

AROMATIC-COMPOUND

Americical word $\rightarrow$ AROMO $\rightarrow$ Pleasant smell
(As like sweet fruit)

Defn: $\rightarrow$

Such homocyclic compounds which are abnormal and do obey aromaticity are called aromatic compounds.

Aromaticity: $\rightarrow$

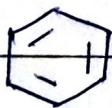
- (i) Compounds must be cyclic and planar.
- (ii) There must be alternate double and single bonds i.e. conjugated double bond which are delocalised.
- (iii) All carbon should be sp^2 hybridised.
- (iv) Compounds must be highly stable and saturated.
- (v) Very resistant towards oxidation.
- (vi) Gives substitution reaction instead of addition reaction.
- (vii) Obeys Huckel's rule: $\rightarrow$

$\uparrow$ $\rightarrow$ $\frac{1}{2}$ unsaturated
or $\frac{1}{2}$ highly saturated

This rule states that aromatic compounds must have ~~4n~~ $(4n+2)\pi$ electrons.

Where, $n = 0, 1, 2, 3, 4, \dots$

eg: $\rightarrow$ (i) C_6H_6 Benzene



$\rightarrow 3\pi$ bond

$= 3 \times 2 = 6\pi$ electrons

$$(4n+2)\pi = 6\pi$$

$$4n = 6 - 2$$

$$n = \frac{4}{4}$$

$$n = 1$$

✓✓