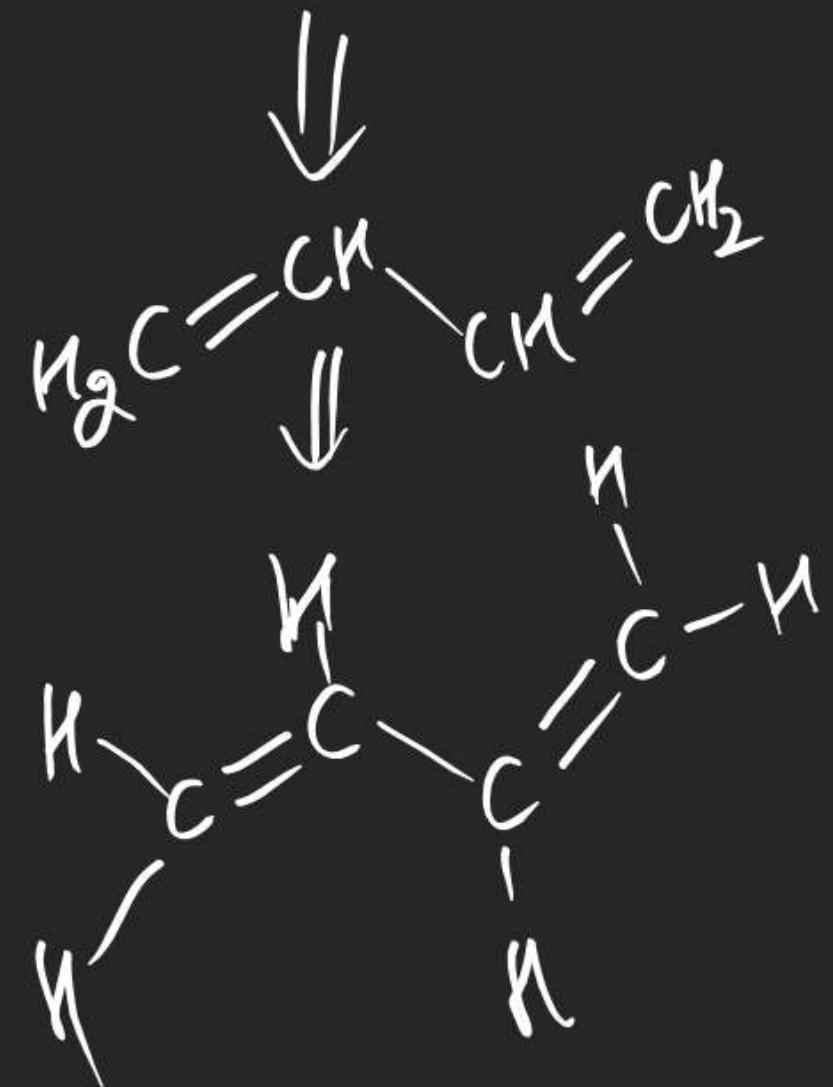
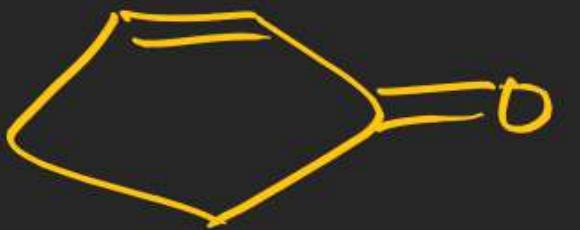


Theory Copy Discussion :-

(4)

 σ
g π
2

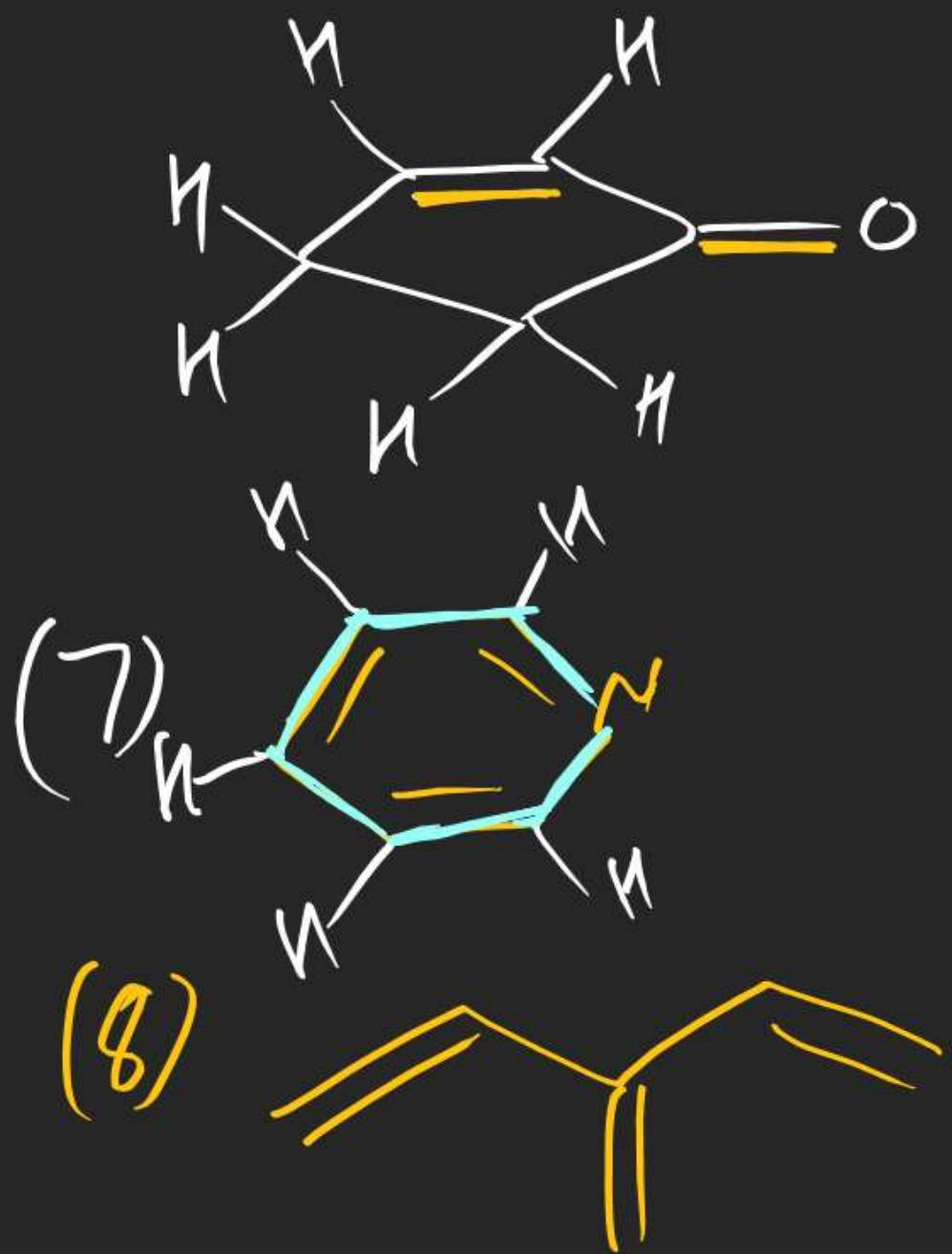
(5)

 σ

12

 κ

2

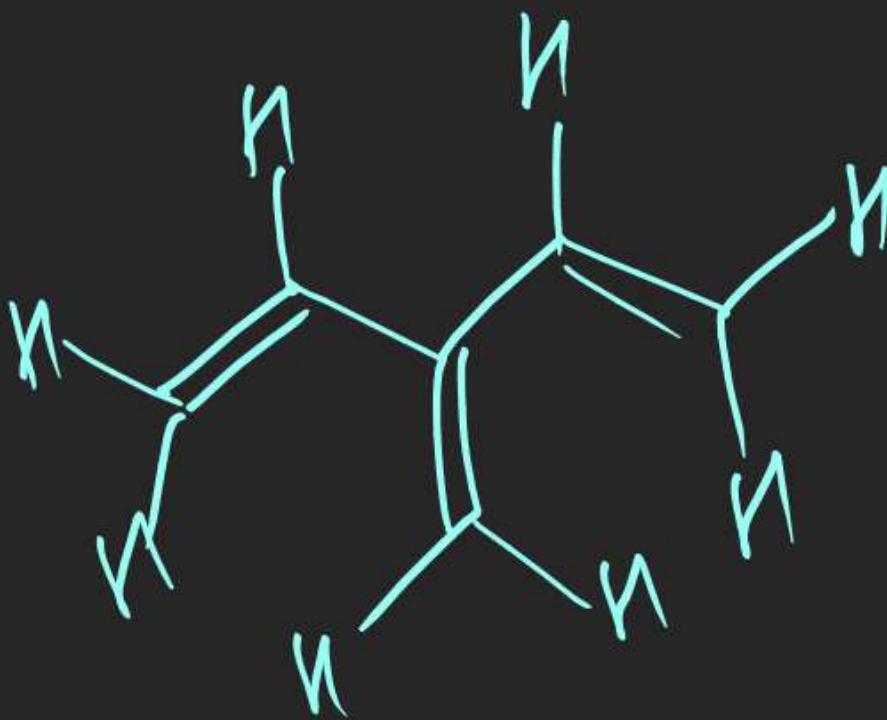


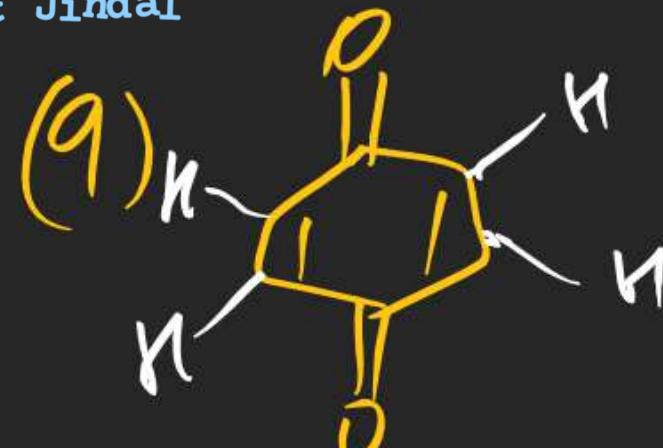
11

13

3

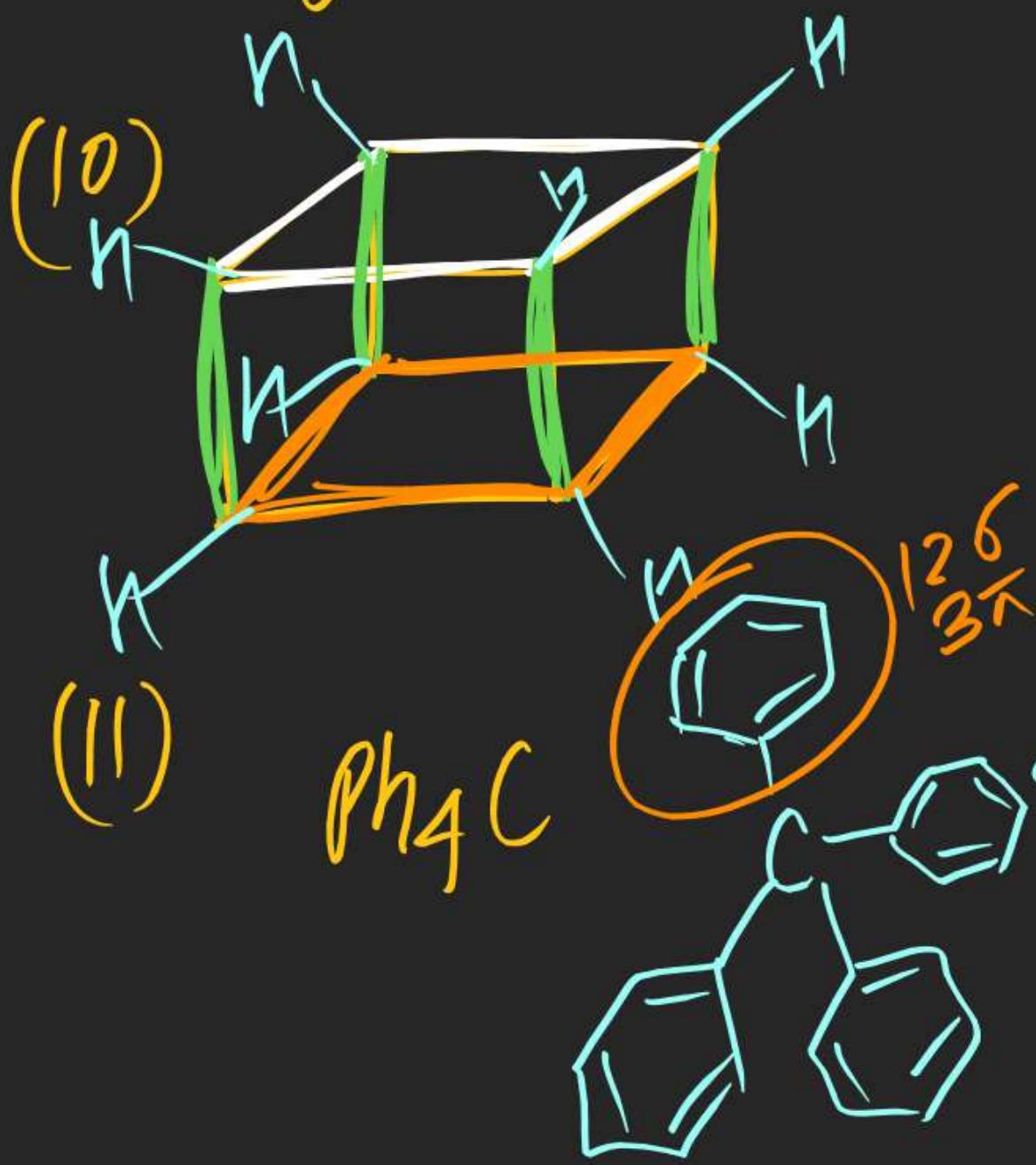
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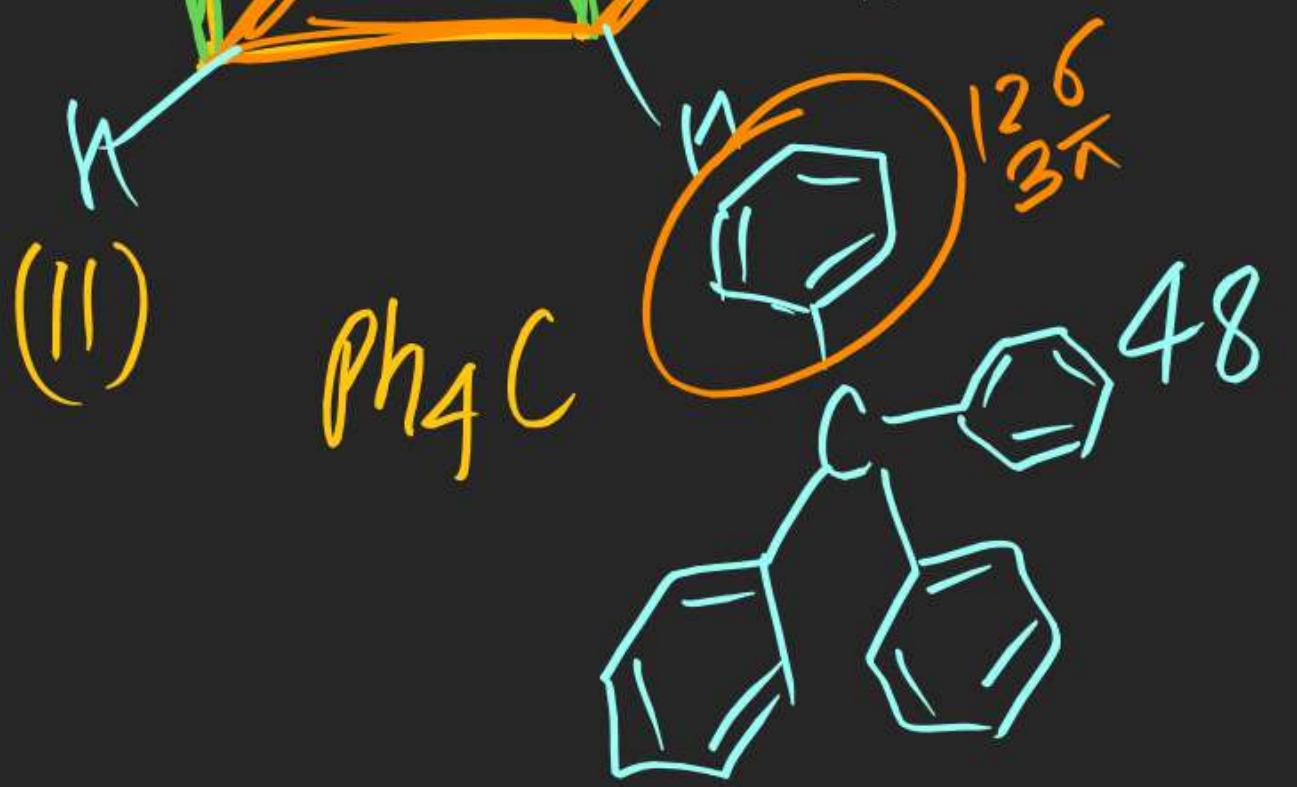
12

4



20

0



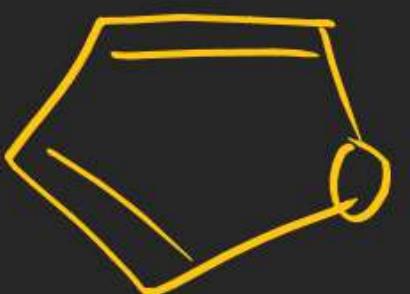
12

(15)



$$\begin{array}{rcl} \text{Ges} & & \text{Ker} \\ 7 \times 2 & & 0 \times 0 \\ = 14 & & 0 \end{array}$$

(16)



$$\begin{array}{rcl} = 9 \times 2 & & = 2 \times 2 \\ = 18 & & = 4 \end{array}$$



Basic Organic Chemistry

1. Which organic structure among the following is not an isomer of the compound

- $C_6H_{12}O$ $CH_3 - CO - CH_2CH_2CH_2CH_3$?
- (A) $CH_3CH_2OCH = CHCH_2CH_3$ (B) $\cancel{CH_3CH = CHCH_2CH_2CHO}$ $C_6H_{10}O$
(C) $(CH_3)_2CH - CO - CH_2CH_3$ (D) $CH_3CH_2COCH_2CH_2CH_3$ $C_6H_{12}O$
- $C_6H_{12}O$

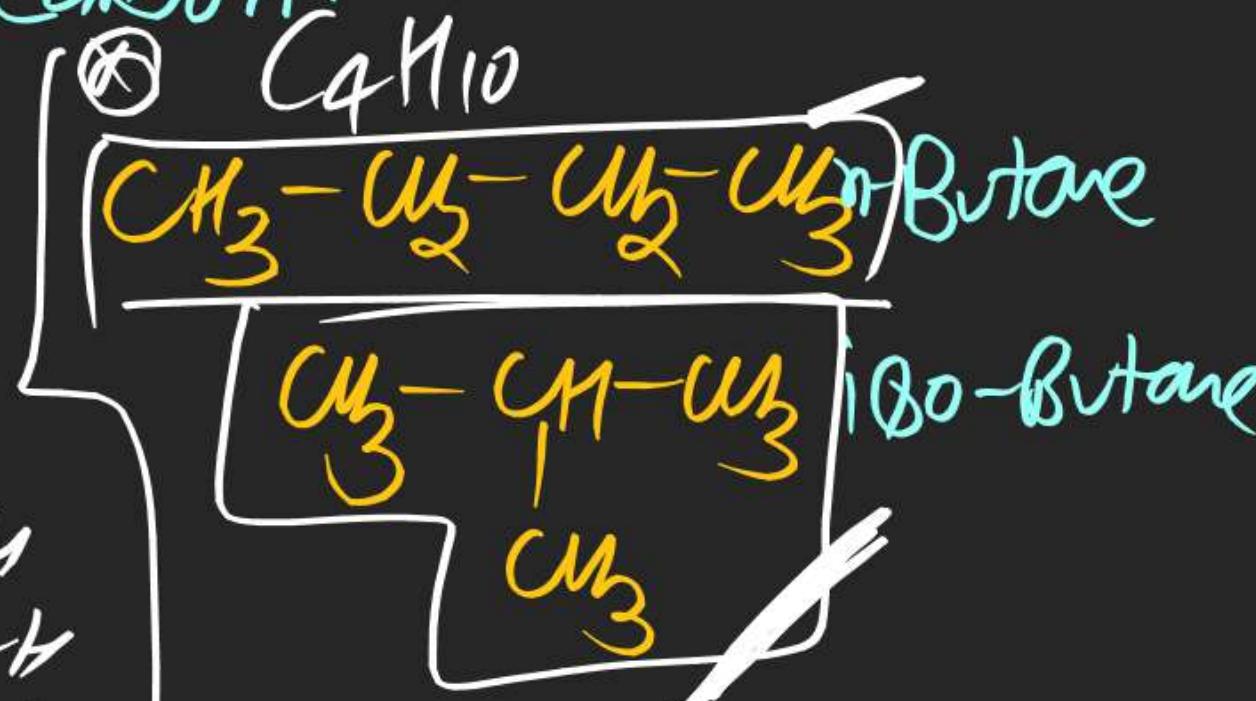
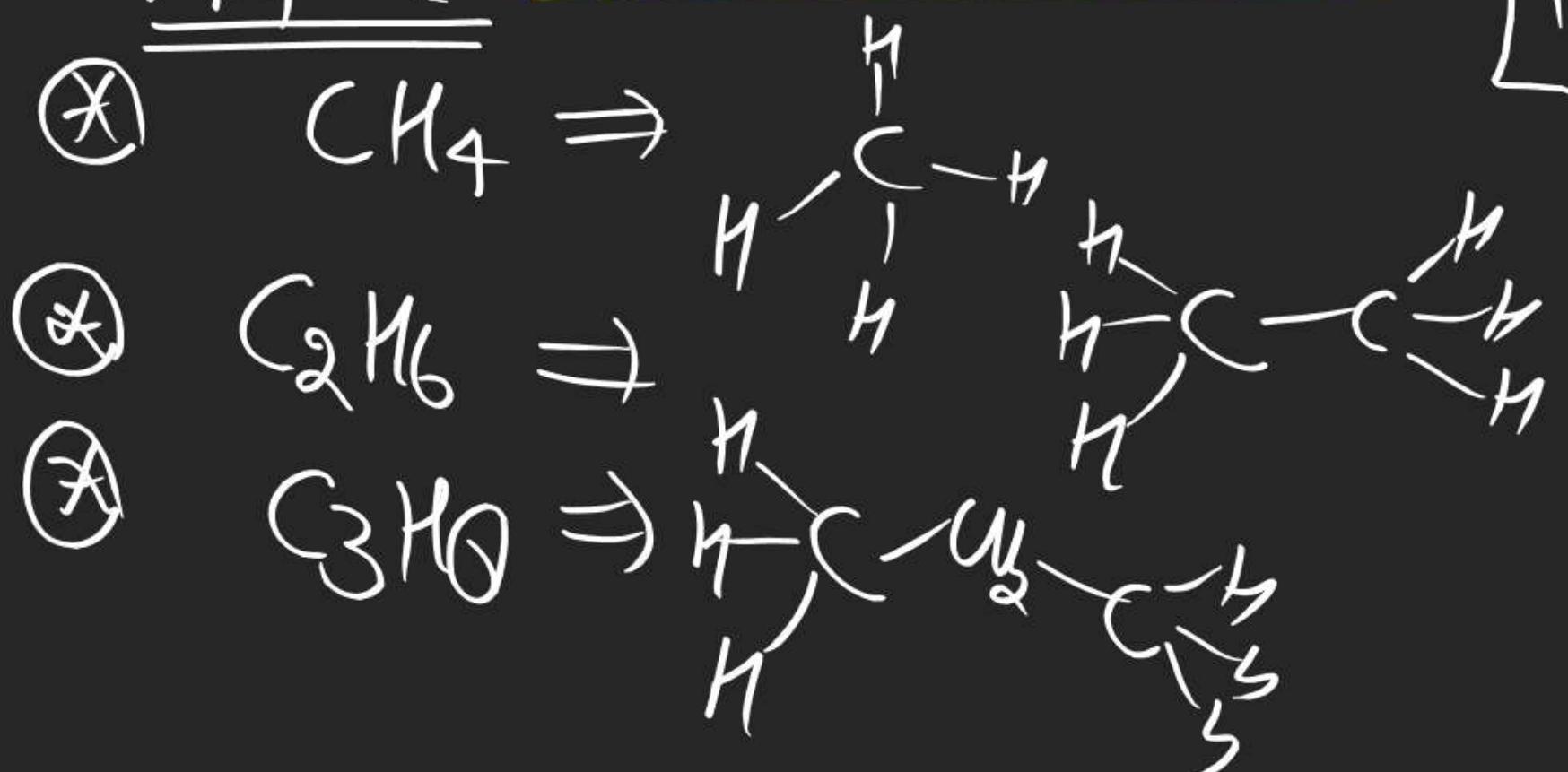
Basic Organic Chemistry

2. The least number of carbon atoms in alkane showing isomerism is
- (A) 3 (B) 1 (C) 2 (D) 4

Solution!

Alkane \Rightarrow Hydrocarbon.

Alkane Chain Isomerism



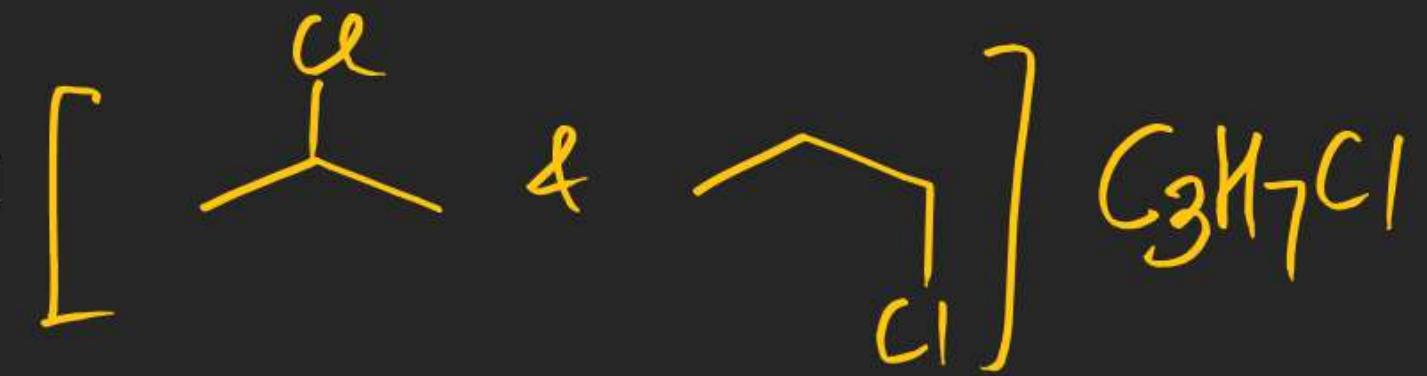
Basic Organic Chemistry

3. Isomers are the compounds having the

- (A) same molecular formula but different physical and/or chemical properties.
- (B) same structural formula but different molecular formulae
- (C) same chemical properties and physical properties
- (D) same physical properties but different chemical properties.

Basic Organic Chemistry

4. Which pair below represents isomers?



Basic Organic Chemistry

5. Consider the following statements : A hydrocarbon of molecular

formula C_5H_{10} is a

I. monosubstituted alkene

2

II. disubstituted alkene

2

III. trisubstituted alkene

1

Which of the following statement(s) is(are) correct?

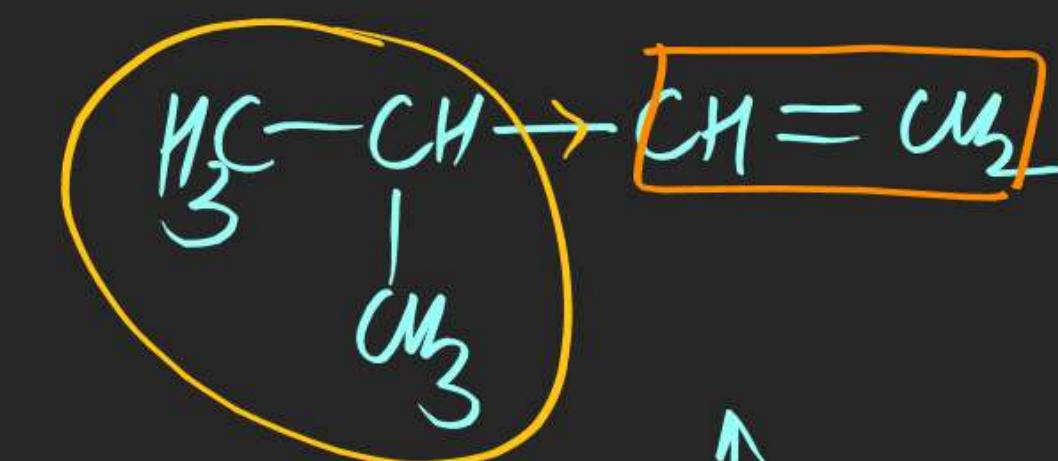
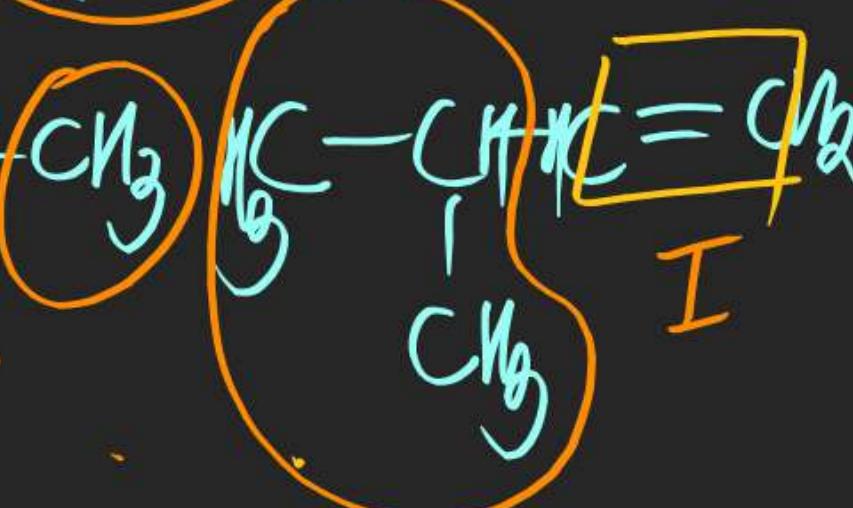
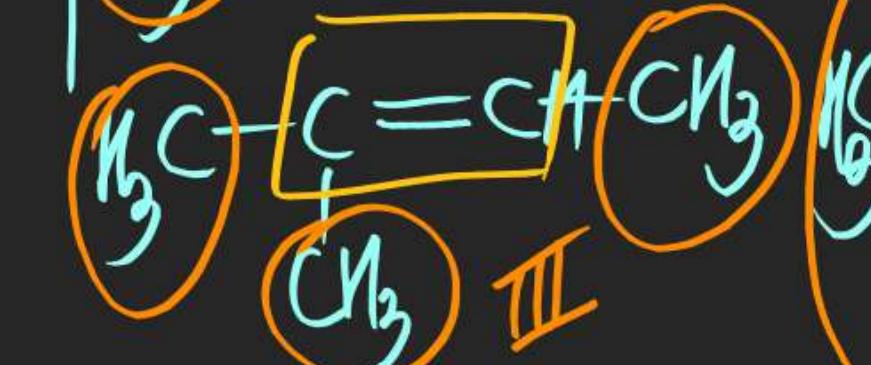
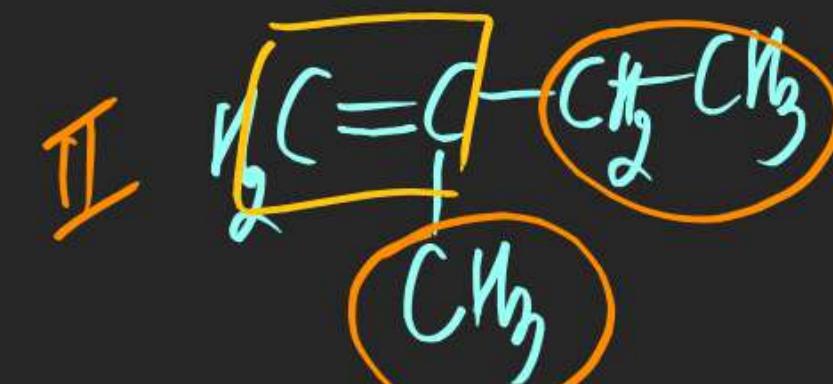
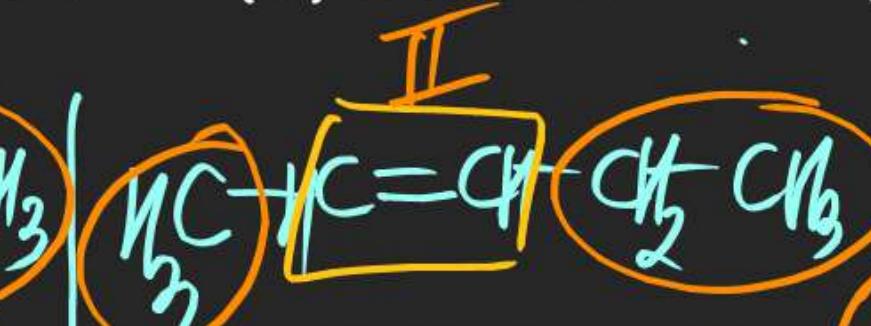
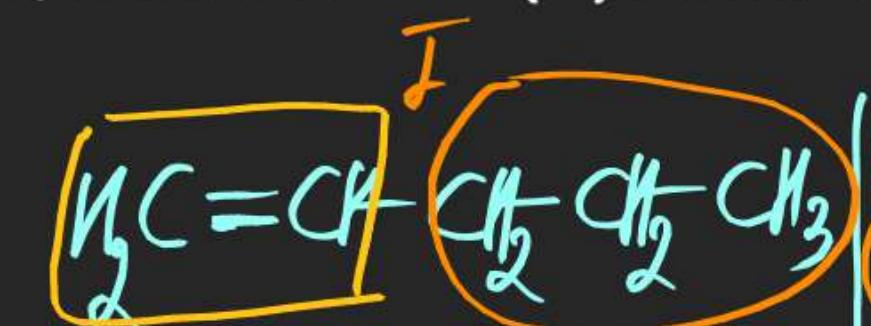
(A) I, II and III

(B) I and II

(C) II and III

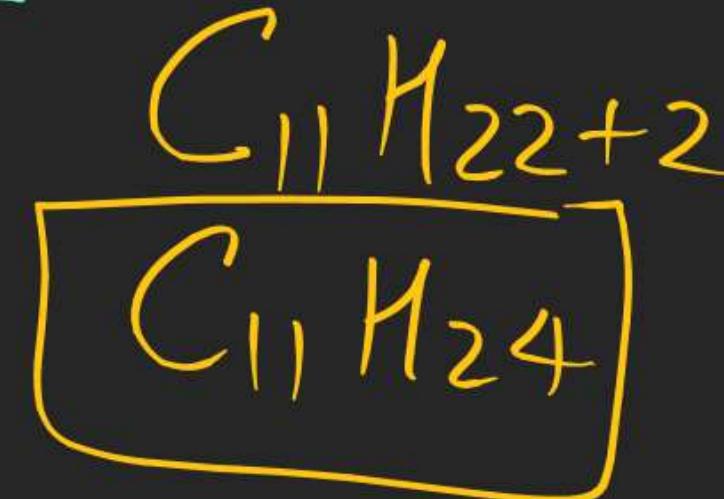
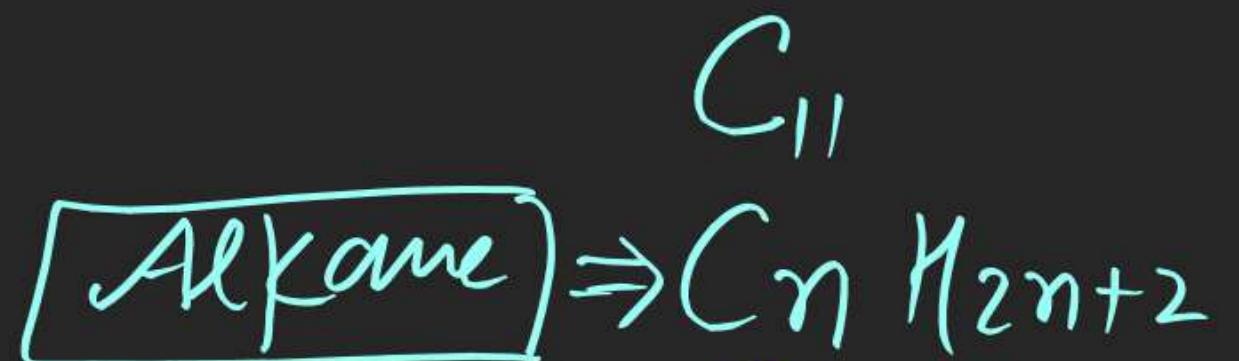
(D) I and III

C_5H_{10} :



Basic Organic Chemistry

6. What will be the molecular formula of the bond line structure?



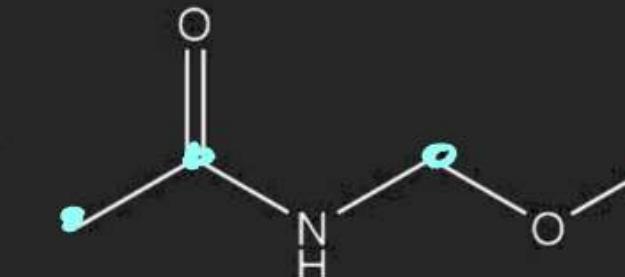
Basic Organic Chemistry

7. Convert the following condensed structures into Bond-line structure.



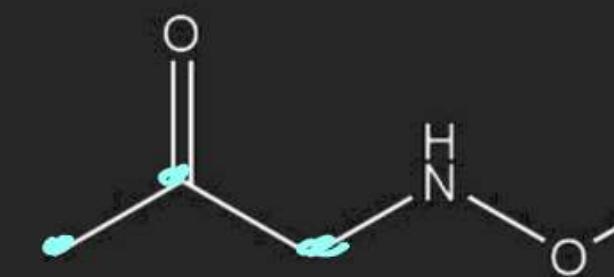
Ans

(A)



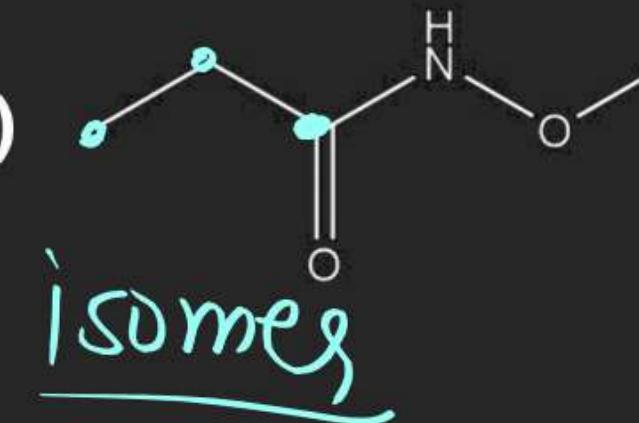
isomer

(B)



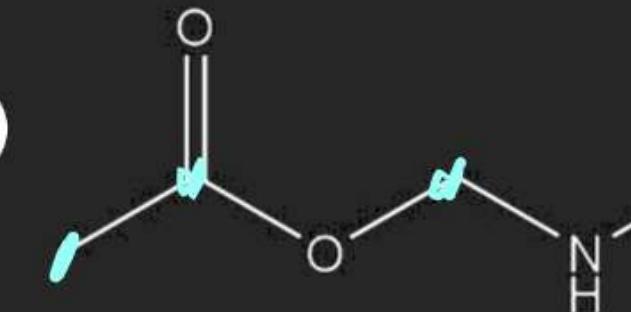
isomer

(C)



isomer

(D)



isomer

Basic Organic Chemistry

8. Write bond line formulas for Heptan-4-one.

- ⊗ Regular
- ⊗ Board ↑
 - ⊗ Competition ↑
 - Regular Classes
 - Theory Notes
 - (Solve at least)
(40-50%)
 - HW Quizzes

- Dummy
- ⊗ more time to study
for competition
 - ⊗ Focused
for Board/competition

Apni Kafsha:7hrs + 2 hrs11th Class Time table:

9 pm - 10 pm	(Dimne / Rest)	45 min
<u>10 pm - 12 mid Night</u>	[study slot]	45 min
12 — 7:00 am	(sleeping cycle)	45 min
7:00 — 8:00	(Ready + B.F)	
<u>8:00 — 11:00 am</u>	[slot]	✓ (Maths)
<u>11:15 am - 1:45 PM</u>	[slot]	✓ Physics
1:45 pm - 2:30	[lunch]	
<u>2:30 — 4:00 pm</u>	[slot]	✓ Physics

(##)

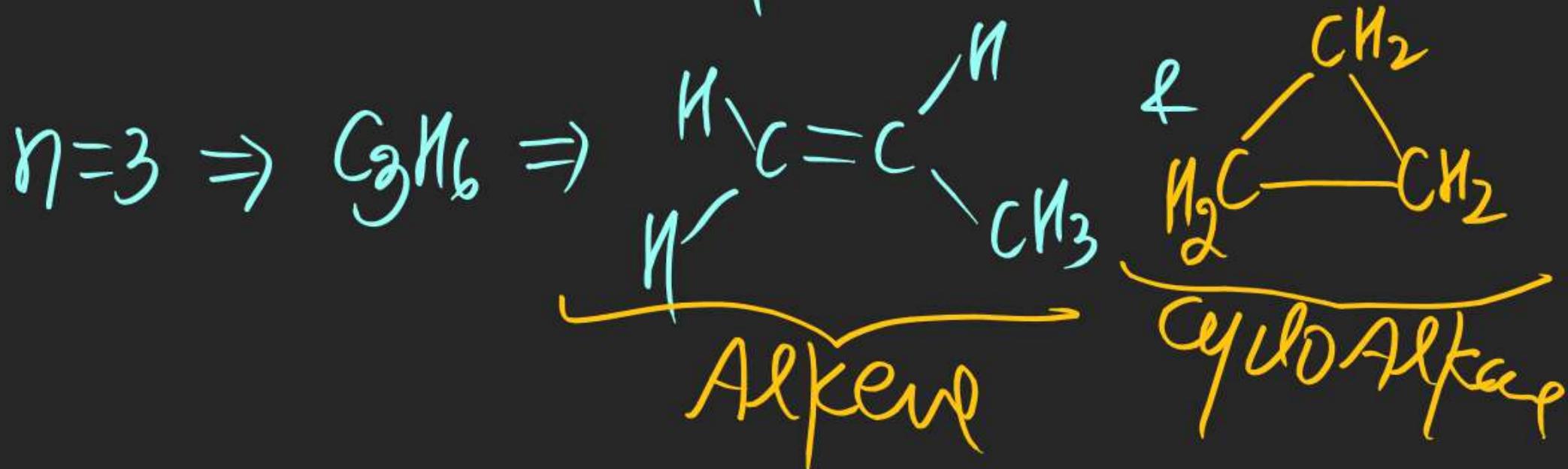
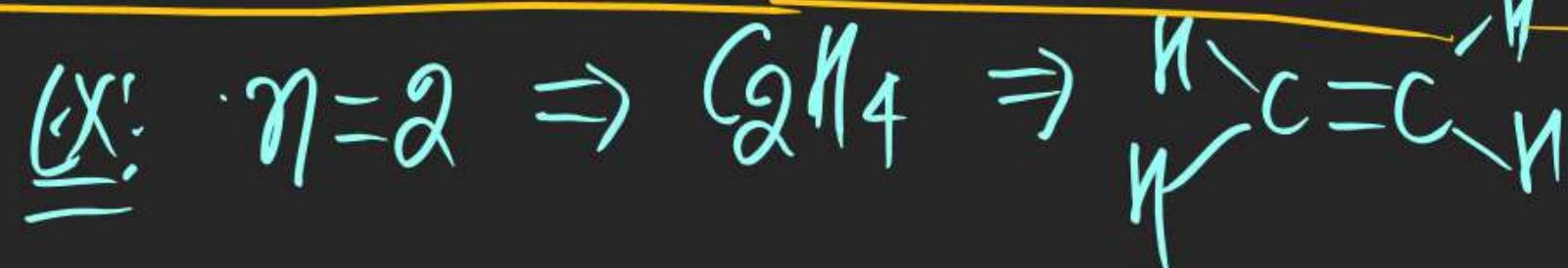
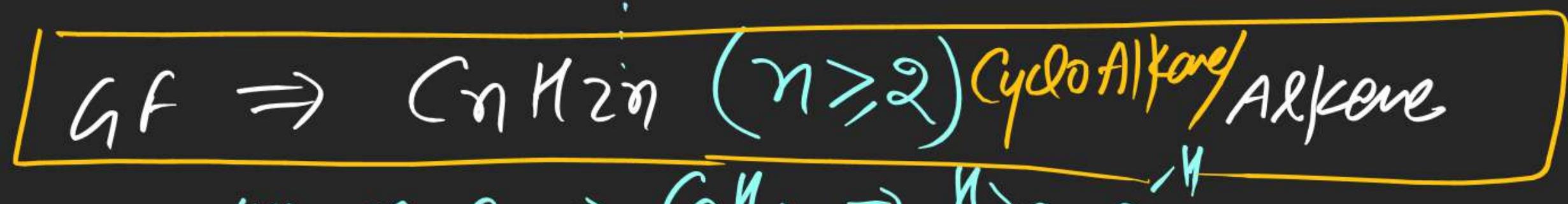
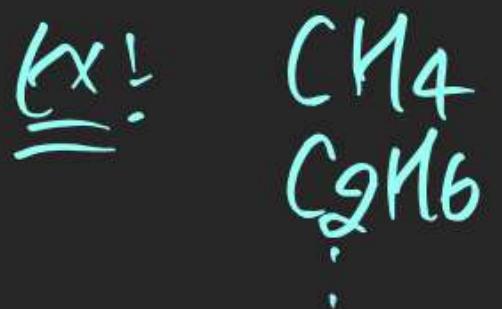
- ⑥ Bond line isomers
- ⑦ Types of carbon
- ⑧ Types of Hydrogen
- ⑨ σ & π Bond
- ⑩ σ & π eB
- ⑪ Condense form



*)



Alkane

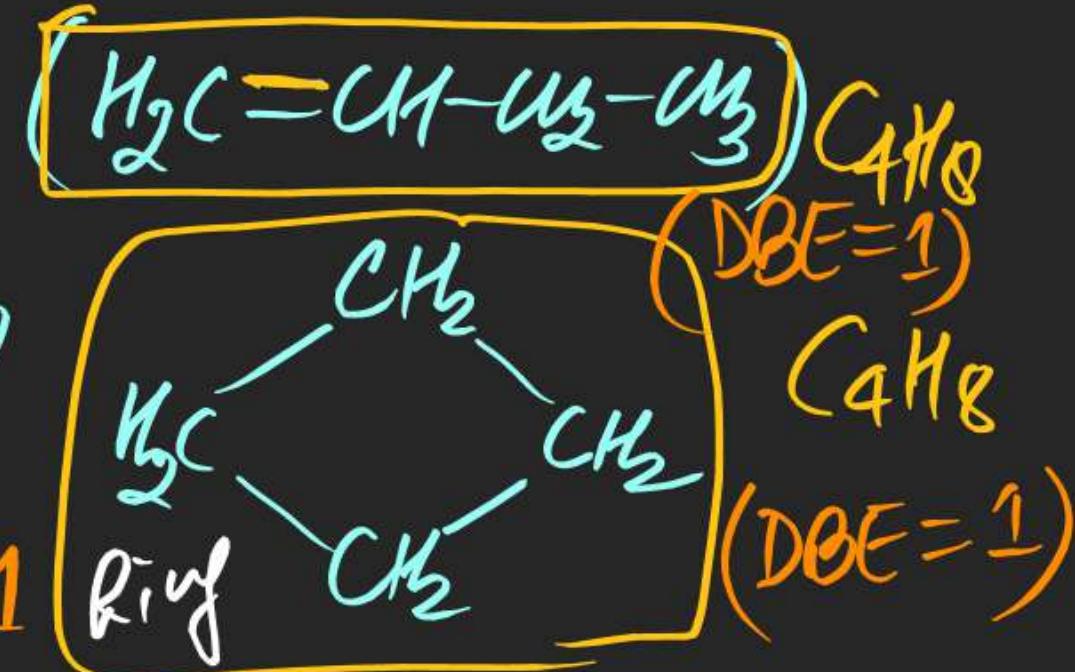


Ex:



double Bond present

Double Bond Equivalent (DBE) = 1



$\Rightarrow 1 \pi \text{ Bond} \Rightarrow \text{DBE} = 1$

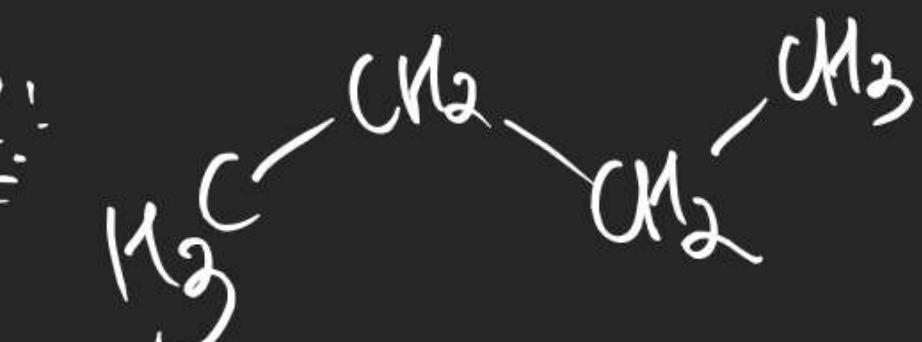
$\Rightarrow 1 \text{ Ring} \Rightarrow \text{DBE} = 1$

$\Rightarrow \text{All Single} \Rightarrow \text{DBE} = 0$

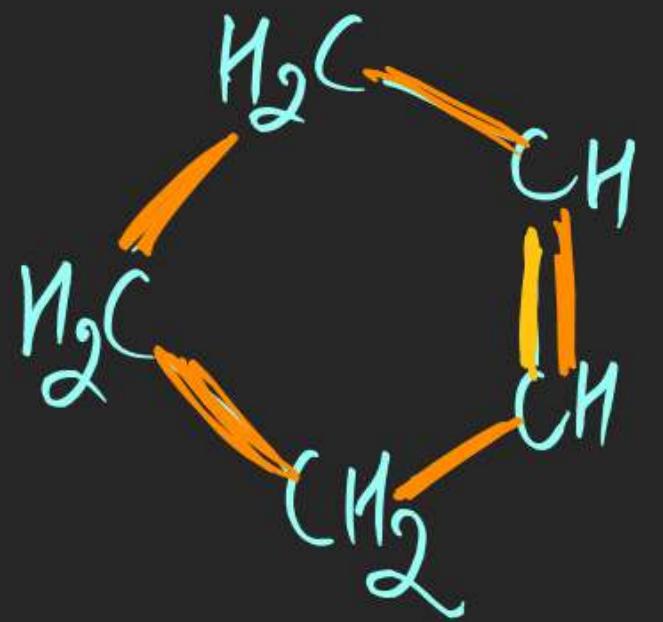
NO π / NO Ring

$\text{DBE} = \text{Total No. of } \pi \text{ Bond} + \text{Total No. of Rings}$

Ex-1:



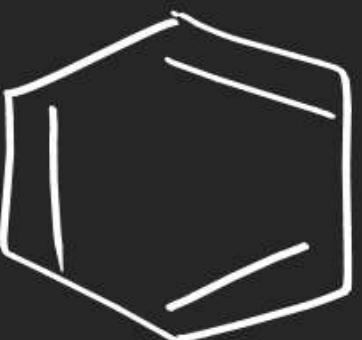
$$\text{DBE} = 0 + 0 \\ = 0$$

Ex-2:

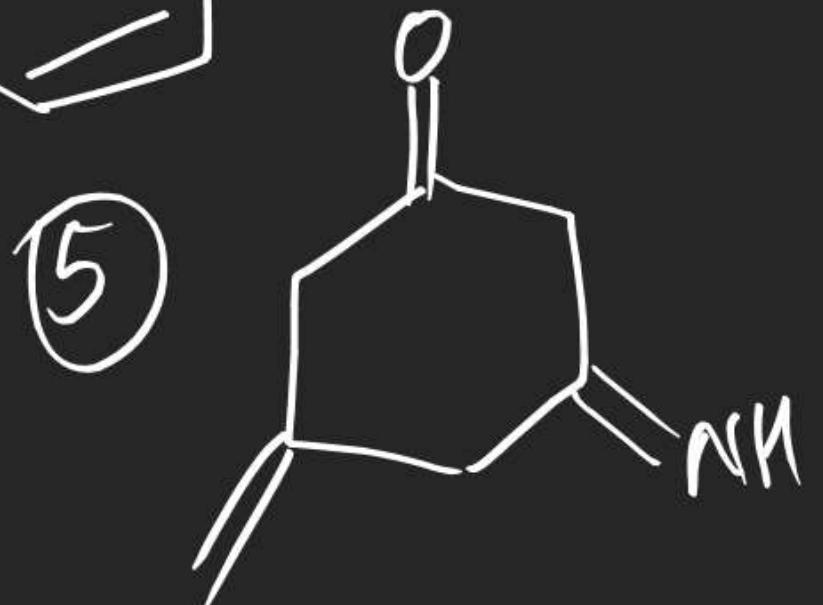
$$\begin{aligned} \text{DBE} &= \eta_{\pi} + \eta_R \\ &= 1 + 1 \\ &= 2 \end{aligned}$$

Ex-3:

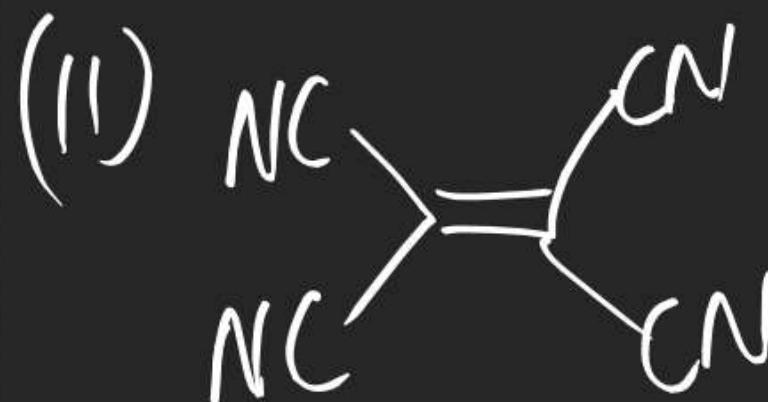
(4)



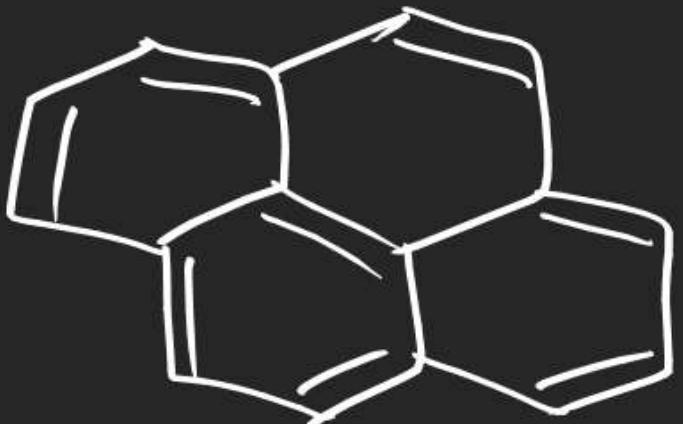
$$\text{DBE} = 3 + 1 = 4$$



(b)



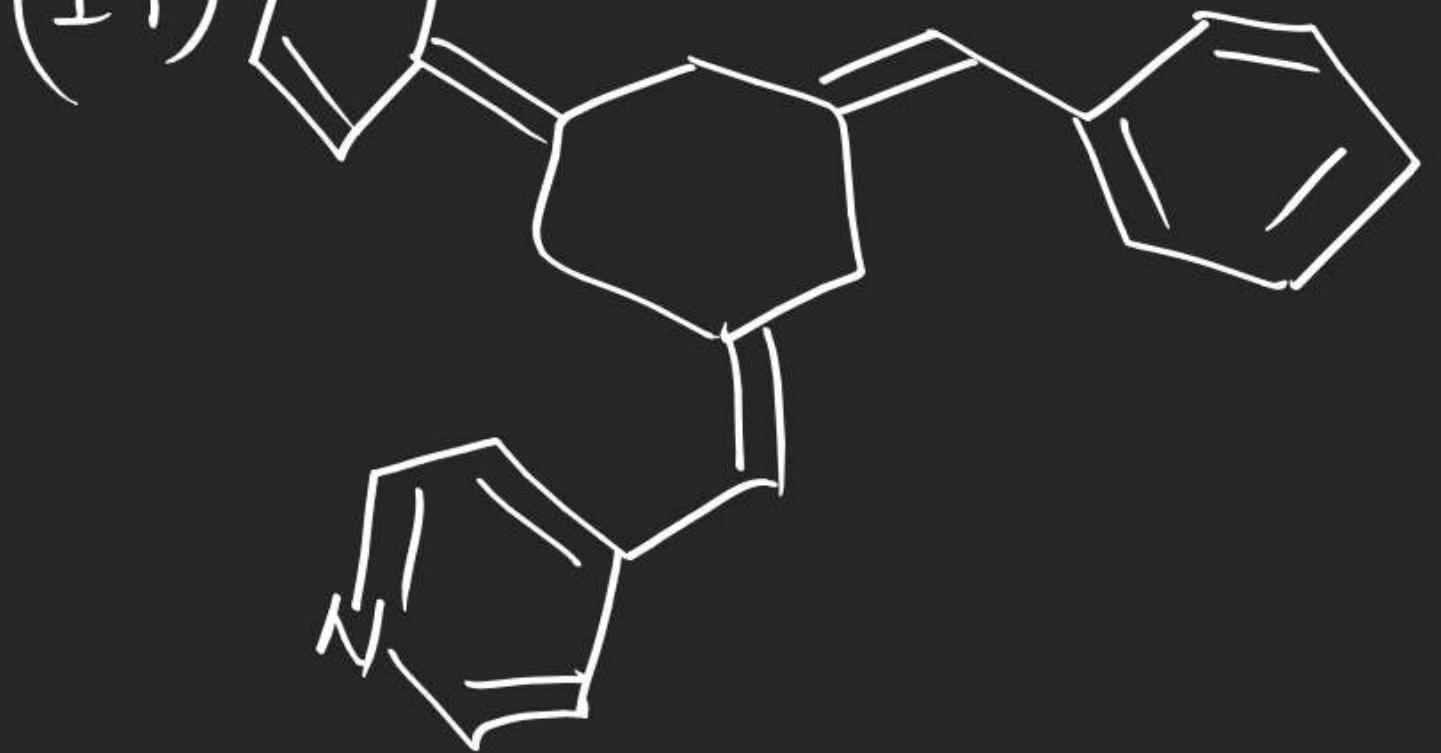
(12)



(13)



(14)



(15)



(16)



(17)



(18)

