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19/MHS01/090

MBS5

- i) $\text{CH}_2 = \text{C}(\text{OH})\text{HCHO}$: alkene, ^{alcohol} ~~hydroxyl~~ ^{alcohol} group and aldehyde.
- ii) $\text{C}_6\text{H}_5\text{CH}(\text{NH}_2)\text{COCH}_3$: amine, ketone
- iii) $\text{CH}_3\text{C} = \text{CHCH}(\text{OH})\text{CHO}$ (~~hydroxyl~~) ^{alcohol} (alcohol), alkene and aldehyde.

2. Specific Rotation = $\frac{\text{observed rotation}}{(\text{conc. in g/cm}^3) \times \text{path length of sample cell in dm}}$

$$\text{Observed rotation} = +1.0^\circ \text{g}^{-1} \text{cm}^3 \text{dm}^{-1}$$

$$\text{conc. in g/cm}^3 = 0.856 \text{g} / 10 \text{cm}^3 = 0.0856 \text{g/cm}^3$$

$$\text{path length} = 1.0 \text{dm}$$

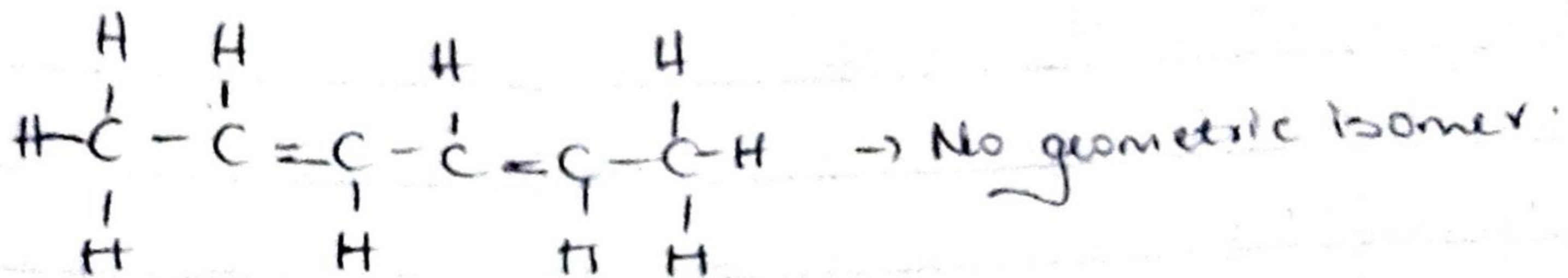
$$\therefore \text{Specific rotation} = +1.0$$

$$(0.0856 \text{g/cm}^3) \times (1 \text{dm})$$

$$= +11.68 \text{g}^{-1} \text{cm}^3 \text{dm}^{-1} \text{ (S enantiomer is dominant)}$$

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3i Hexa-2,4-diene.



ii 2,3-dimethylbut-2-ene:

