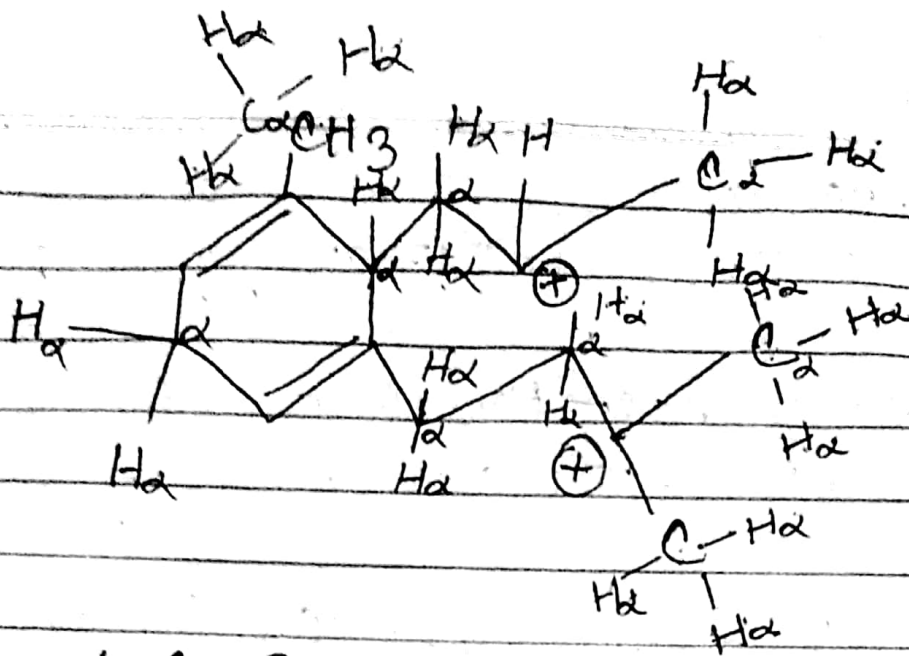


Ques:-



$$\alpha - C = 9$$

$$\alpha - H = 21$$

$$H \cdot C = \alpha - H + 1$$

$$= 21 + 1$$

$$H \cdot C = 22 \text{ Ans .}$$

✳️ Resonance / Cammonical structure ($\longleftrightarrow$) :- The process by which we converted Single compound into 2 or more than two different structures.

$\Rightarrow$ When number of resonance structure increase, then increase, stability, acidic nature, P_{OH} value, K_a value & P_{Kb} value but decrease, reactivity, basic nature, P_H value, K_b value, & P_{K_a} value.

$\Rightarrow$ Resonance is an exothermic process in

heat (energy) evolved hence increase stability.

⇒ In resonance structure position of atoms remain fixed but position of electron varies from one position to other position.

⇒ In resonance structure no. of atoms electron fixed.

⇒ All resonance structure having nearly same energy.

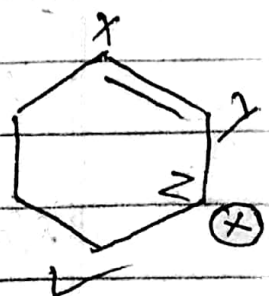
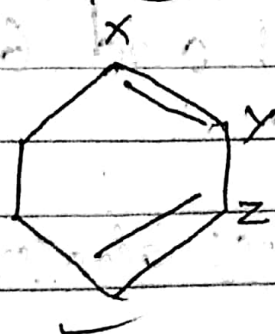
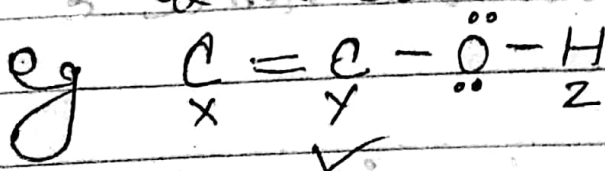
⇒ Resonance causing fixed bond length
($1.39 \text{ \AA}$) and indicated by --- ,
bond length of --- bond $1.54 \text{ \AA}$
bond length = bond $1.34 \text{ \AA}$,
bond length of $\equiv$ bond $1.20 \text{ \AA}$

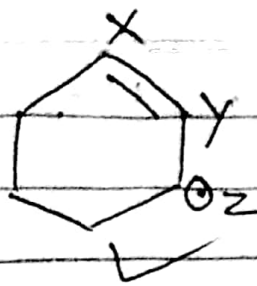
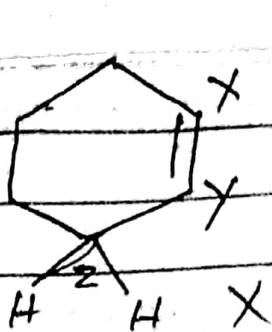
⇒ Condition for resonance

(a) $X=Y-Z$

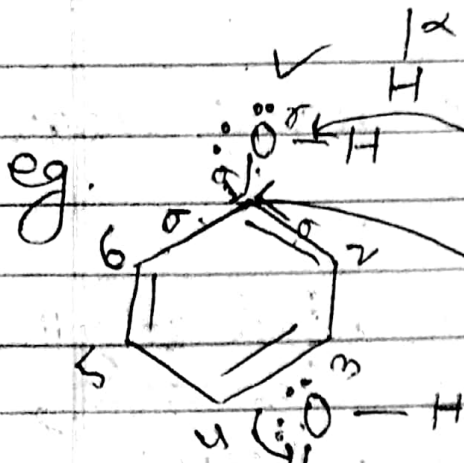
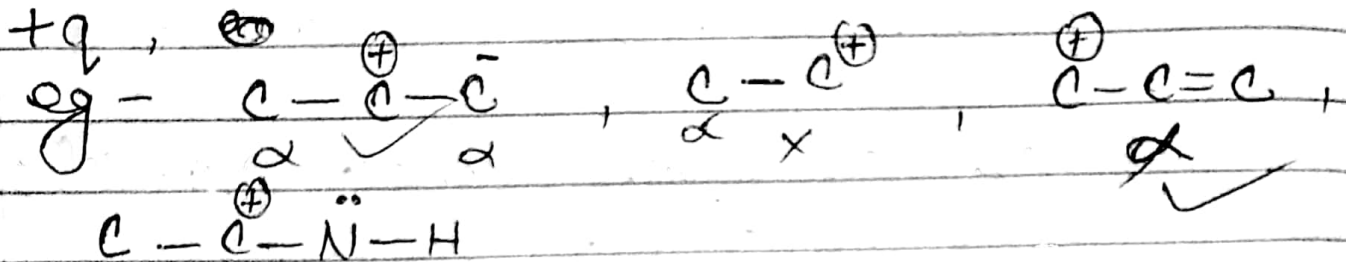
where X , Y and Z , Z must be any element but at Z may be.

$+q$, $-q$, $=$, $\equiv$, $\odot$, $\ominus$ but not $\oplus$ and $\ominus$ on a bond.



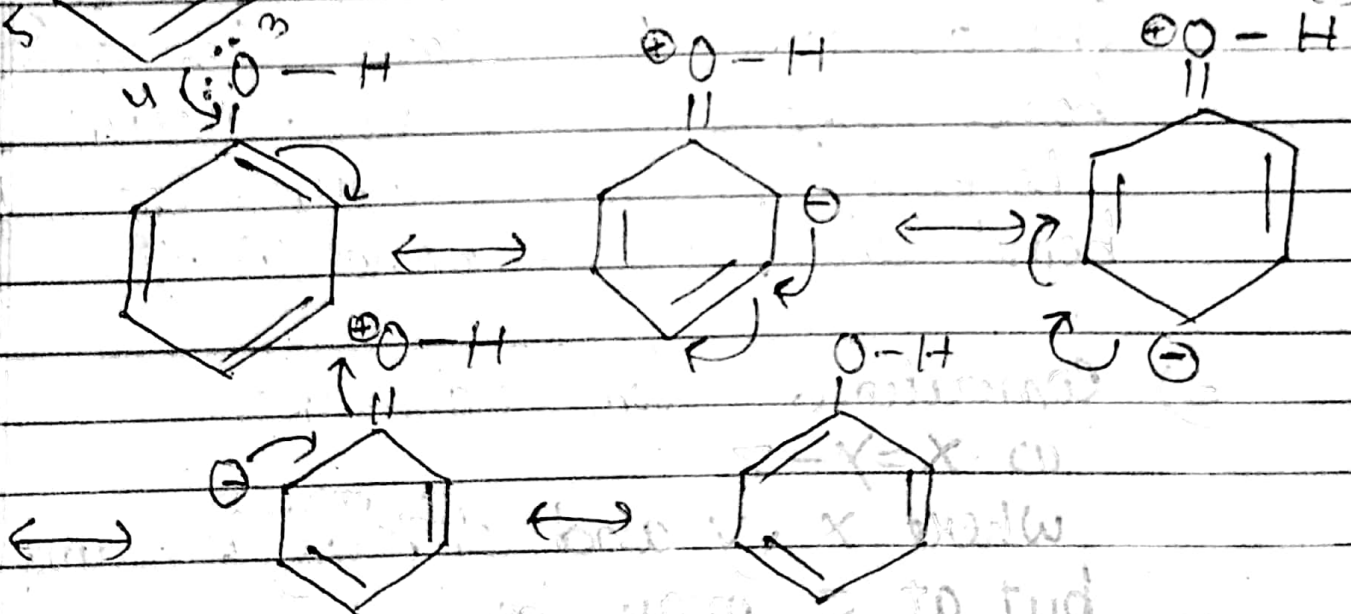


(iii) At α -position of $+q$ charge must at least one $-q$, $\ominus$, $=$, $\equiv$, not α ,



$$2\alpha + 21 \cdot p = 4 = 1s + 3p = sp^3 \rightarrow s\% = 25\%$$

$$3\alpha = 1s + 2p = 3 sp^2 \rightarrow s\% = 33.33\%$$



Here more electron density ($-q$) at 2, 4 and 6 position hence $\oplus$ attack here.

Here less electron density (neutral) at