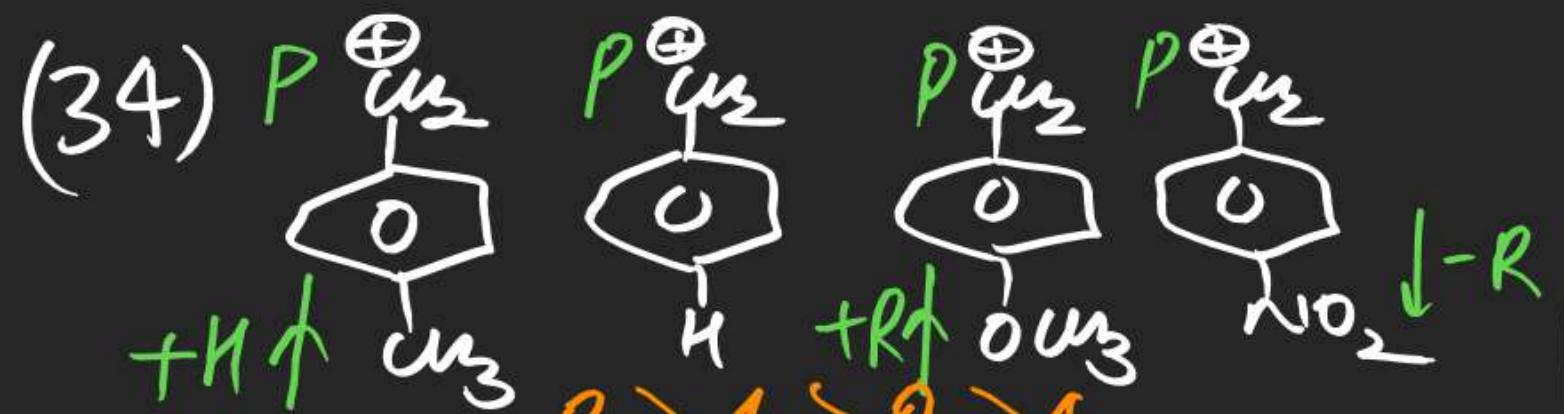


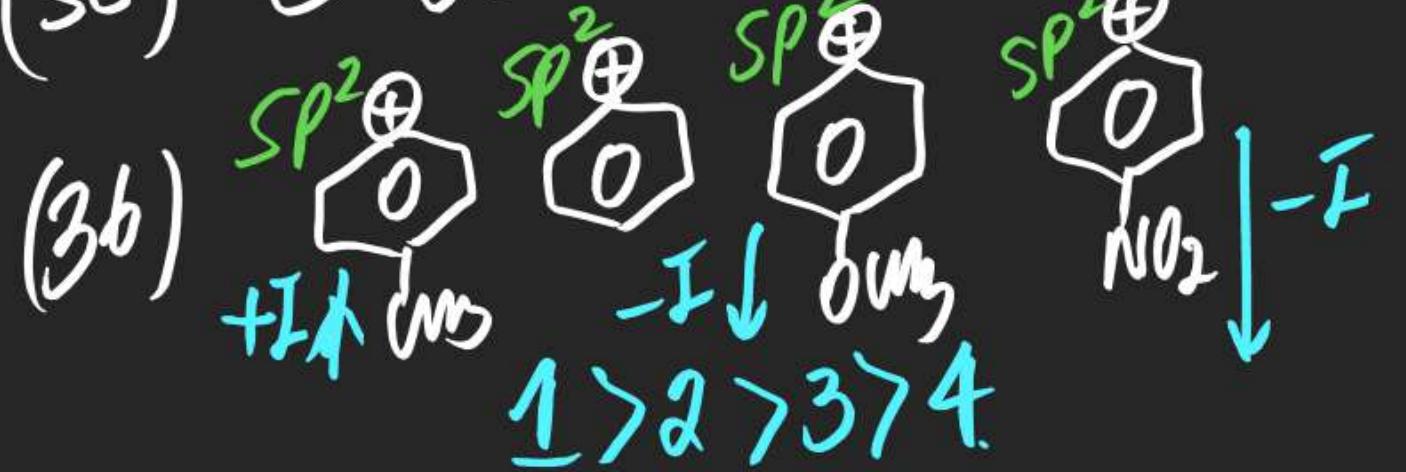


1>2>3 % S orbital & En
1>2>3

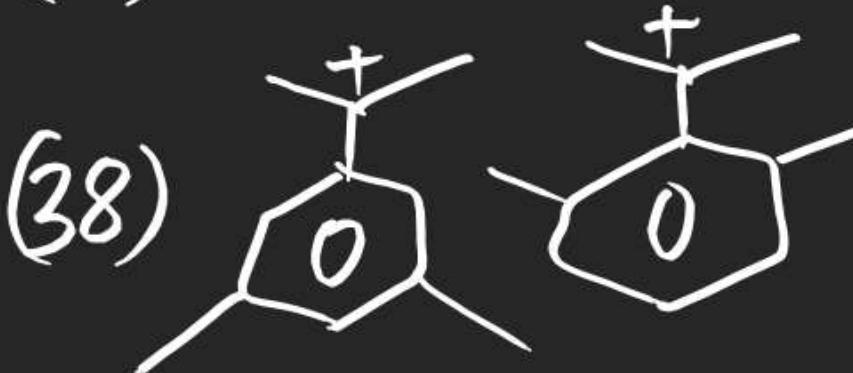
(33) 3>2>1



(35) Carbamion 3>1>2>4 4>2>1>3



(37) Carbanion (4>3>2>1)

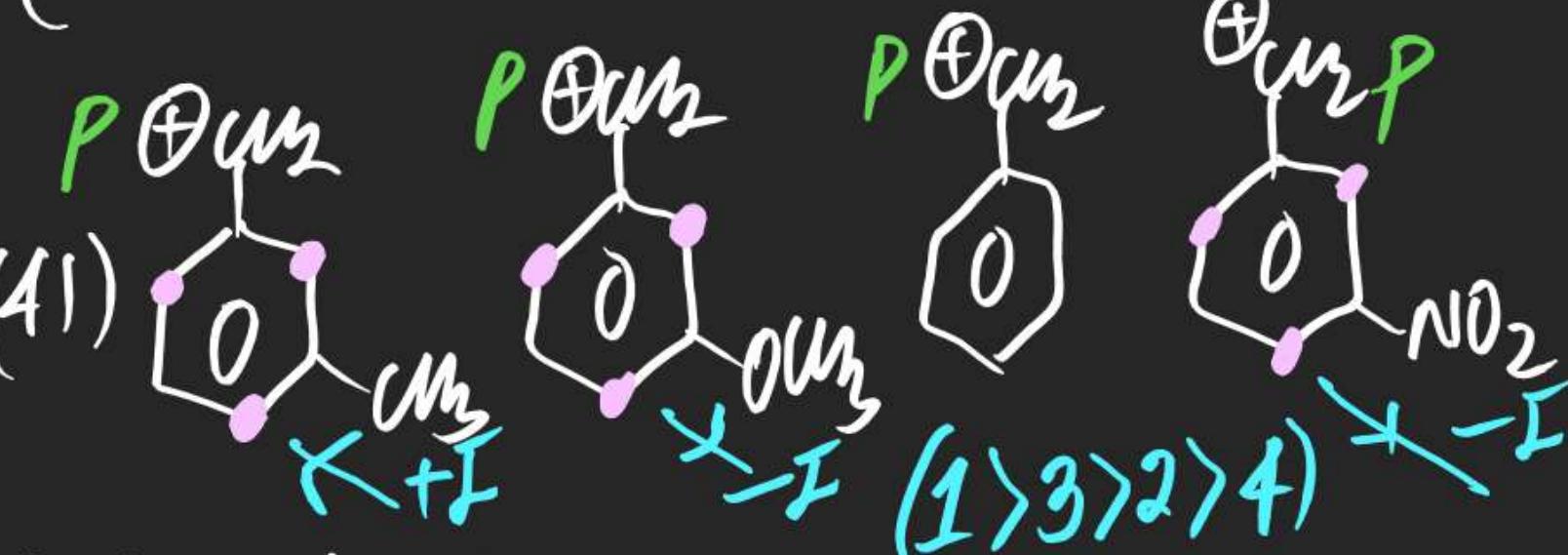


1>2 (SIR)

(39) Free Radical

1>2 (SIR)
1>2 (SIR)

(40) Carbanion



(42) Carbanion.

(4>2>3>1)

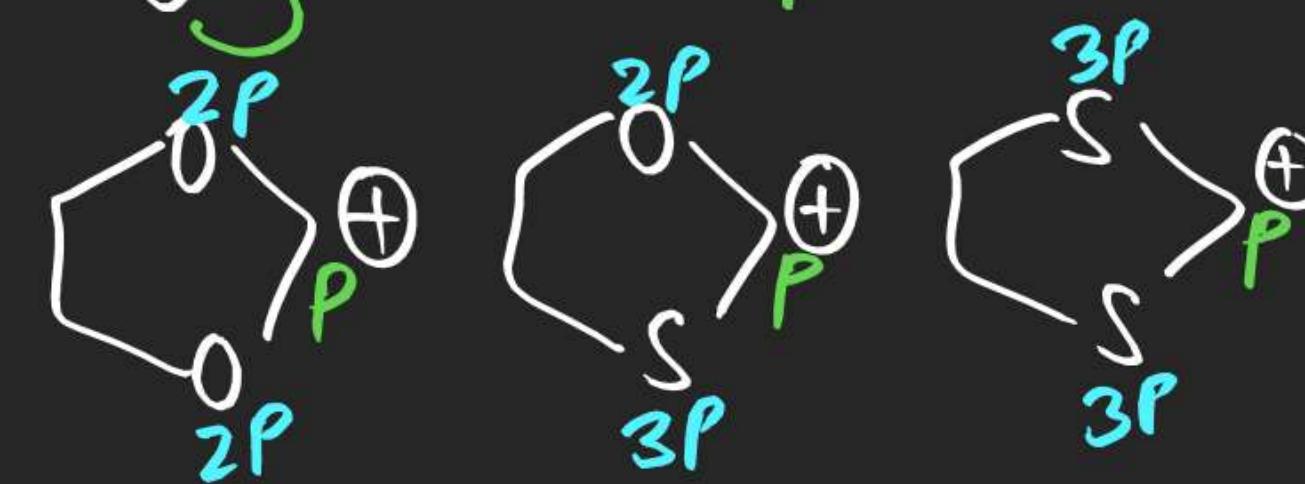
(43)

 $(2 > 1)$ (Bredt's Rule)

(44)

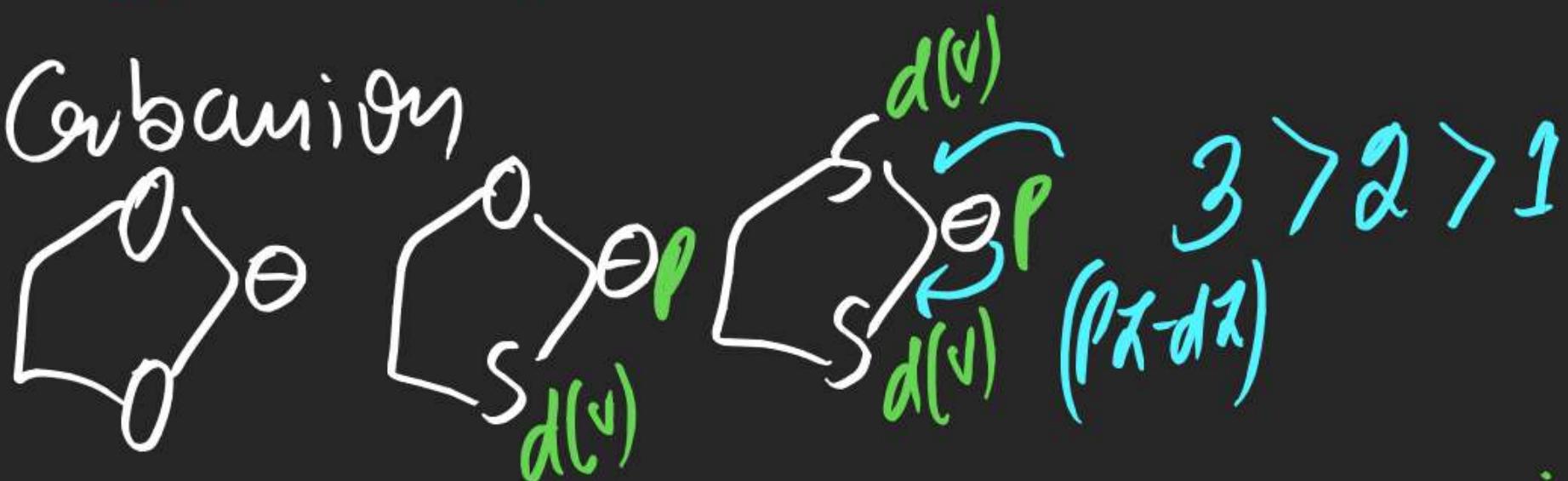
 $(1 > 3 > 2)$

(45)

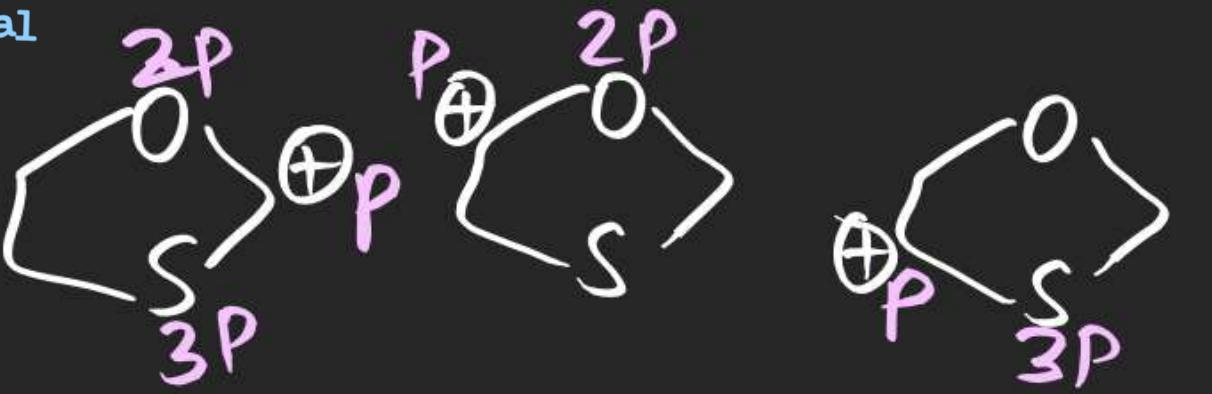
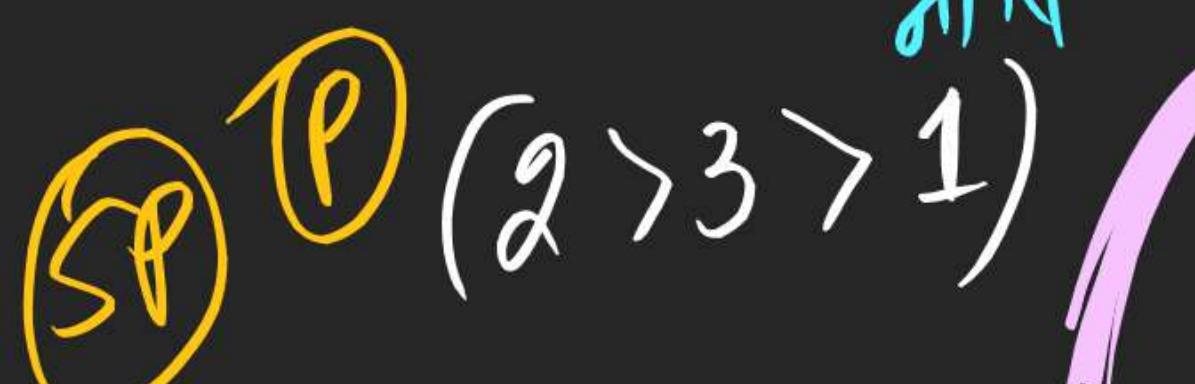
 $1 > 2 > 3$
 $(2P-2P > 2P-3P > 3P-3P)$

(46)

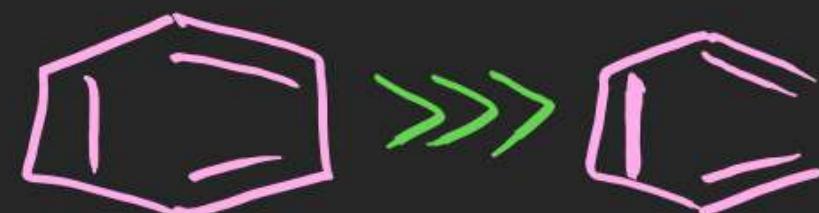
Carbanion

 $3 > 2 > 1$ $(Pz-dz)$

∴

- (47)  (1>2>3)
- (48)  2>1>3 = Cl
Carbon.
- (49) Carbamion  6π & 8 Aromatic (3>2>1)
ना Read
- (50)  (2>3>1)
ना लिखा
- (51) Free Radical  (2>3>1)

(Stability
order)



Condition for Aromatic Compound :-

Compounds must be

- (a) Cyclic
- (b) planar (sp or sp^2)
- (c) Cyclic Conjugated
- (d) $(4n+2)\pi\text{eB}$ { $n=0, 1, 2, 3, \dots$ }
NucleoB Rule Nucleo No. { $2, 6, 10, 14, \dots$ }

Anti Aromatic Compounds

All cyclic Compounds which are highly unstable than its open chain analogous system are known as Anti aromatic compound.



Condition for Anti Aromatic Compound

- (a) Ayclic ✓
- (b) Planar ✓
- (c) Conjugated ✓
- (d) $4n\pi$ electrons ($n=1, 2, 3, \dots$) [4, 8, 12, 16, ...]

(H) Non Aromatic Compound:

⇒ Compounds which are neither Aromatic nor Anti Aromatic are known as Non Aromatic Compounds.

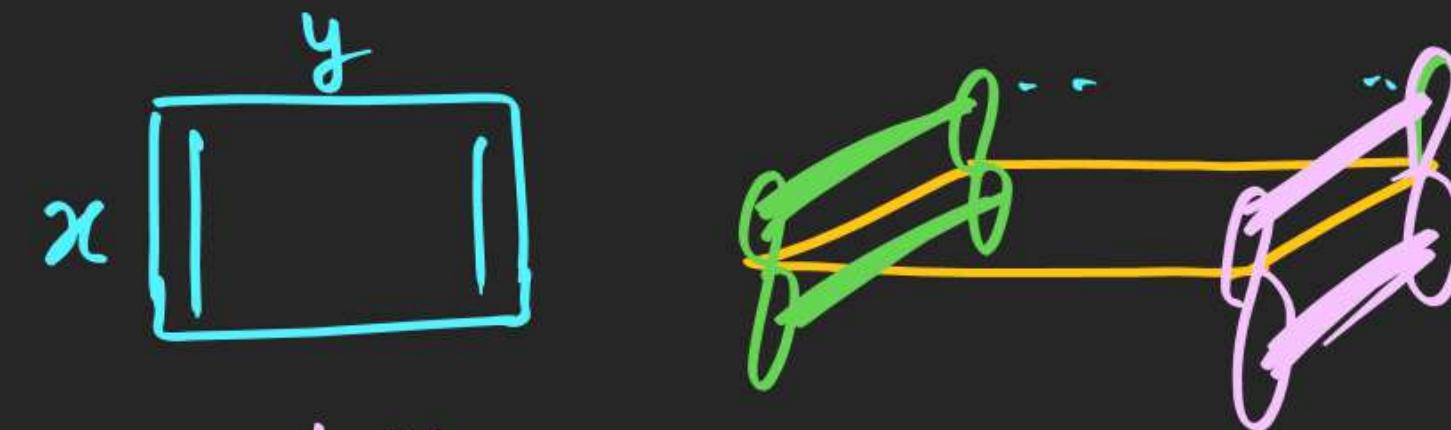
Note: (i) Stability order

~~Rule~~
~~(ii)~~ Aromatic Compound > Non Aromatic > Anti Aromatic
 Cyclic Compounds containing more than 7 carbon atoms
 are never Anti Aromatic

(iii) Anti Aromatic compound don't exist at Room Temperature in its pure form & gets dimerized.



In CycloButa-1,3-diene it is found that it contains two different C-C Bond lengths and it means AntiAromatic Compounds are not stabilised by Resonance.



$$x \neq y$$

(#) Quasi Aromatic Compound:

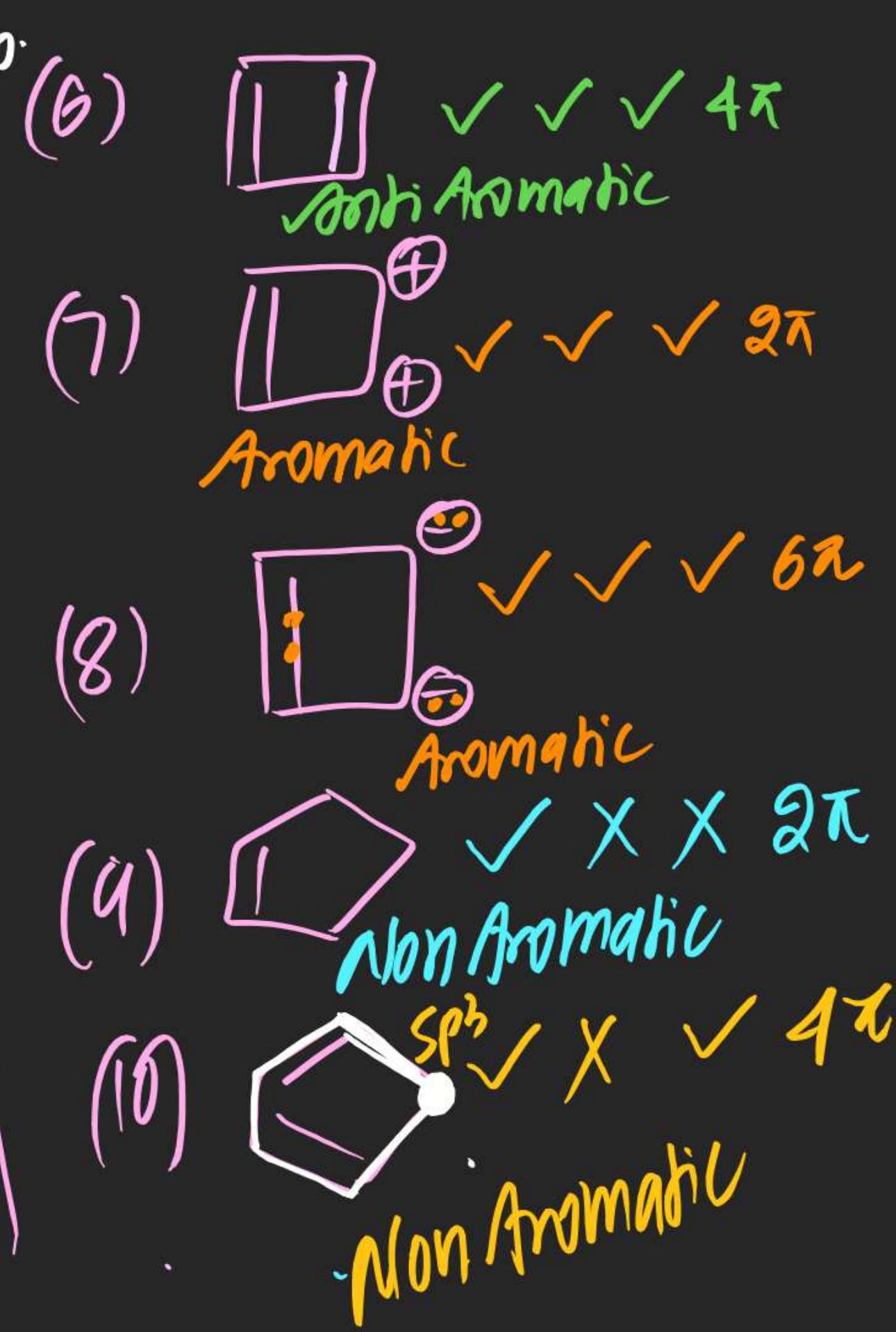
⇒ Aromatic Compounds having charge delocalisation are known as

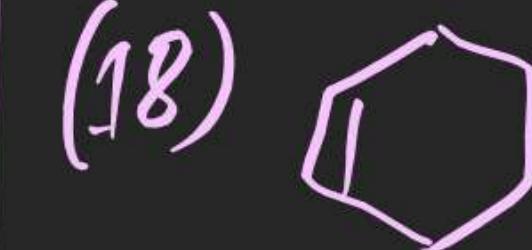
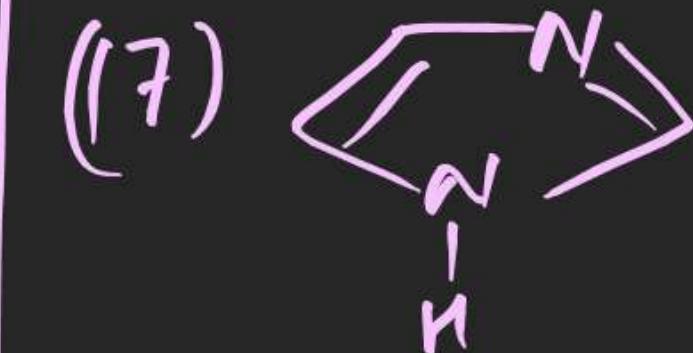
Quasi Aromatic Compound

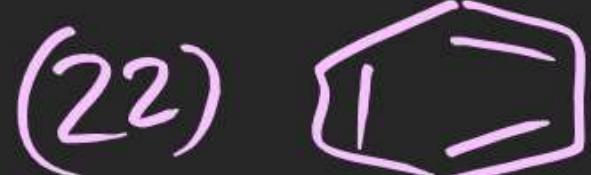


Cyclic Conjugated Planes Hückel No.

		Cyclic	Conjug. Planes	Hückel No.
(1)		✓	✗	✓ 2π
(2)		✓	✓	✓ 2π
(3)		✓	✓	✓ (2π)
(4)		✓	✓	✓ 4π
(5)		✓	✓	✓ 2π
(6)		✓	✗	



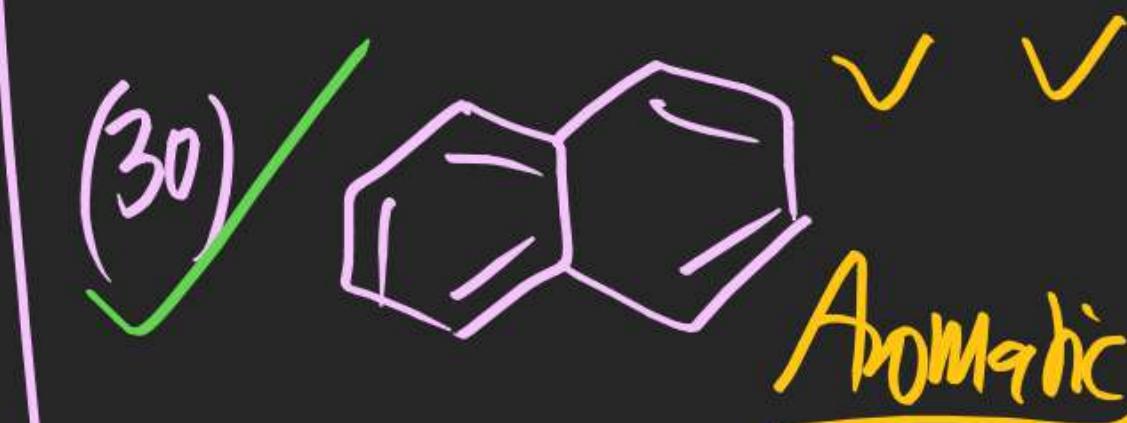
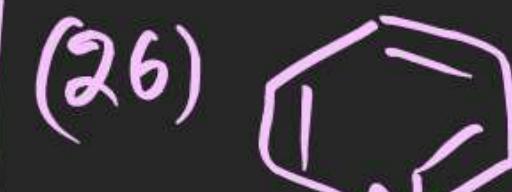




(Benzyne)

✓ ✓ ✓

6R



✓ ✓ ✓ 10T

(31)



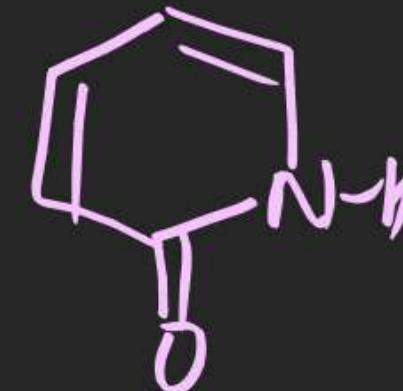
(32)



(33)

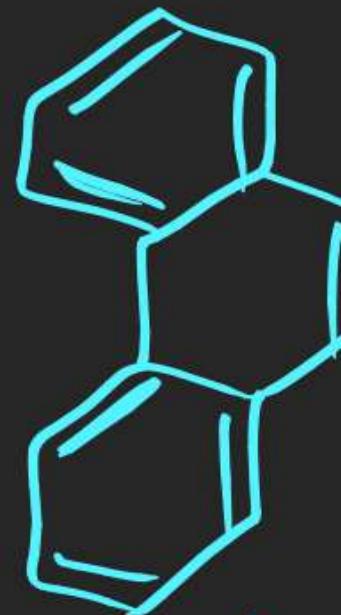


(34)

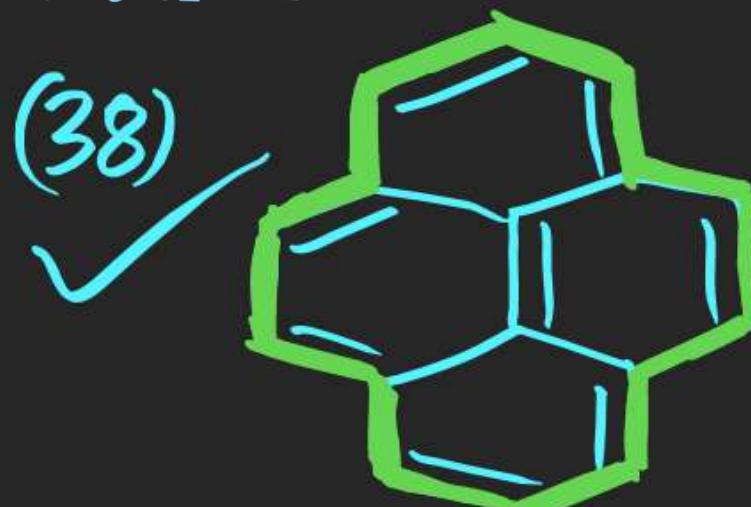
(35) Inorganic Benzene
orBorazine ($B_3N_3H_6$)or
Borazole✓ ✓ ✓ 14 π 

(Aromatic)

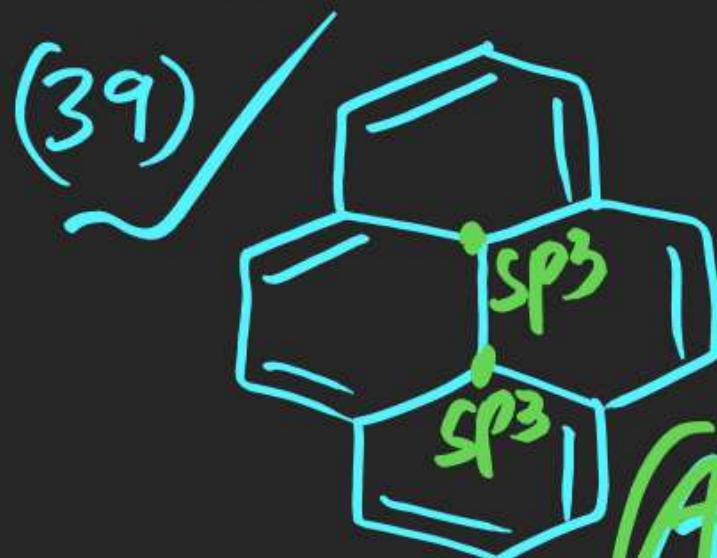
(36)



(37)



(Aromatic)



(Aromatic)

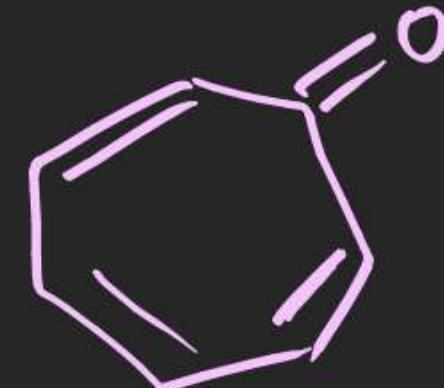


✓ ✓ ✓ ~~✓ 16π~~
~~14π egs~~
largest conjugated
cyclic periphay.

(41)



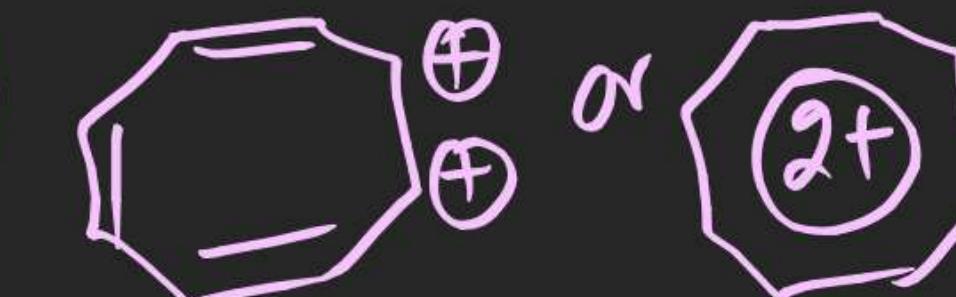
(42)

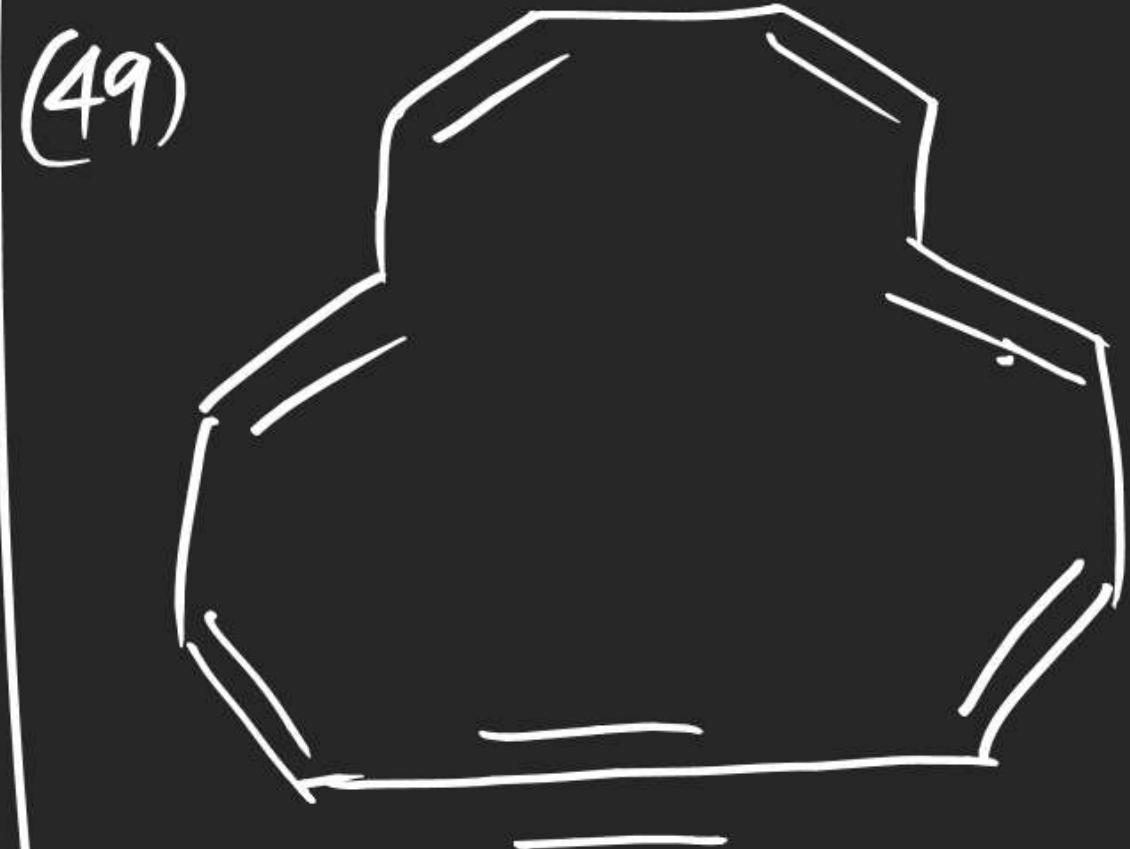


(43)



(44)





(50) Annulene-[16]

(51) Annulene-[18]

(52) Azulene

