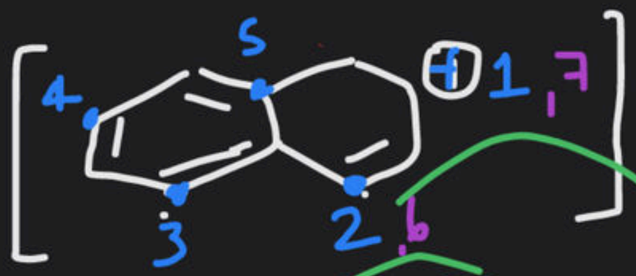
Rules for Stability of Resonating Structure Part, Resonance Effect

Course on General Organic Chemistry (GOC) for Dropper 13th students

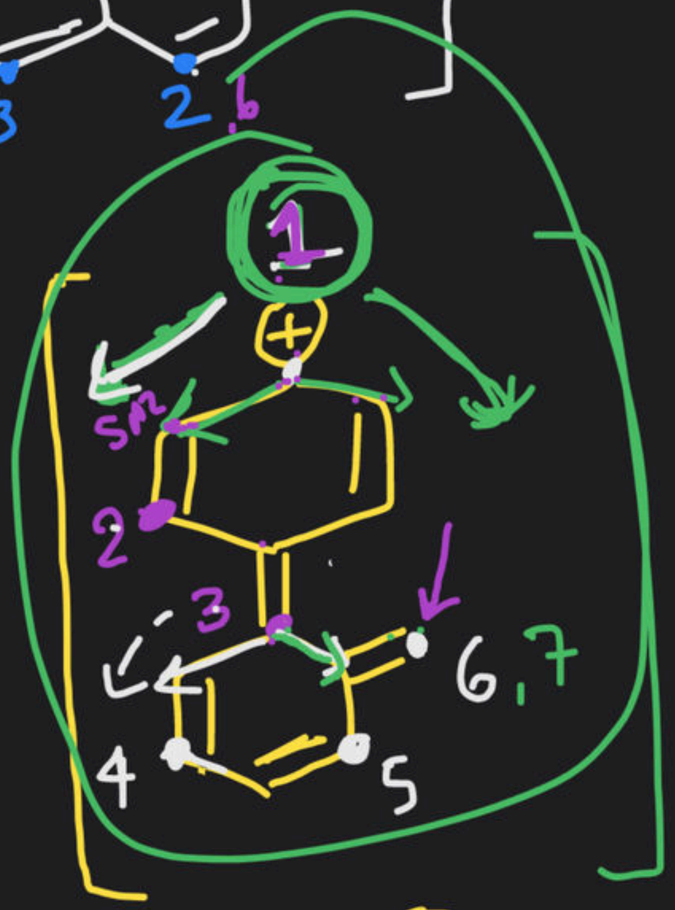
SURENDRA K MISHRA • Lesson 7 • Sept 22, 2021

HW (discussion)

(9) 7



(10)

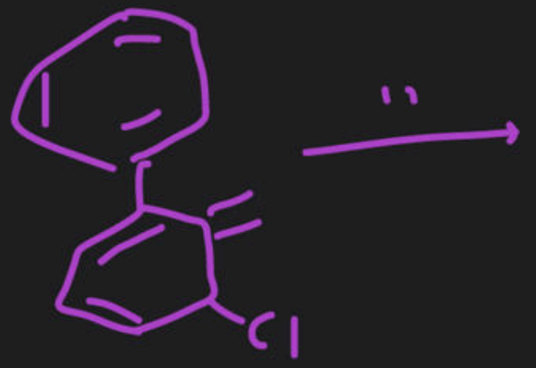


(13)

(RS)

(13)

Q



(13)

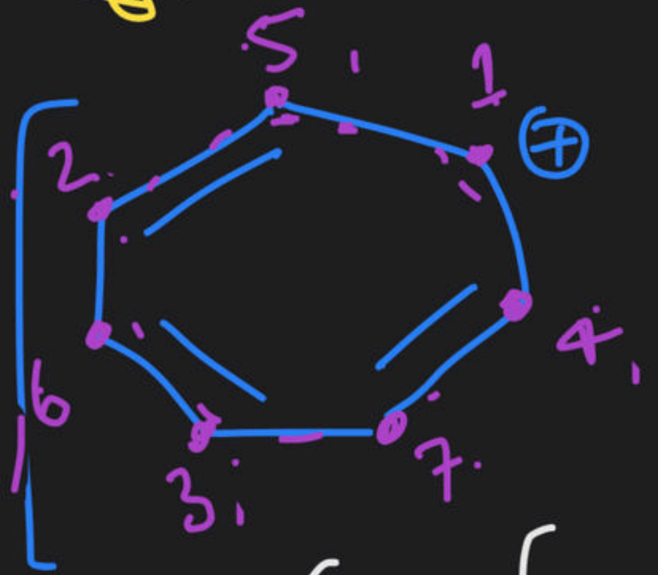
Anticlockwise clockwise

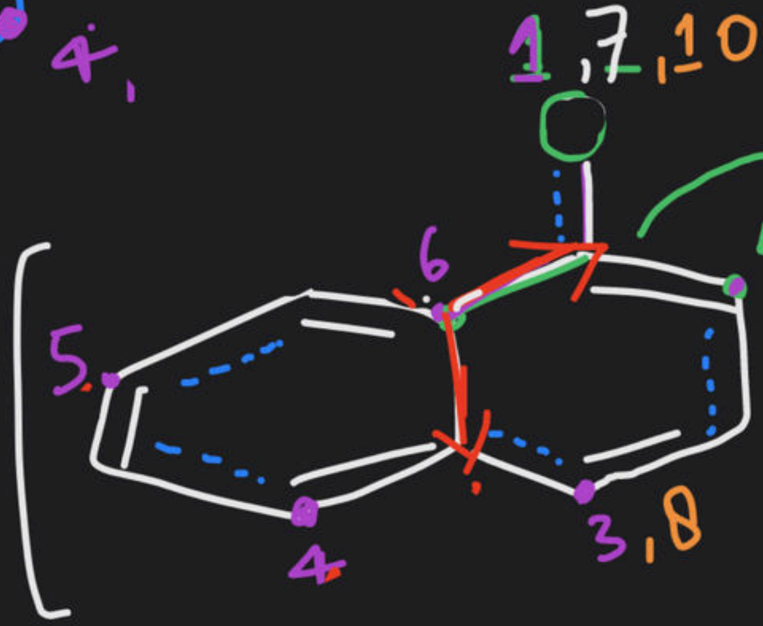
$= 13\ RS$

(11)

3

(12)





(15)

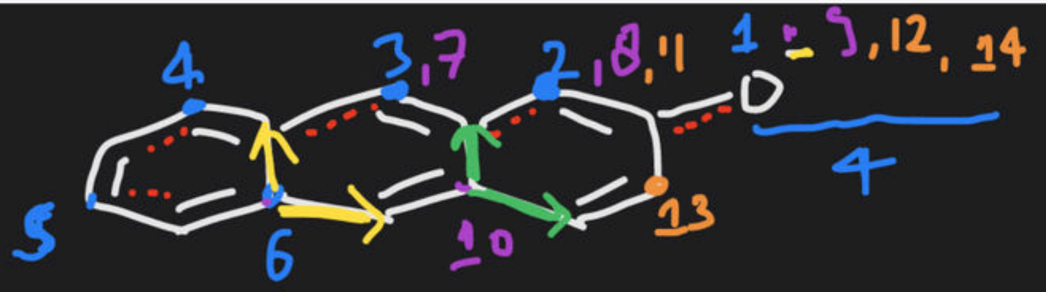
(10)

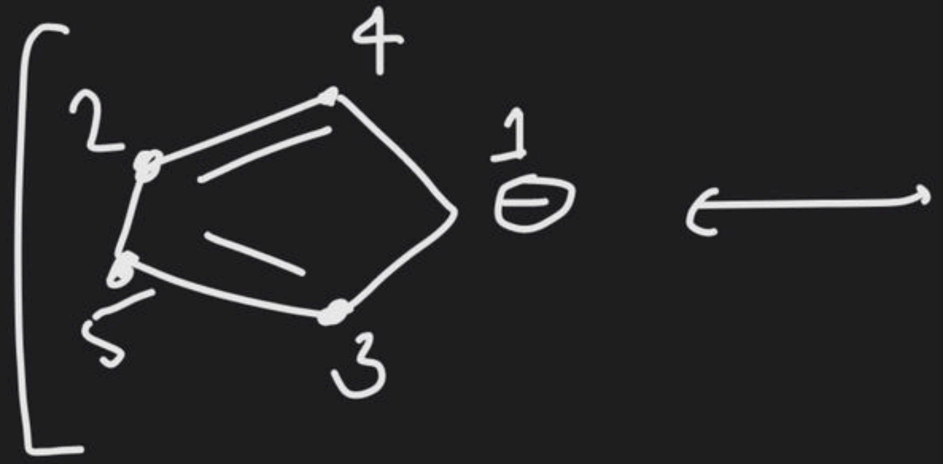
(16) 14

(17) 16

(18) 20

(19) 5



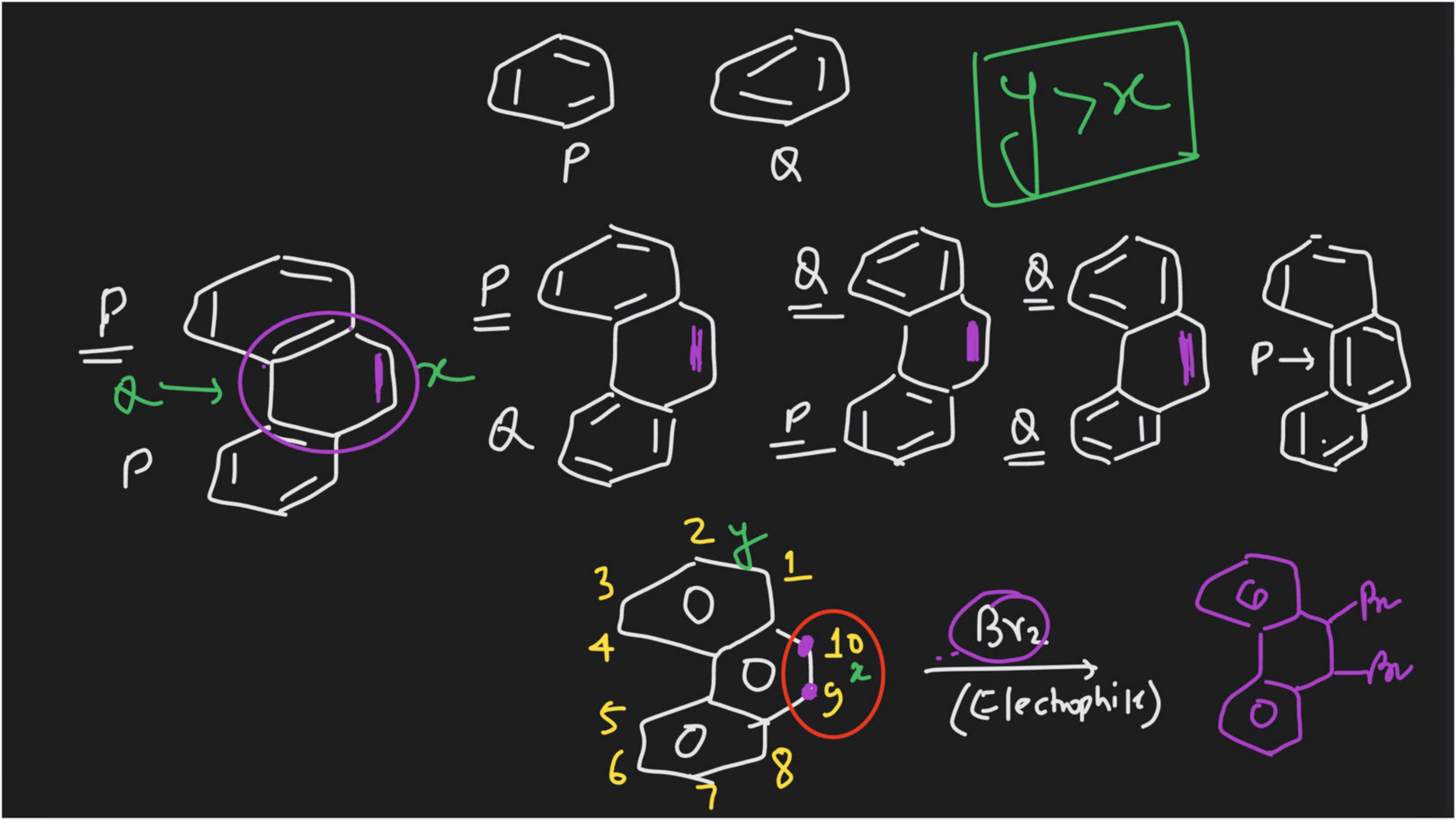


(20) ——

(21) ——

(22) —— 4

(23) — 5


P
Q
y > x
P
Q
x
P
Q
P
Q
Q
P
Q
Q
P
2
y
1
3
4
5
6
7
8
9
10
x
Br_2
(Electrophile)
Br
Br

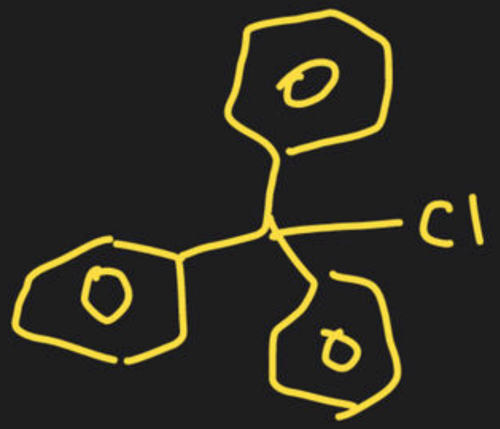
(24) 16 (2^4)

(25) 8 (2^3)

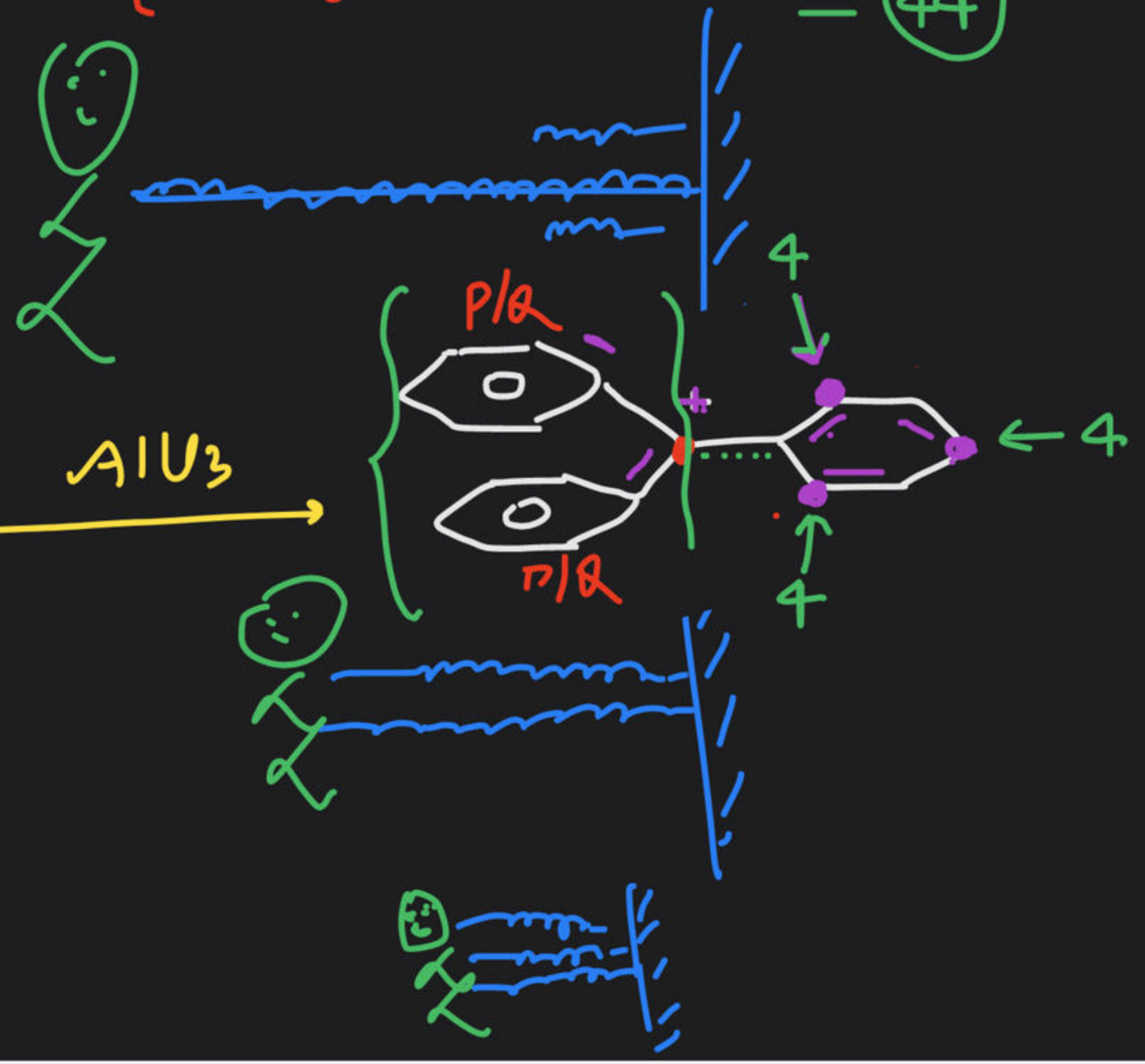
(26) —

(27) 2 (2^1)

(28)



AlU_3

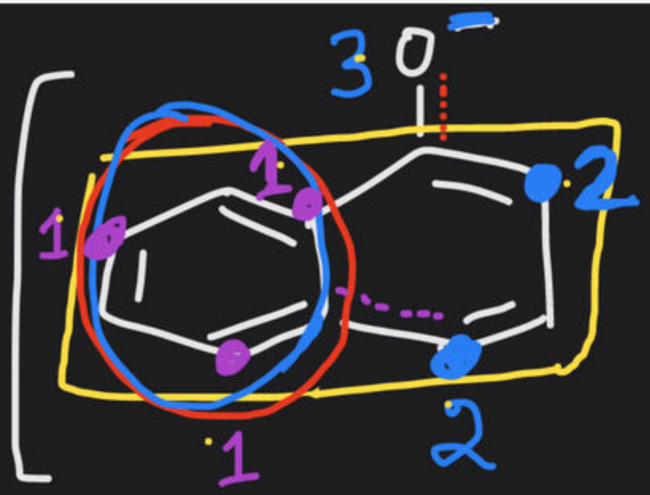


$\begin{pmatrix} PPP & QQP \\ QPP & QPQ \\ PQP & PQQ \\ PPQ & QQQ \end{pmatrix}$

$8 + \underline{1}2 + \underline{1}2 + \underline{1}2$

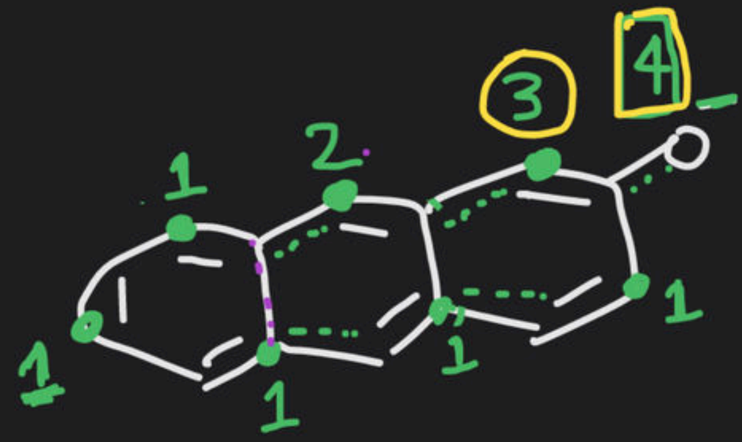
$= (44)$

Q =



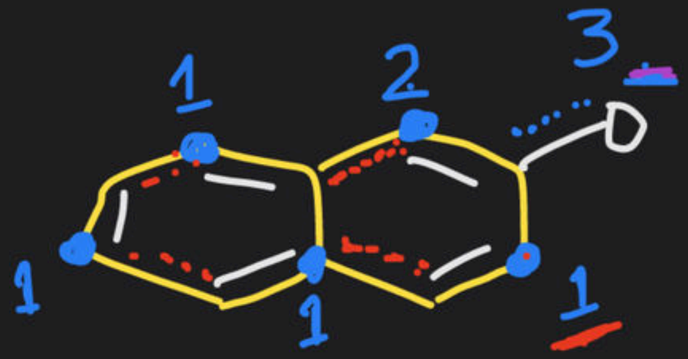
(10)

Q

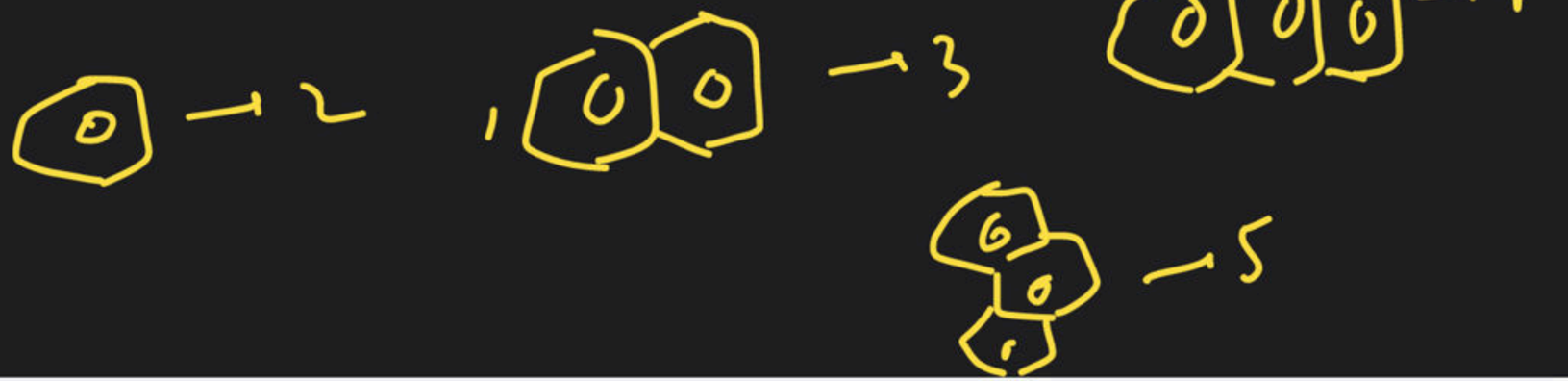


= 4 + 3 + 2 + 1 + 1 + 1 + 1 + 1

Q

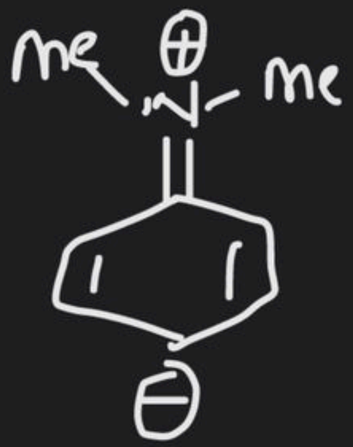


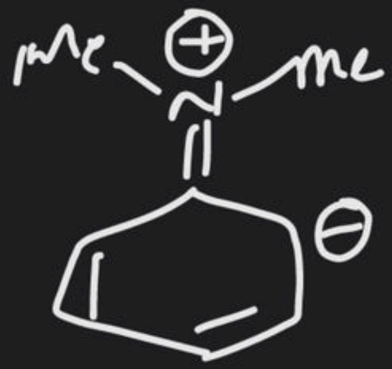
(9)



(Rule-4) RS having opp. charges closer & like charges away are more stable

Ex-7:





(II > I)

Rul-5: RS having higher no. of Benzenoid segments are more stable.

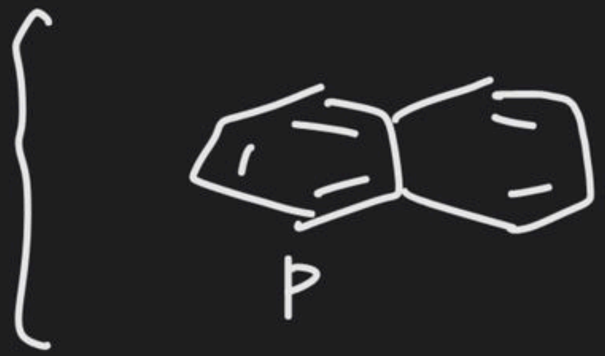
Ex-8:

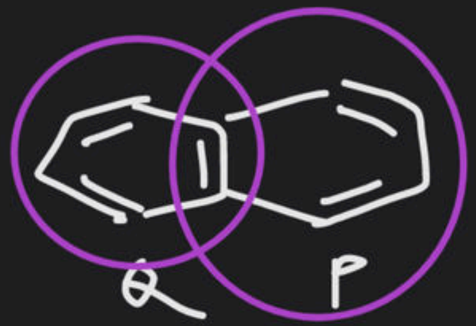
(I)

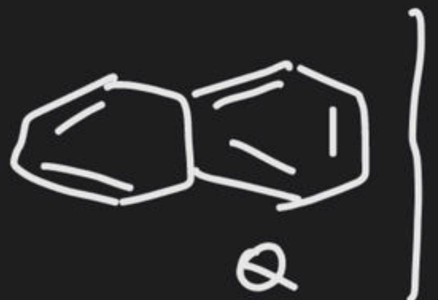
(II)

(I = II)

Ex-9

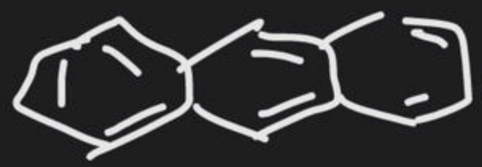


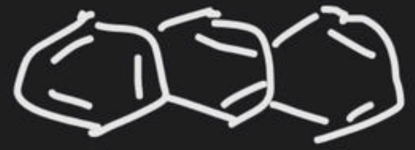


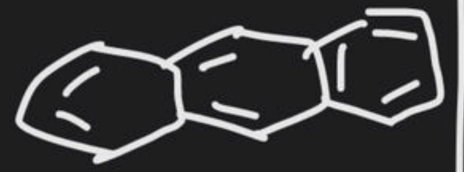


II > I = III

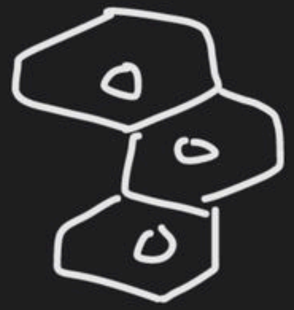
Ex-10





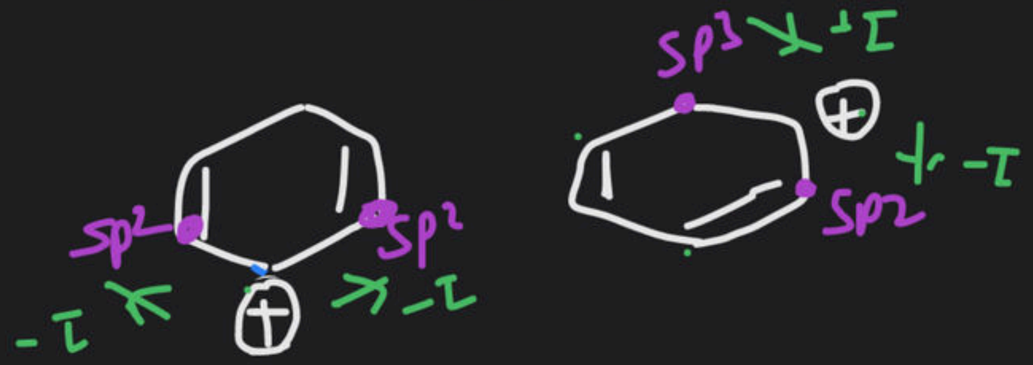


Ex-11



(12) 

(13) 

(14) 

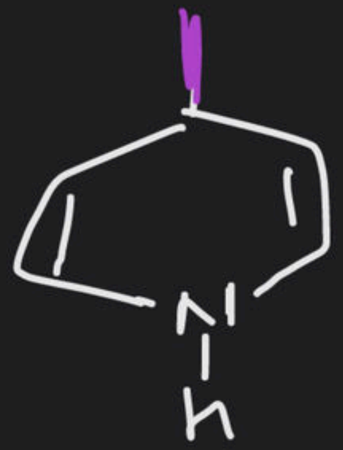
(II > I)

(15) 

(16) 

(Q) Which of the following is more stable RS than

(A)



(B) N.O.T