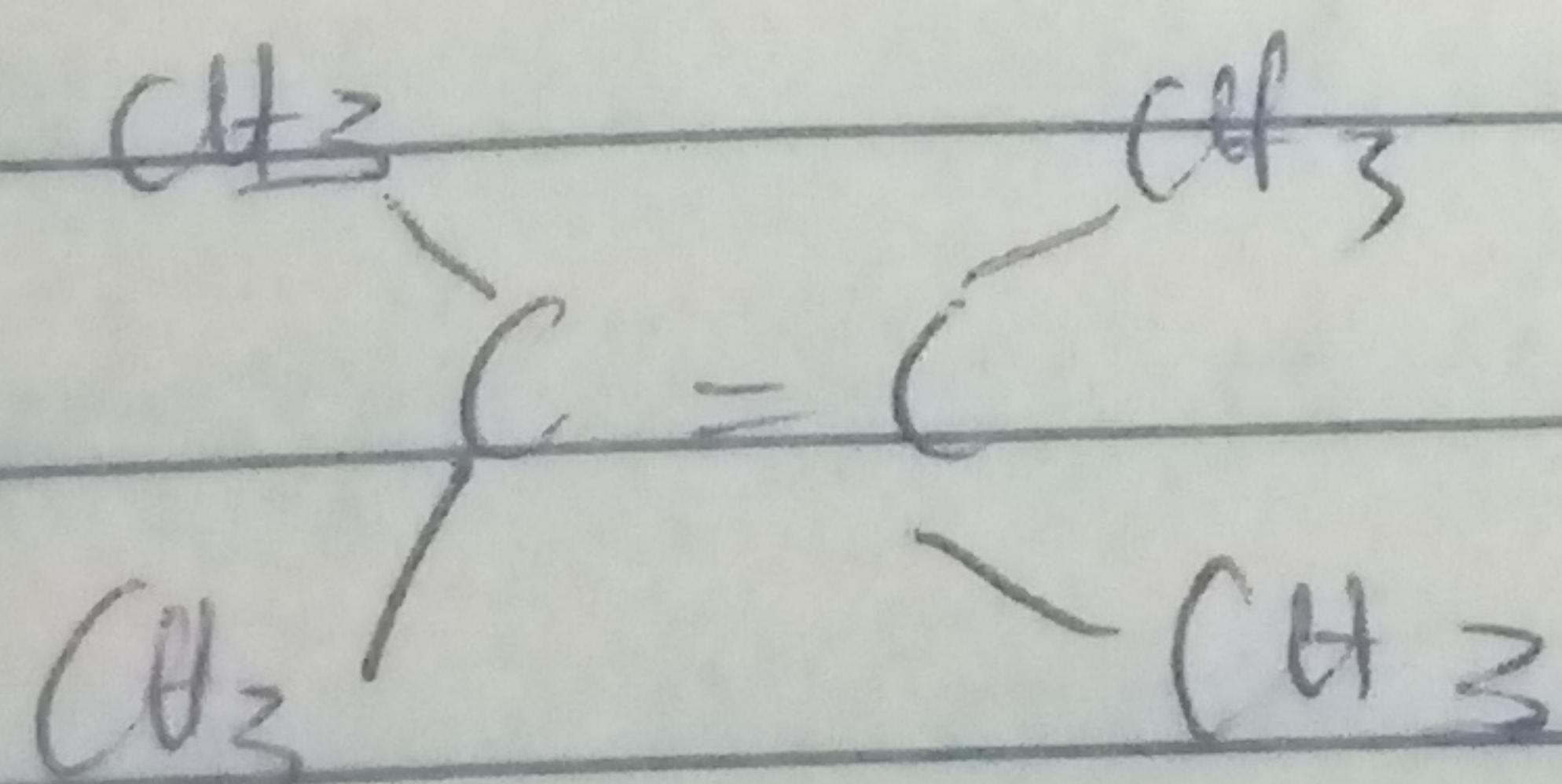
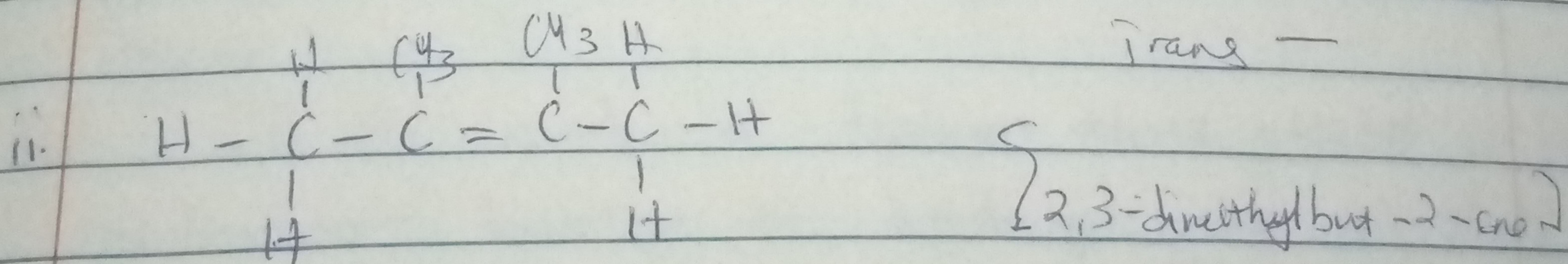
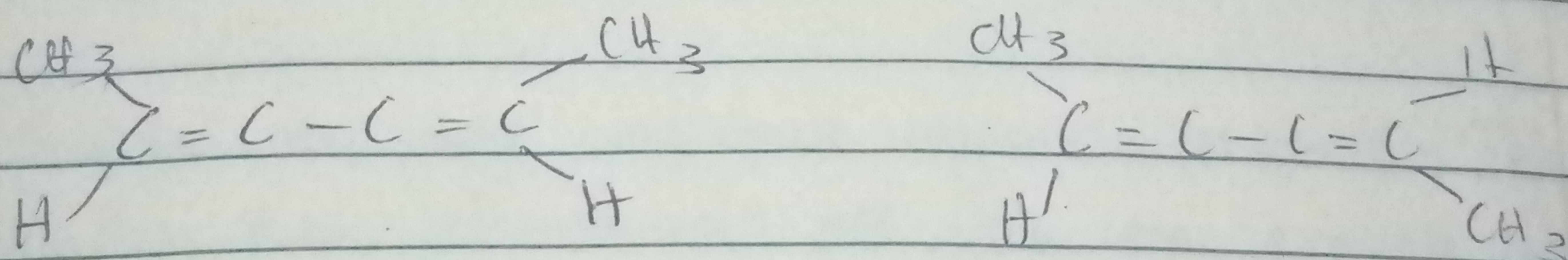
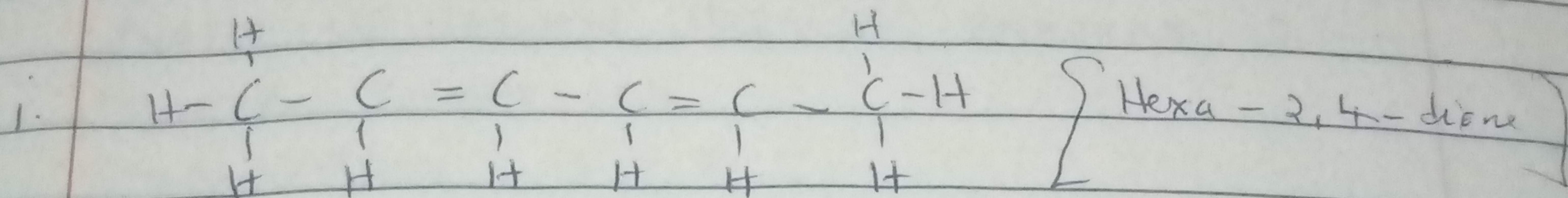
a. Aldehyde group

b. Hydroxyl group

c. Double bond (Alkene group)

2. A 0.856g sample of pure (2R,3R)-tartaric acid was diluted to 10cm³ with water and placed in a 1.0dm³ polarimeter tube the observed n_D^{20} at 20°C was +1.0°. Calculate the specific rotation of (2R,3R)-tartaric acid.

Answer to number 3.



No geometric isomers