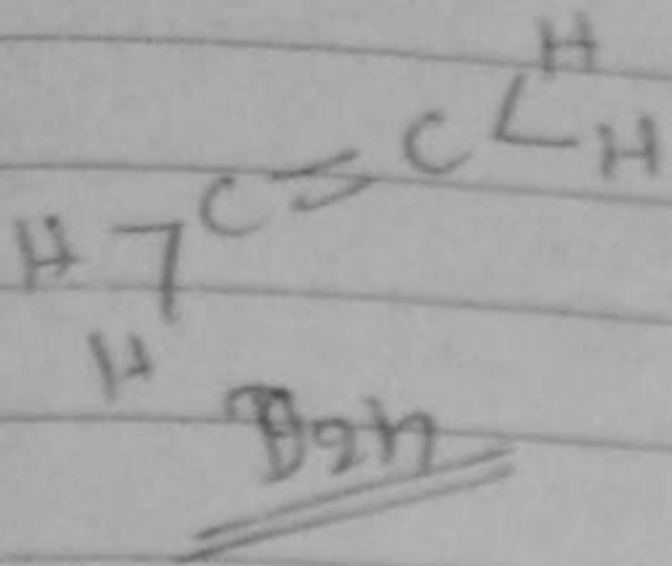


② $C_2H_4 \rightarrow$ gt has planar structure



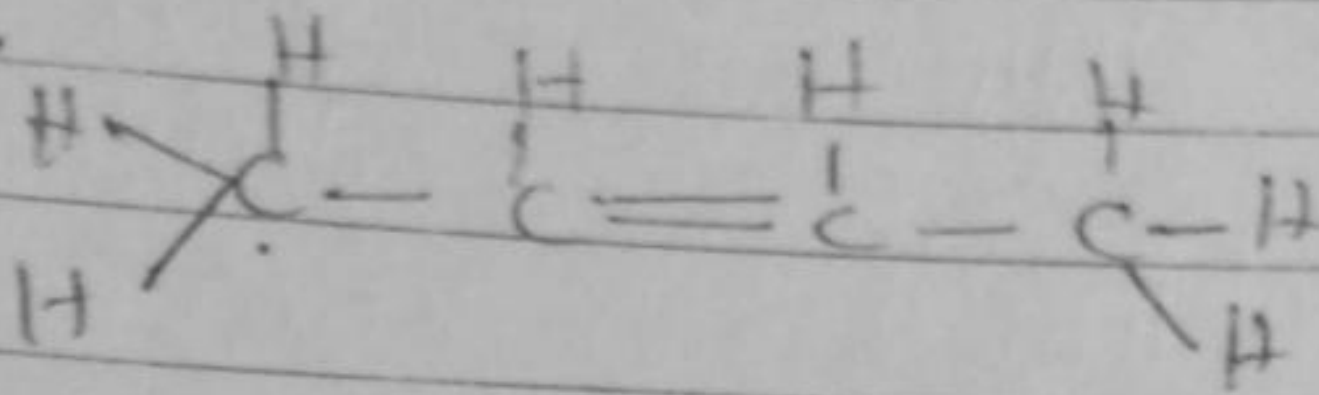
- (i) gt has C_2 axis as principal axis
- (ii) gt has two C_2 -axis as subsidiary axis.
- (iii) gt has two σ_v and one σ_h plane
- (iv) gt has centre of inversion.

\therefore Point group = D_{2h}

Symm operation possible \Rightarrow

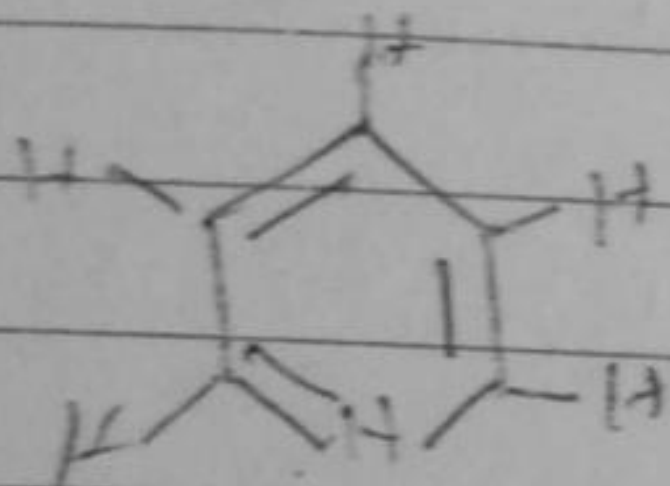
$E, C_2, 2C_2, 2\sigma_v, \sigma_h, i = 8$

③ $C_6H_6 \rightarrow$



$\rightarrow D_{6h} = 16$

④ C_5H_5N (pyridine) $\rightarrow C_{2v}$



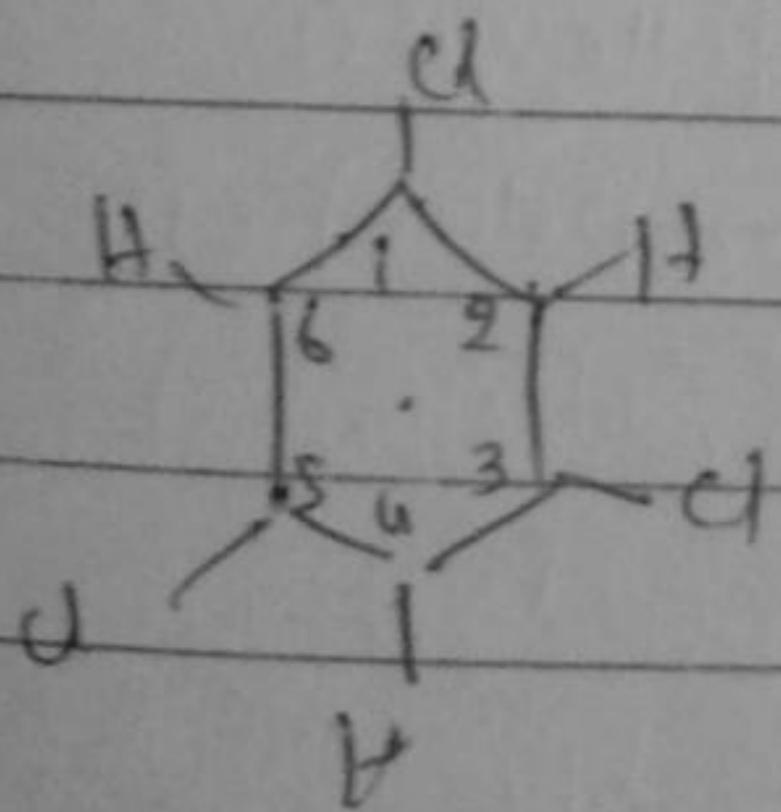
gt has planar str

- (i) gt has C_2 -axis
- (ii) gt has 2 σ_v plane

\therefore Point group = C_{2v}

Symm operation possible = $E, C_2, 2\sigma_v = 4$

⑤ 1, 3, 5 Trichlorobenzene $\rightarrow D_{3h}$



gt has one C_2 axis as principal axis and 3 C_2 axes as subsidiary axis. and two σ_v plane.

Symm operation possible \Rightarrow

$E, C_2, 2C_2, 2\sigma_v, \sigma_h, i, S_6 = 9$

$C_{60} \rightarrow I_h$