

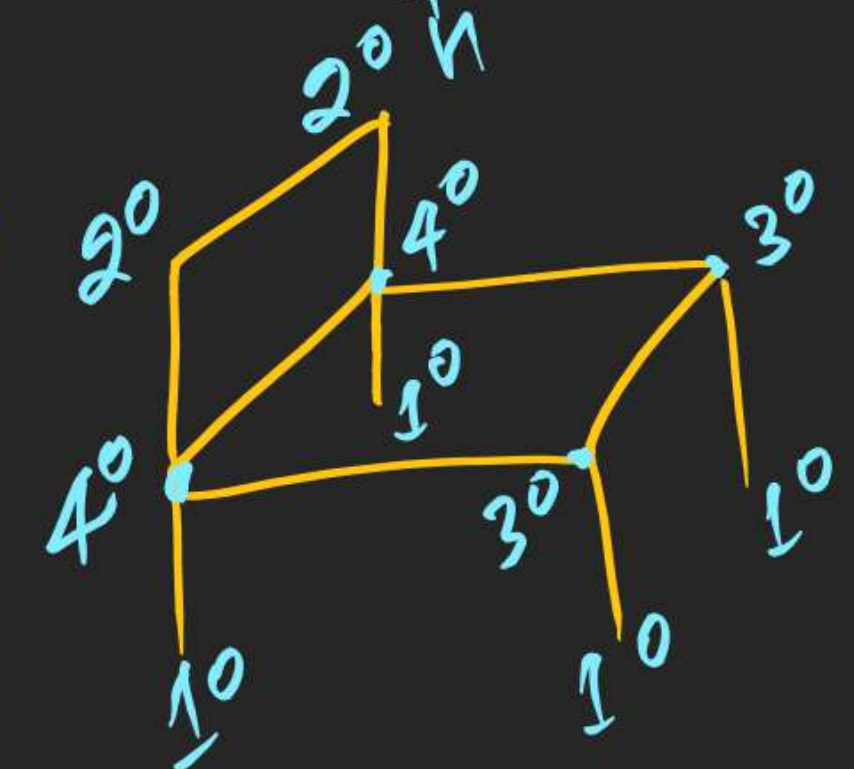
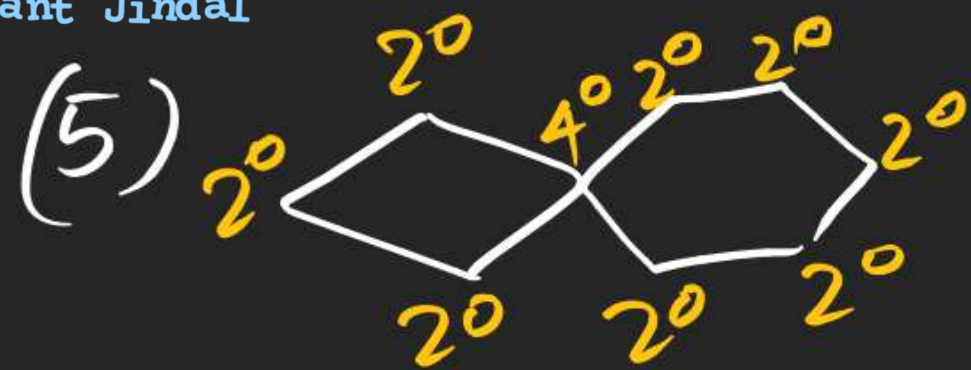


Basic Organic Chemistry

HW Discussion (Theory Copy)

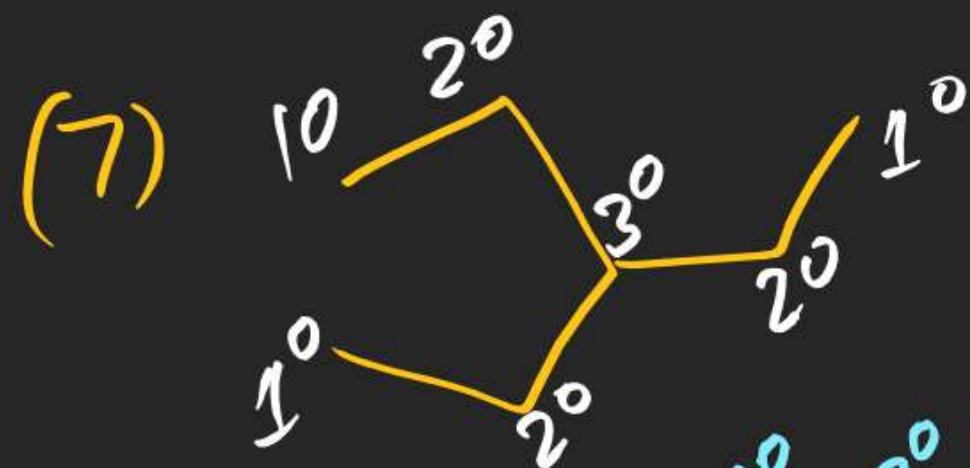
		4°C	3°C	2°C	1°C	3°H	2°H	1°H
①		0	1	1	3	1	2	9
(3)		0	1	2	3	1	2	9
(4)		2	2	2	4	2	4	12



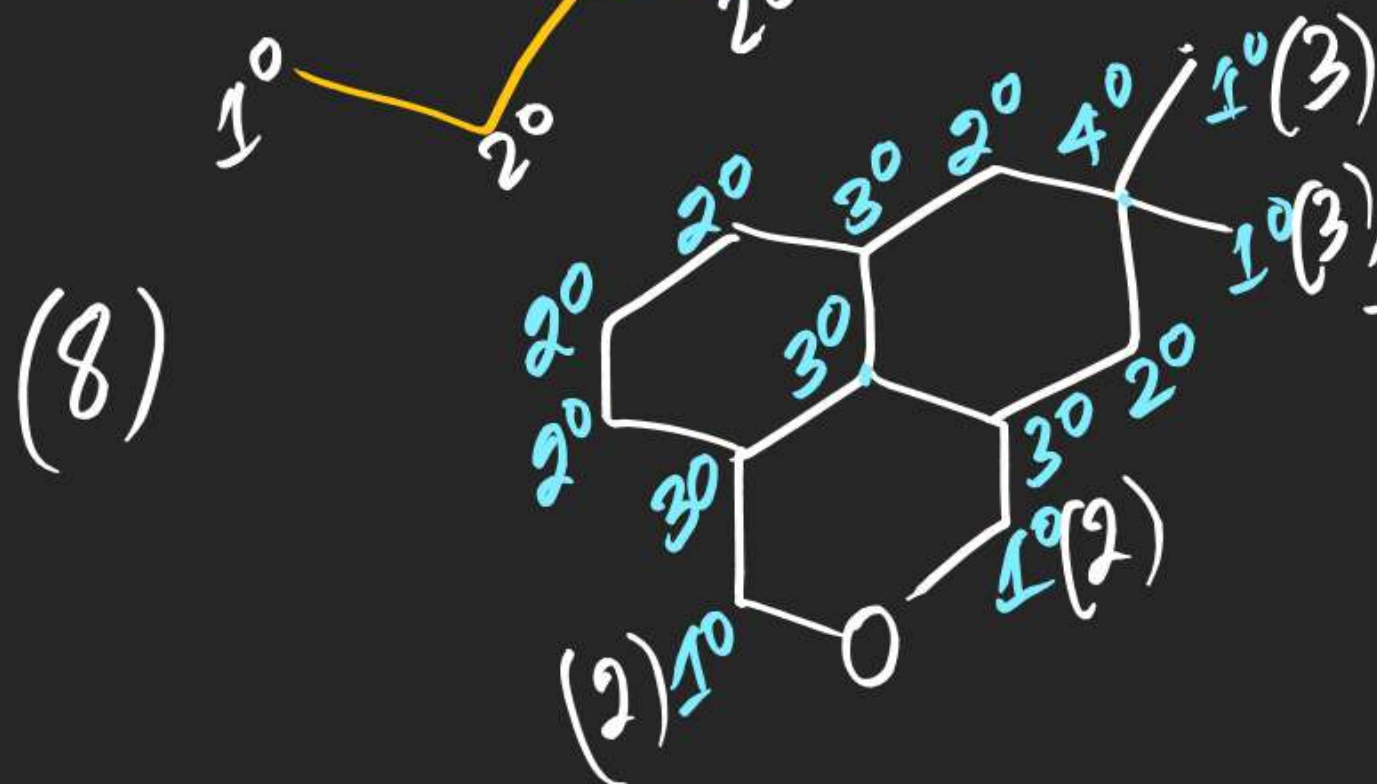
1 0 8 0 0 16 0



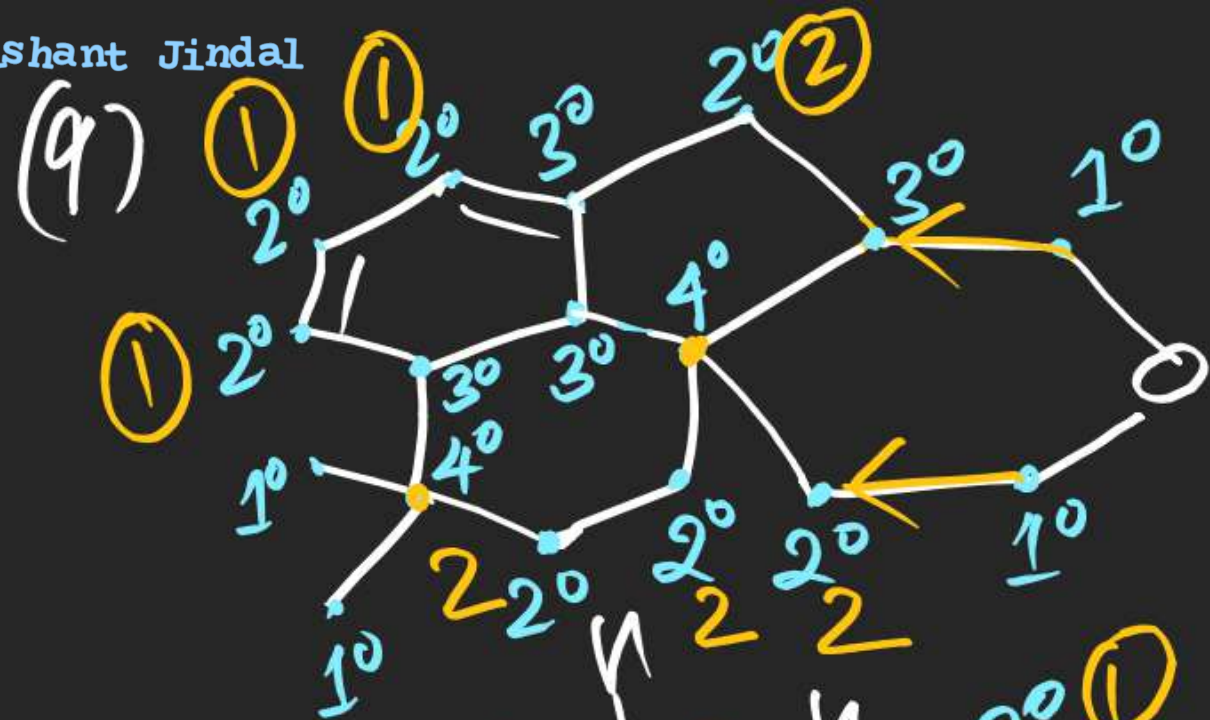
1 0 4 4 0 8 12



0 1 3 3 1 6 9



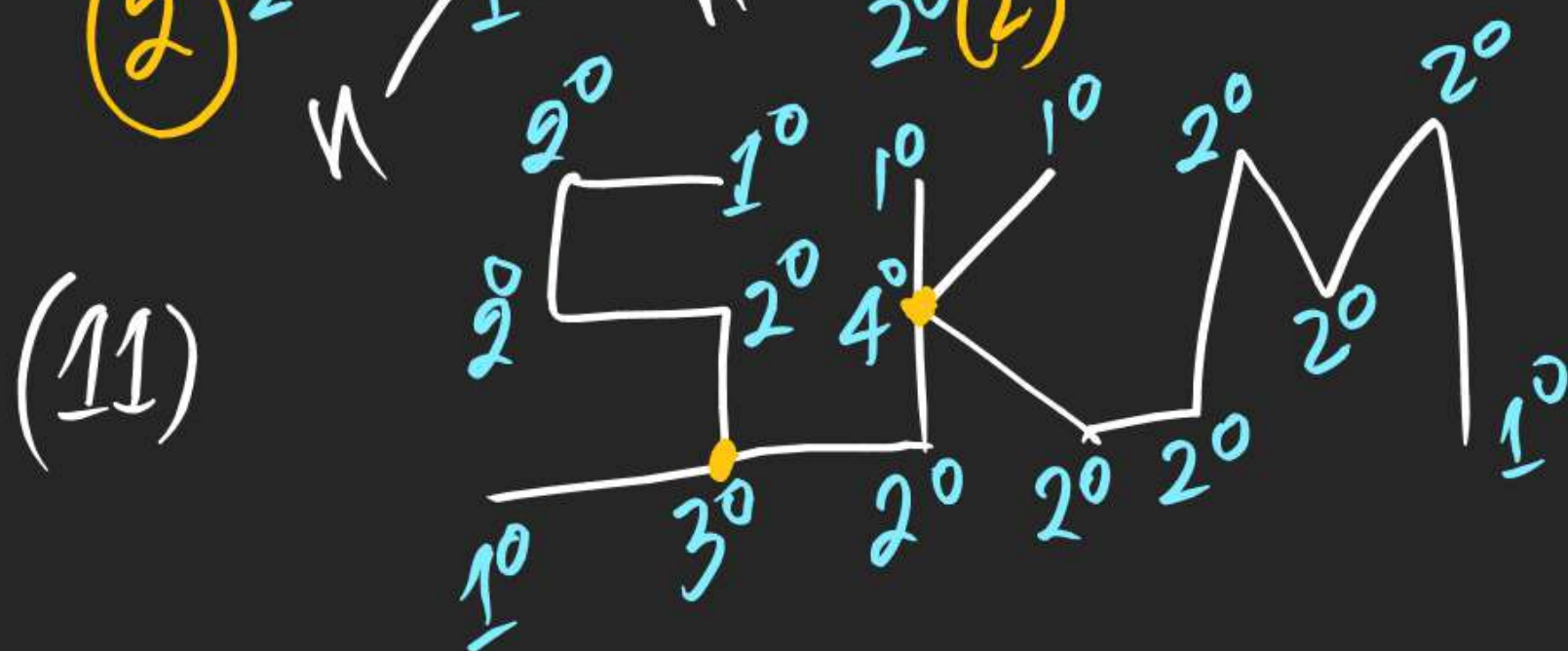
1 4 5 4 4 10 10



2 4 7 4 3 11 10



0 0 8 2 0 13 4



1 1 9 5 1 18 15

(#) Sigma & Pi Bond:

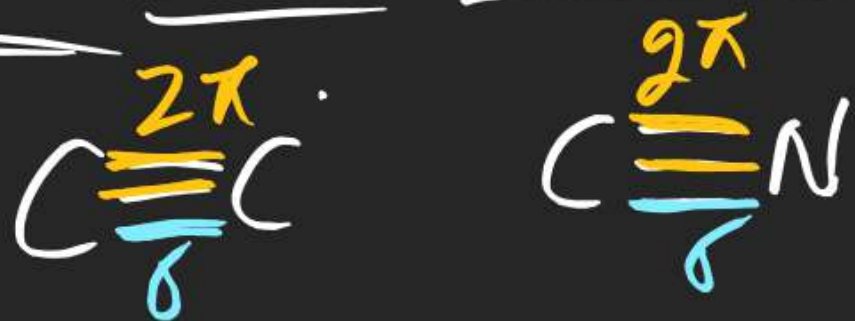
⇒ All Single Bonds are Sigma Bonds (σ -Bond)



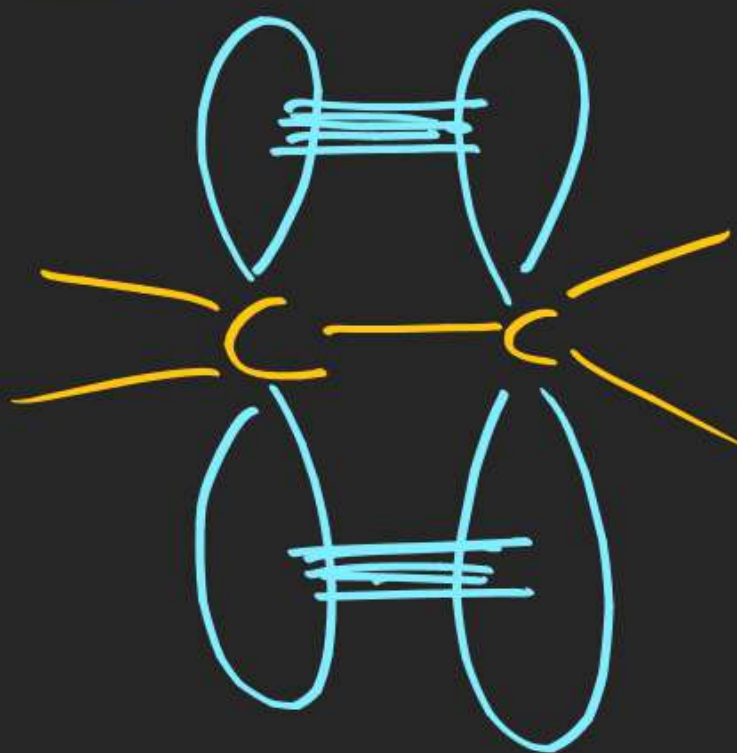
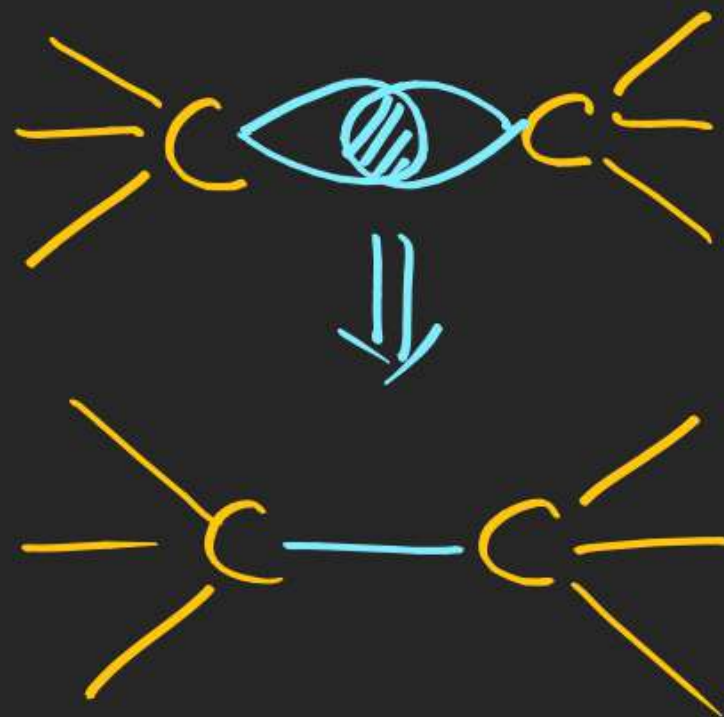
⇒ Each Double Bond contains (1 σ & 1 π Bond)



⇒ Each Triple Bond contains (1 σ & 2 π Bonds)



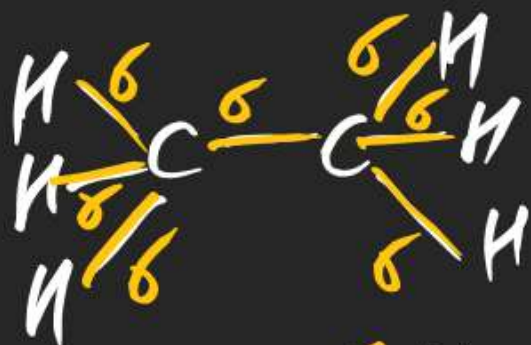
(*) Sigma Bonds are stronger Bonds than π Bonds



wd study in
IOC in detail

Calculate σ Bonds & π Bonds

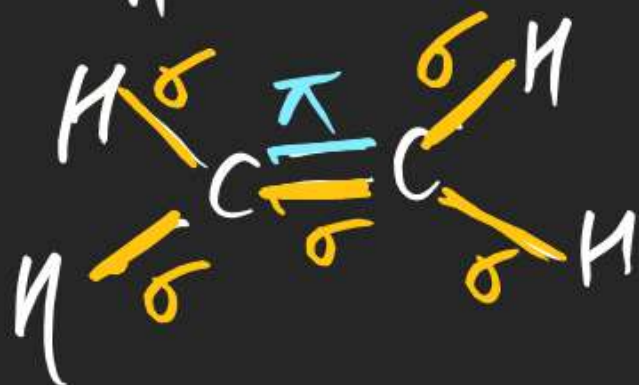
(1)



$$\frac{\sigma \text{ Bond}}{7}$$

$$\frac{\pi \text{ Bond}}{0}$$

(2)



$$5$$

$$1$$

(3)



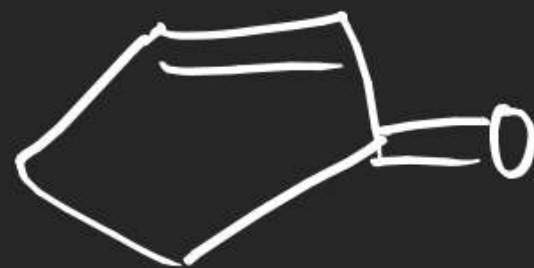
$$3$$

$$2$$

(4)



(5)



σ Bond

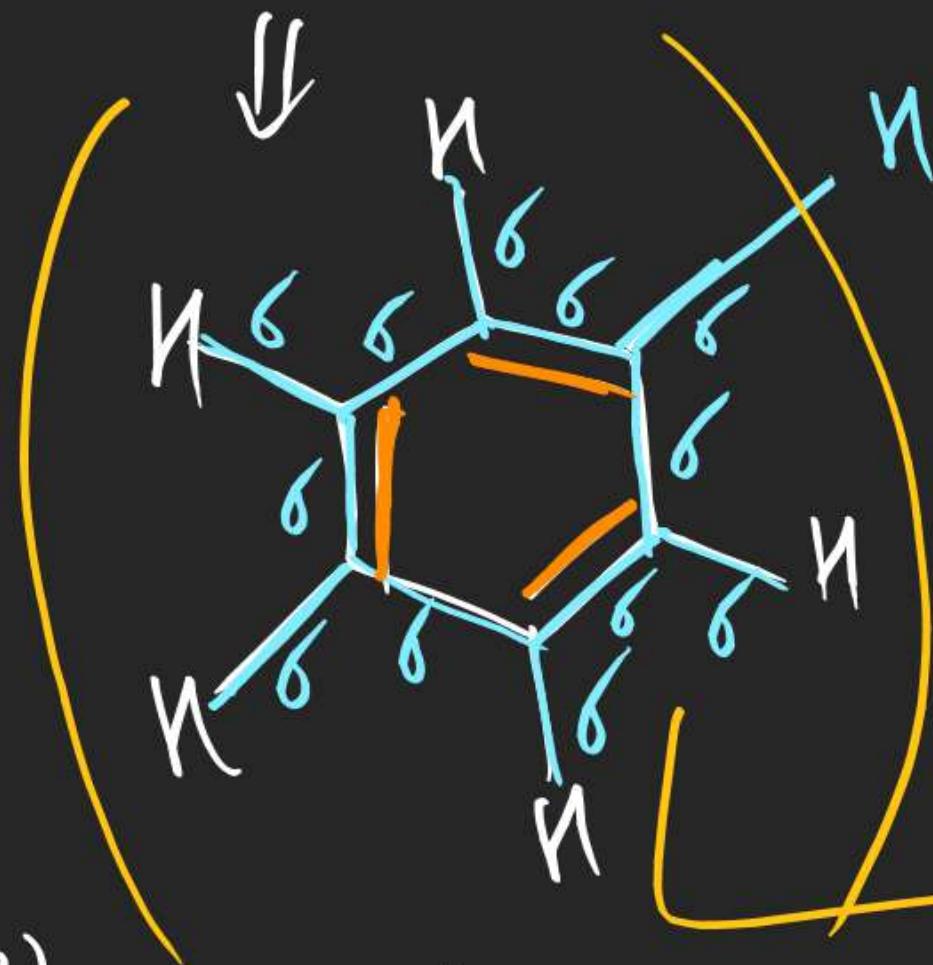
π Bond

(6)



12

3



Phenyl (Ph)

(7)



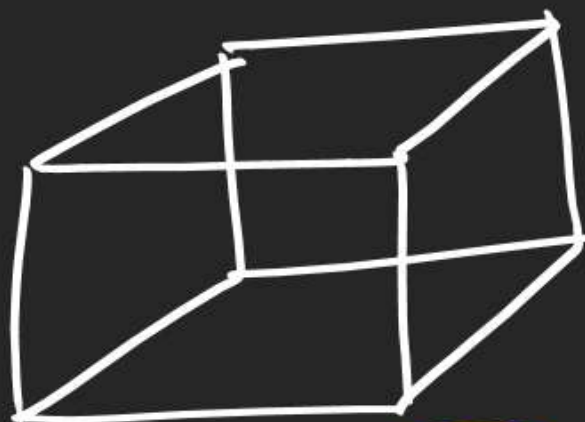
(8)



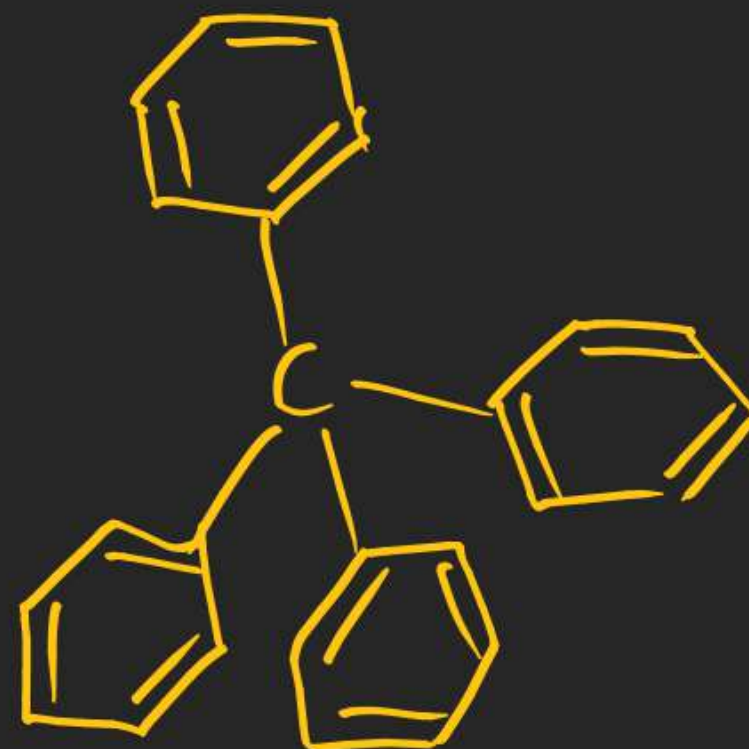
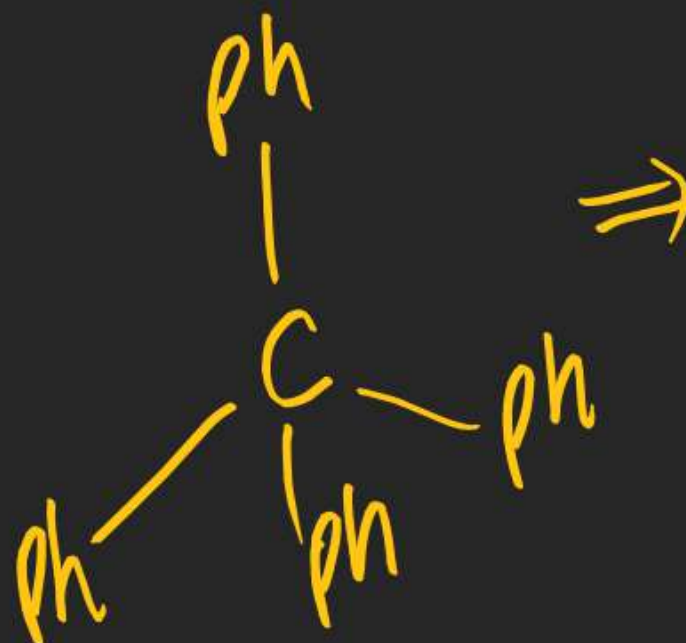
(9)

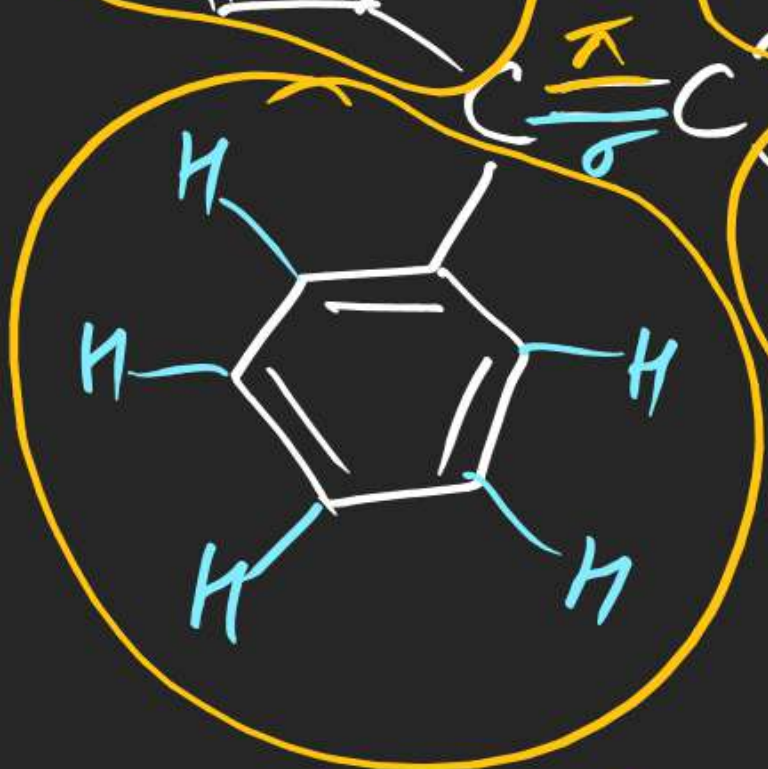
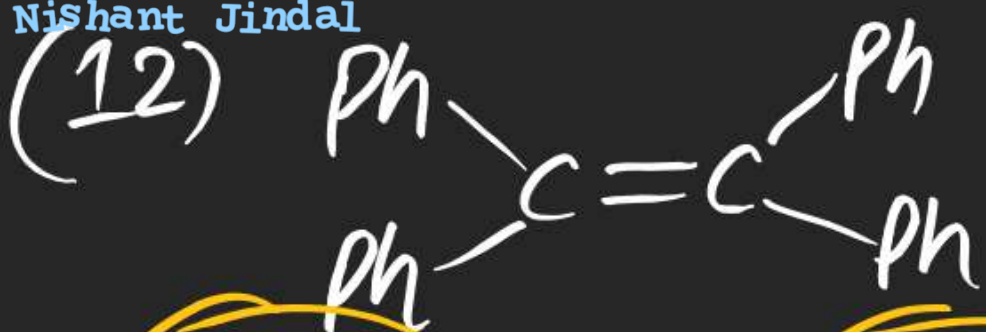


(10)



(11)

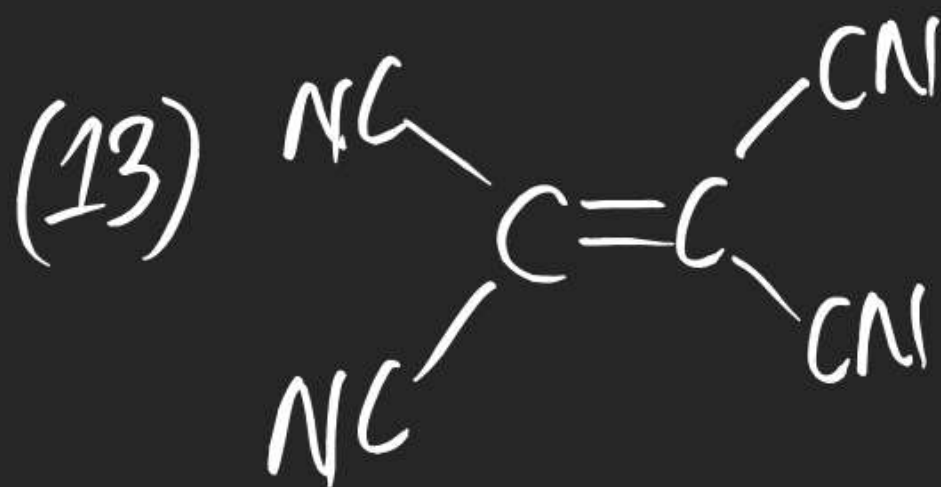




12σ & 3π

$$\begin{aligned} &49 \\ &= 12 \times 4 + 1 \\ &= 48 + 1 \\ &= 49 \end{aligned}$$

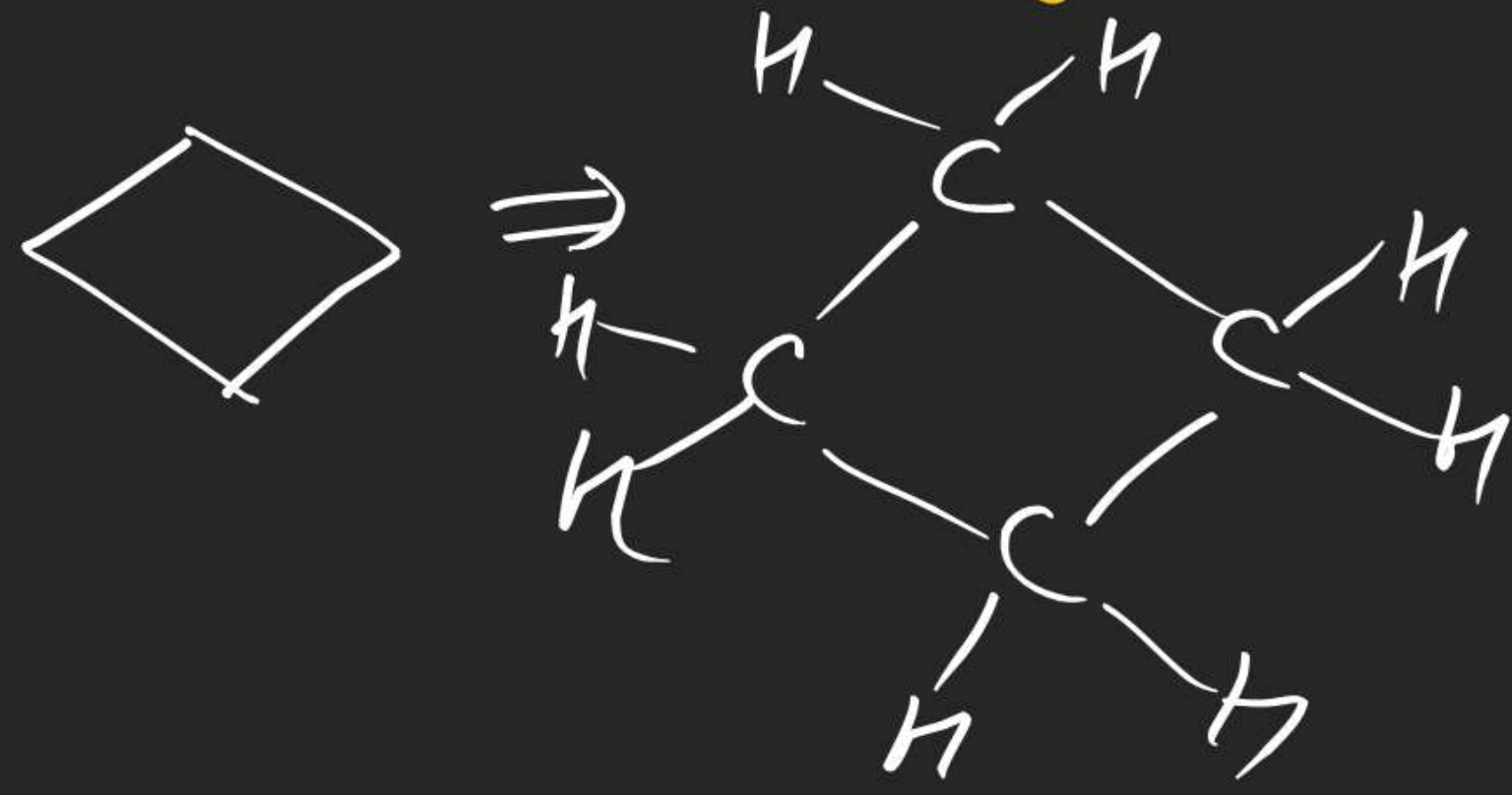
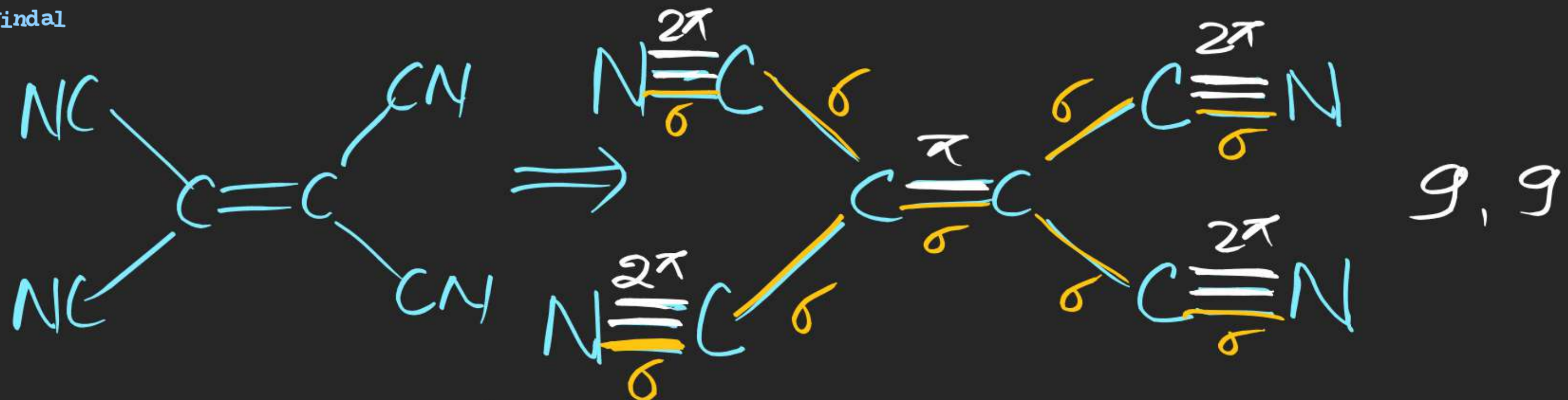
$$\begin{aligned} &13 \\ &= 3 \times 4 + 1 \\ &= 12 + 1 \\ &= 13 \end{aligned}$$



σ
g

π
g

C_6H_6 Benzene
 C_6H_5 Phenyl



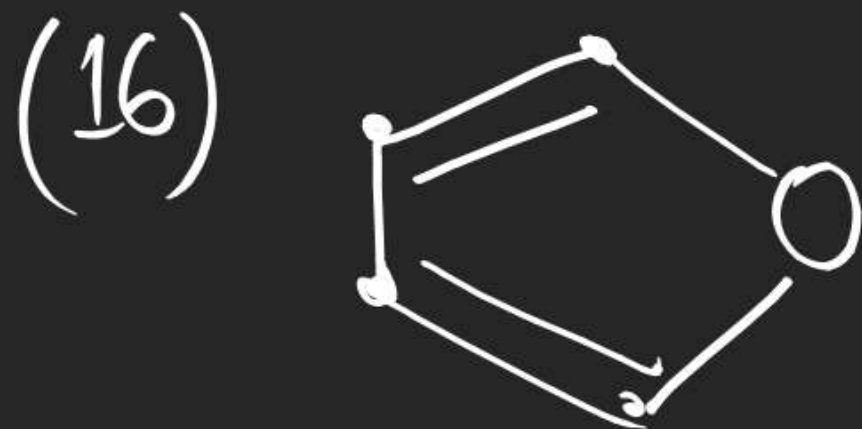
$$\Rightarrow 1 \text{ Bond} = 2e^-$$

$$\Rightarrow \text{Sigma } e^- = 2 \times \text{Sigma Bond}$$

$$\pi e^- = 2 \times \text{pi Bond}$$

$$\boxed{\sigma e^-} = 9 \times 2 = 18$$

$$\boxed{\pi e^-} = 2 \times 1 = 2$$



~~Poor~~

Nomenclature

GOC

Book for Organic chemistry

⊗ No Theory Book is Req^d.

⊗ Practice Book

Blue Book

BB

(i) Theory Copy

(ii) DPP

(iii) Sheet

(iv) Cengage Publication (3e)

(Problems & Solution) in
organic chemistry

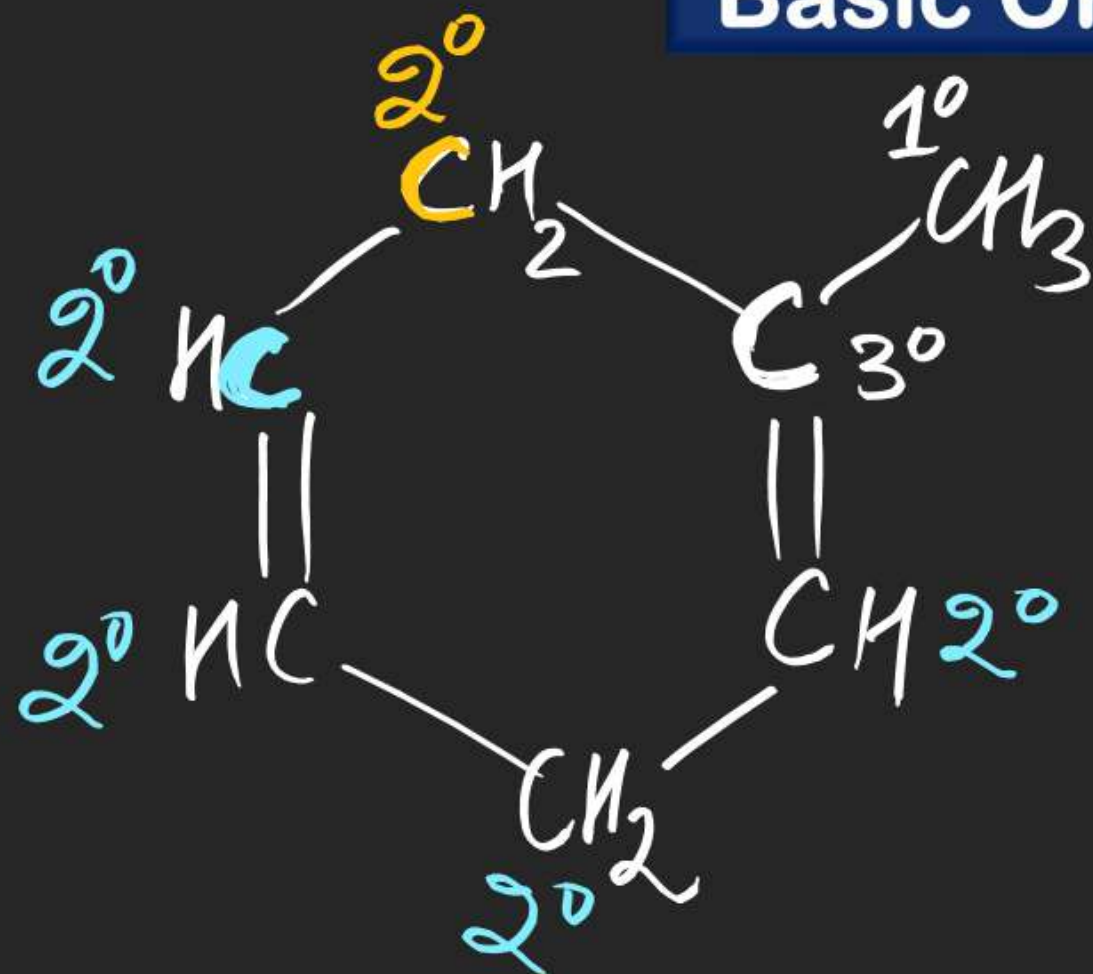
(Suresh K. Mishra)

IIT Advance

AIR 1. —→
2. —→
3. —→
6. —→
8. —→
9. —→
10. —→

Basic Organic Chemistry

(10)



0 1 5 1 0 7 3