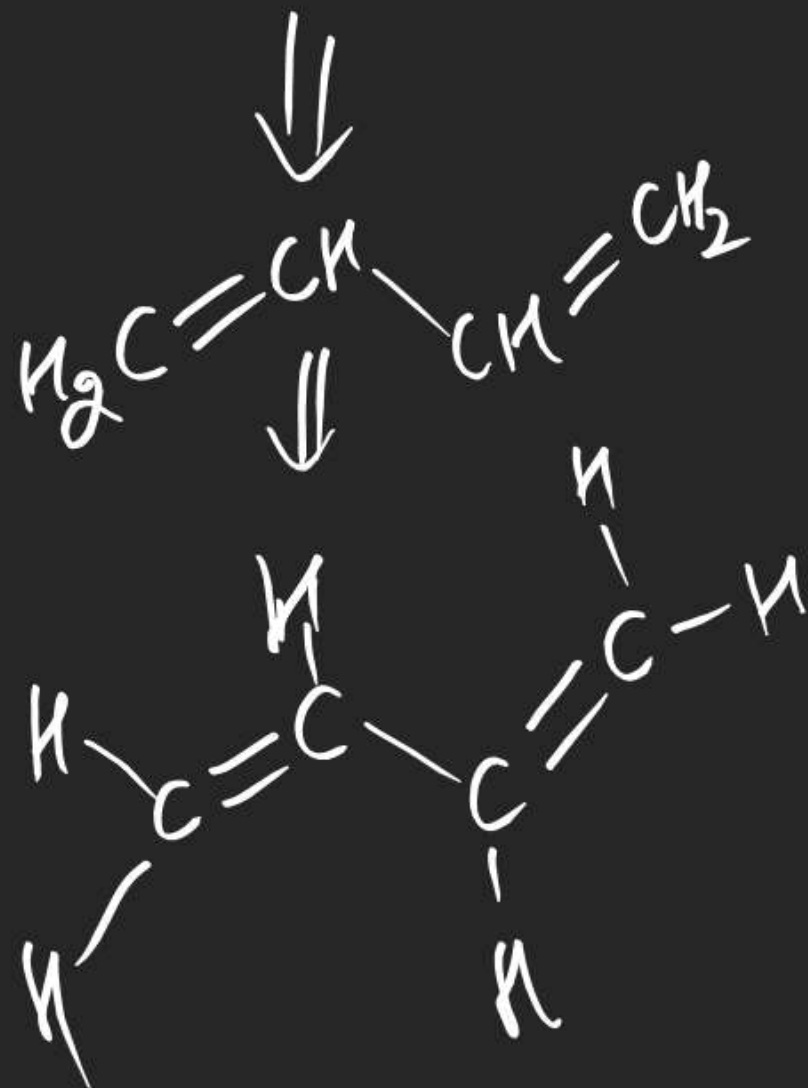


Theory Copy Discussion:

(4)

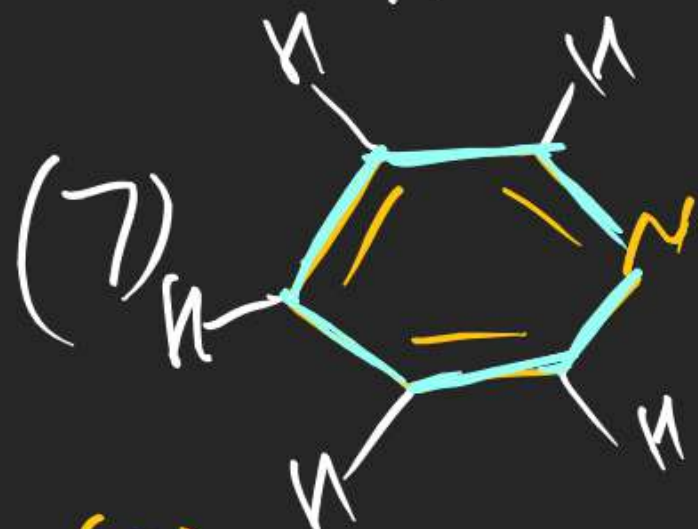
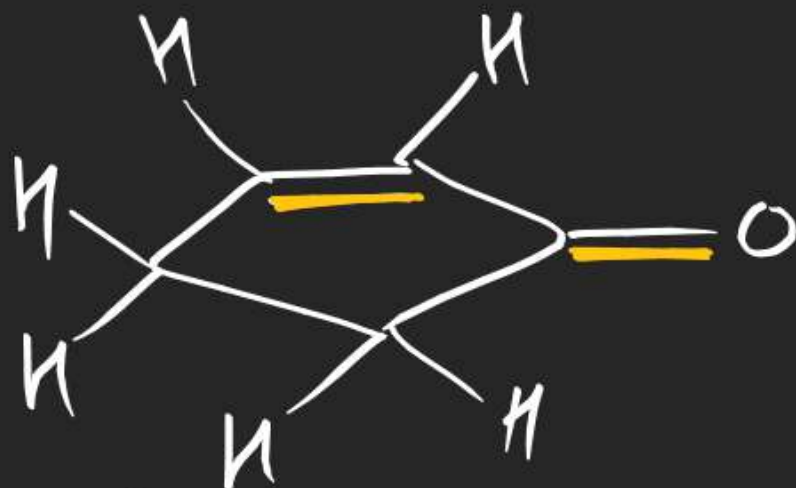
 σ
9 π
2

(5)



σ
12

π
2



11

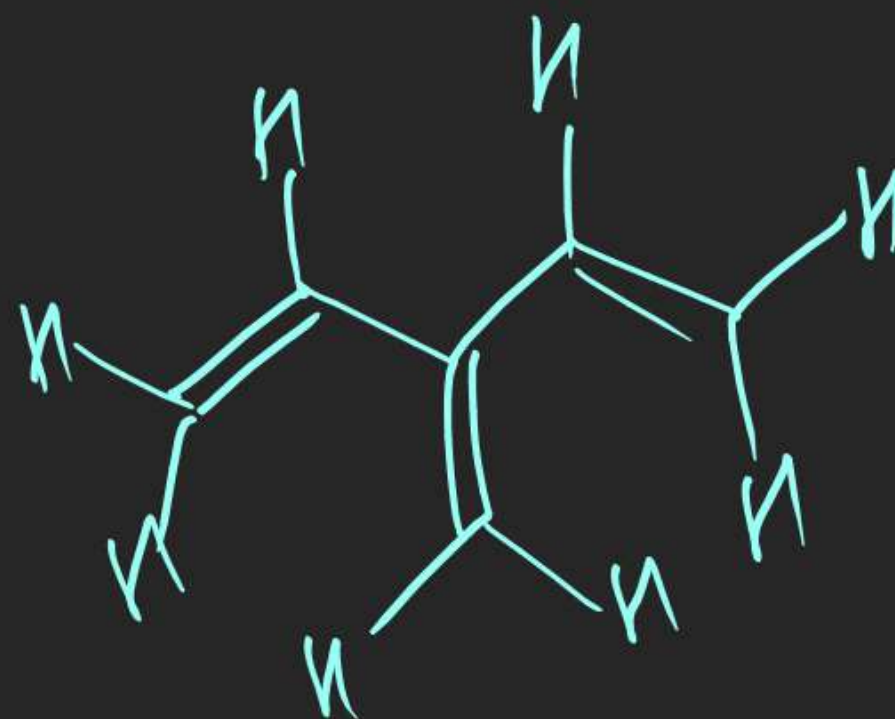
3

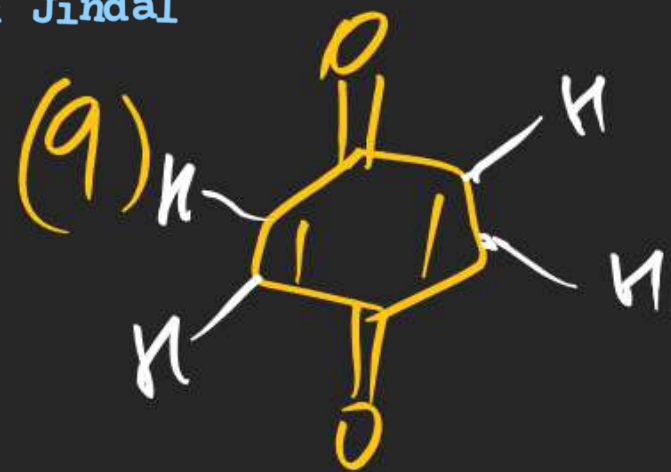
(8)



13

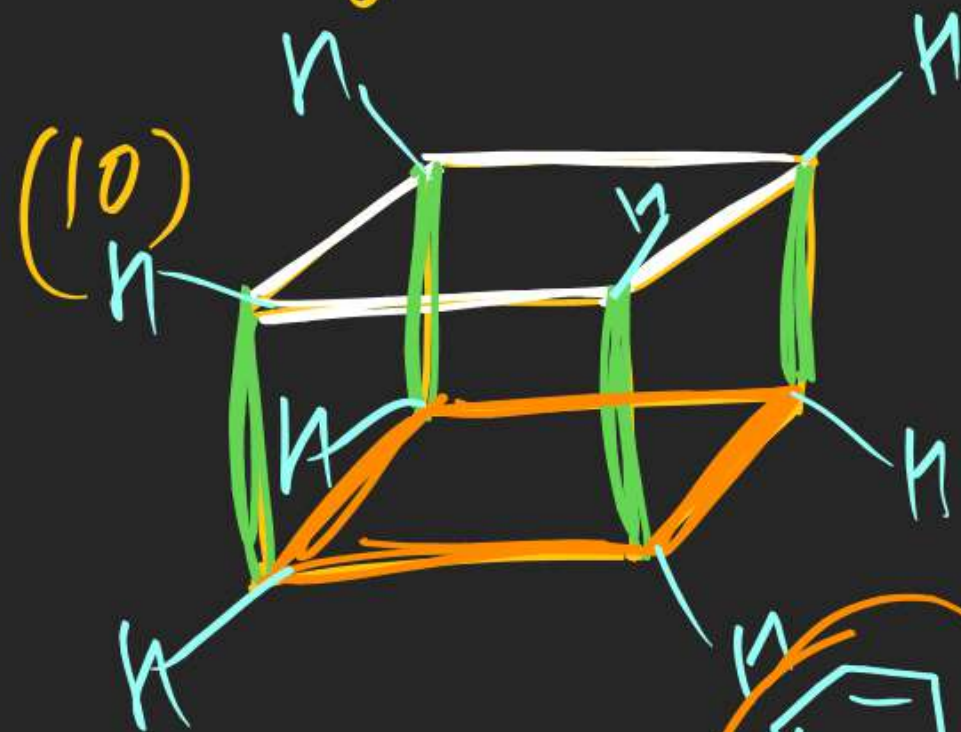
3





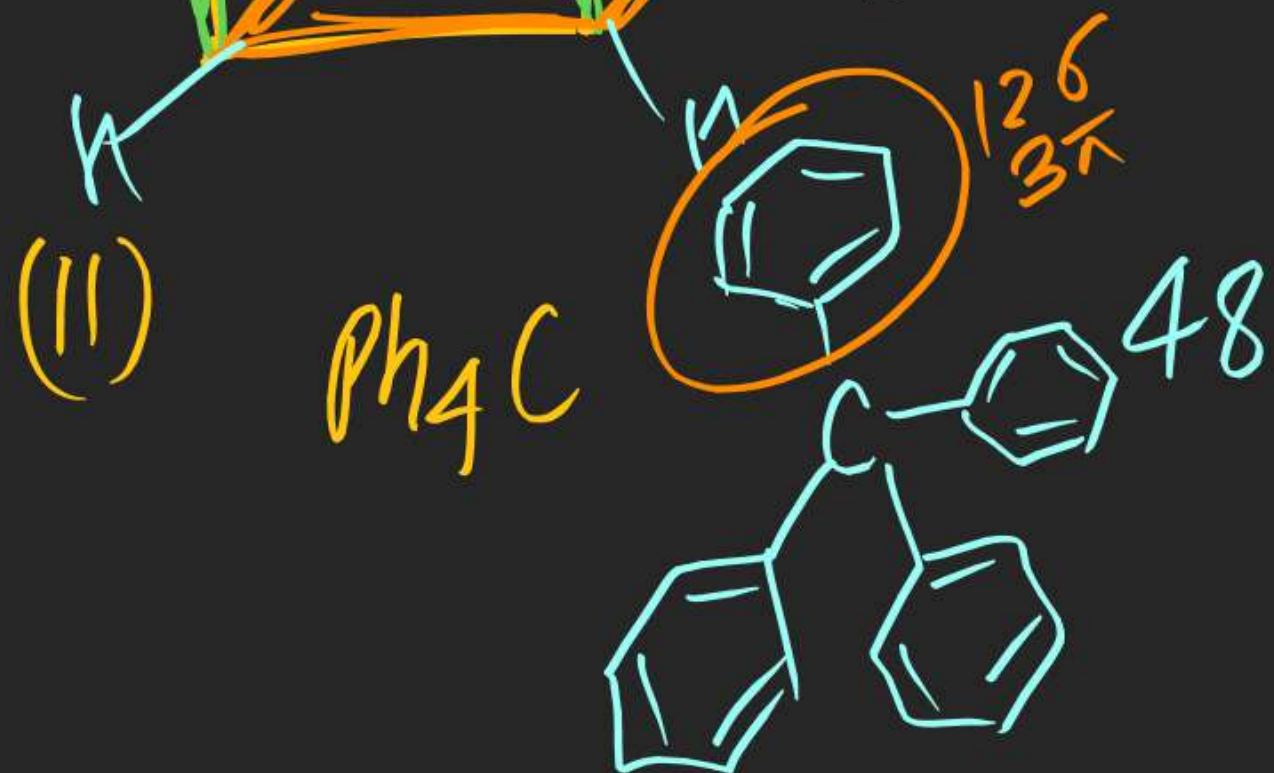
12

4



20

0



12

(15)



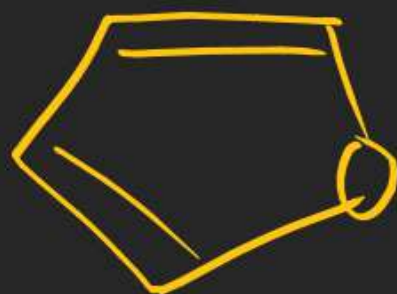
σe^-s

$$7 \times 2 = 14$$

πe^-s

$$0 \times 0 = 0$$

(16)

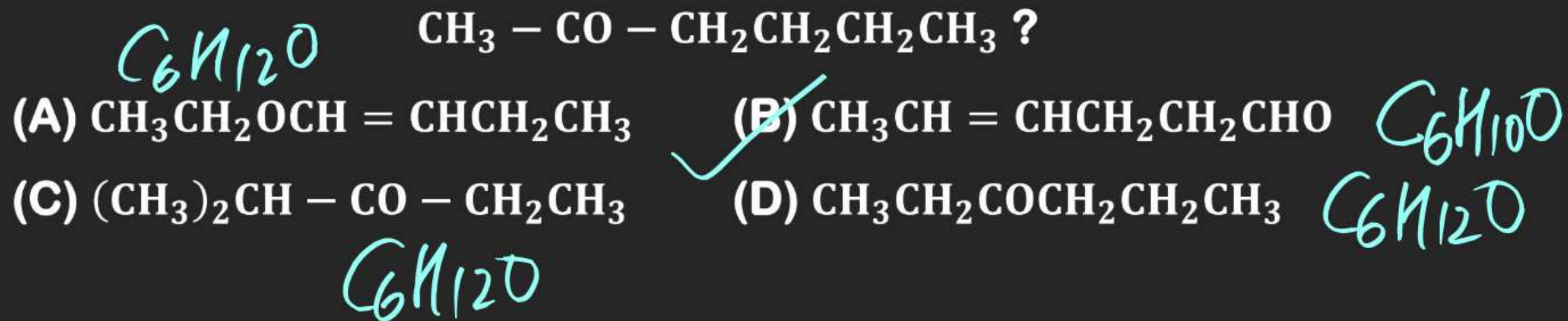


$$\begin{array}{l|l} = 9 \times 2 & = 2 \times 2 \\ = 18 & = 4 \end{array}$$



Basic Organic Chemistry

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



Basic Organic Chemistry

2. The least number of carbon atoms in alkane showing isomerism is

(A) 3

(B) 1

(C) 2

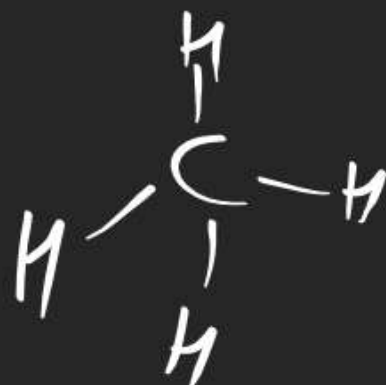
✓ (D) 4

Solution!

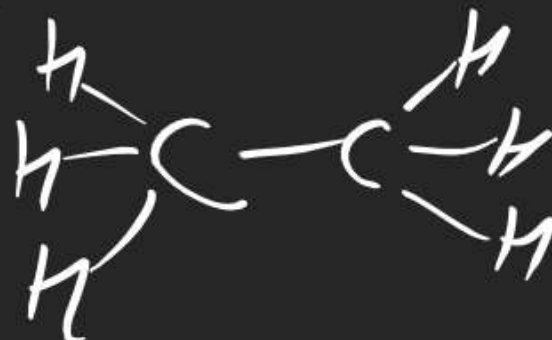
Alkane \Rightarrow HydroCarbon.

Alkane Chain Isomerism

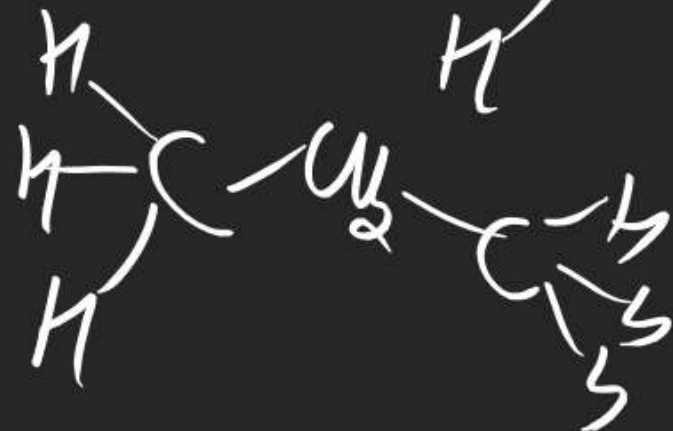
⊗



⊗



⊗





⊗



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?

☒ (A) CH₃CH₂CH₂OH and HOCH₂CH₂CH₂CH₃

☒ (B) CH₃CH₂CH₃ and CH₃CH₂CH₂CH₃

Ans ☒ (C) CH₃CH(Cl)CH₃ and CH₃CH₂CH₂Cl

☒ (D) CH₃COCH₃ and CH₃CH₂CH₂CHO



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

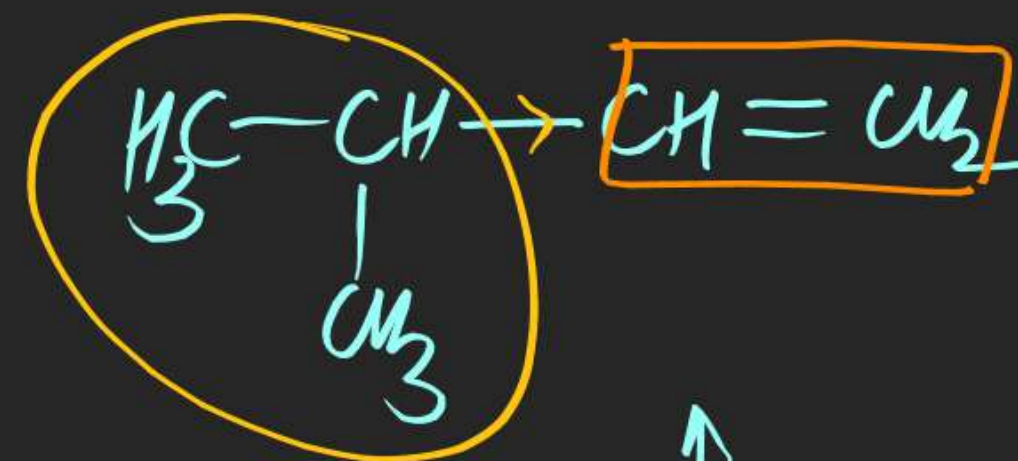
Which of the following statement(s) is(are) correct?

(A) I, II and III

(B) I and II

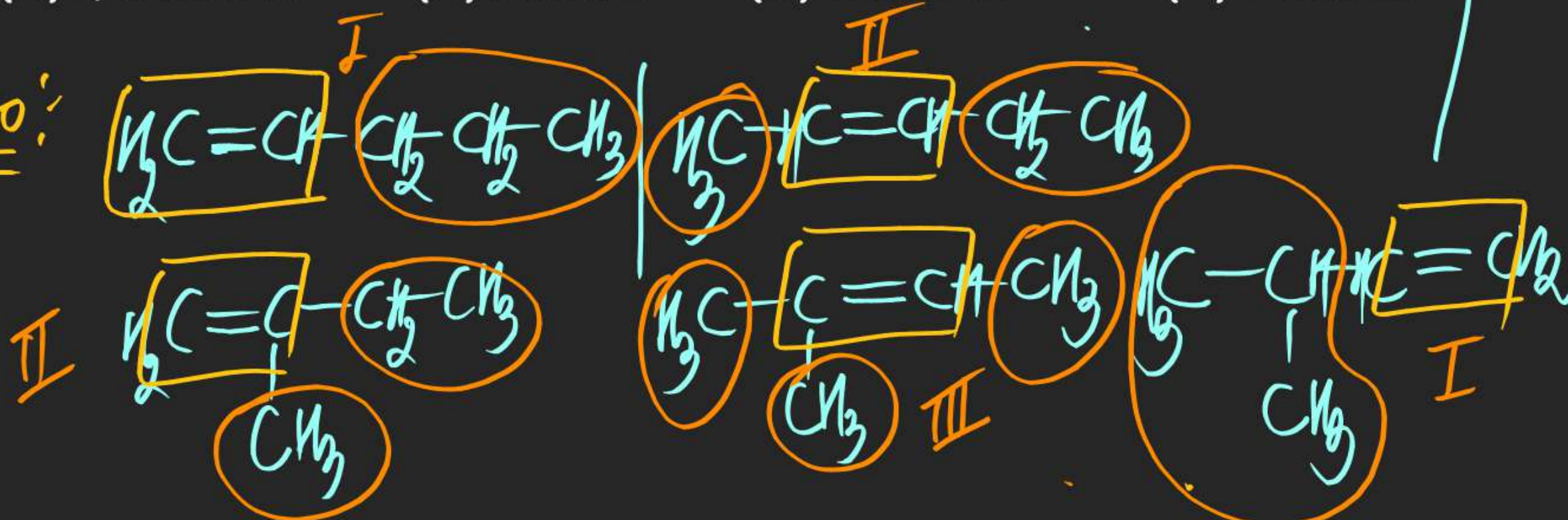
(C) II and III

(D) I and III



Ans

C_5H_{10} :



Basic Organic Chemistry

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

C_{11}

Alkane $\Rightarrow C_n H_{2n+2}$

$C_{11} H_{22+2}$

$C_{11} H_{24}$



Basic Organic Chemistry

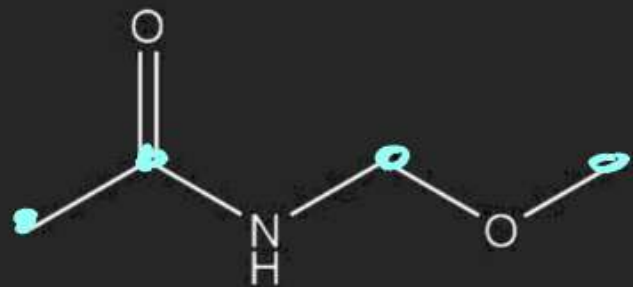
7. Convert the following condensed structures into Bond-line

structure.



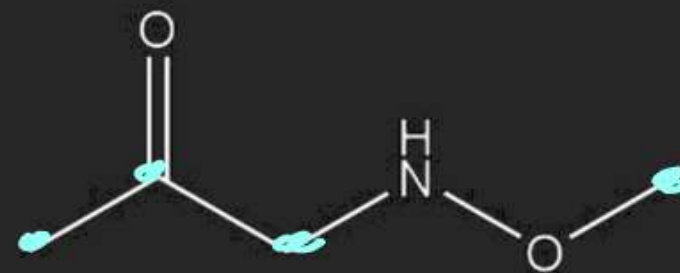
Ans

(A)



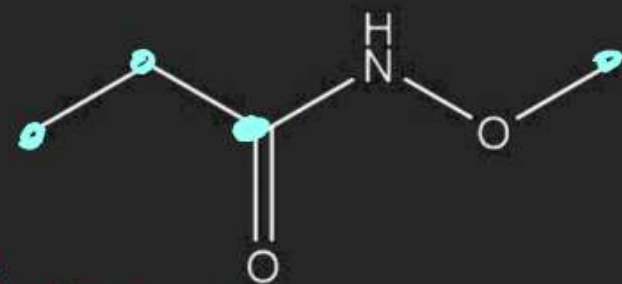
isomer

(B)



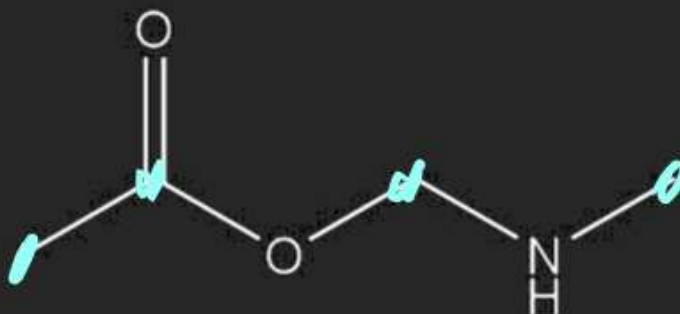
isomer

(C)



isomer

(D)



isomer

Basic Organic Chemistry

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

⊗ Regular

⊗ Board ↑

⊗ Competition ↑

Regular ^{cap} Classes
Theory Notes
(Solve at least
(40-50%))
Hw Ques

Dummy

⊗ more time to study
for Competition

⊗ Focused
for Board/Competition
↑

Apni Kaksha:

7hrs + 2hrs

11th class Time table:

9 pm - 10 pm (Dinner/Rest)

10 pm - 12 mid Night [study slot] ✓ 45 mins
 ✓ 45 mins
 ✓ chemistry

12 — 7:00 am (sleeping cycle) → 45 mins

7:00 - 8:00 (Ready + B.F.)

8:00 - 11:00 am [slot] ✓ (maths)

11:15 am - 1:45 pm [slot] ✓ [physics]

1:45 pm - 2:30 [lunch]

2:30 - 4:00 pm [slot] ✓ [physics]

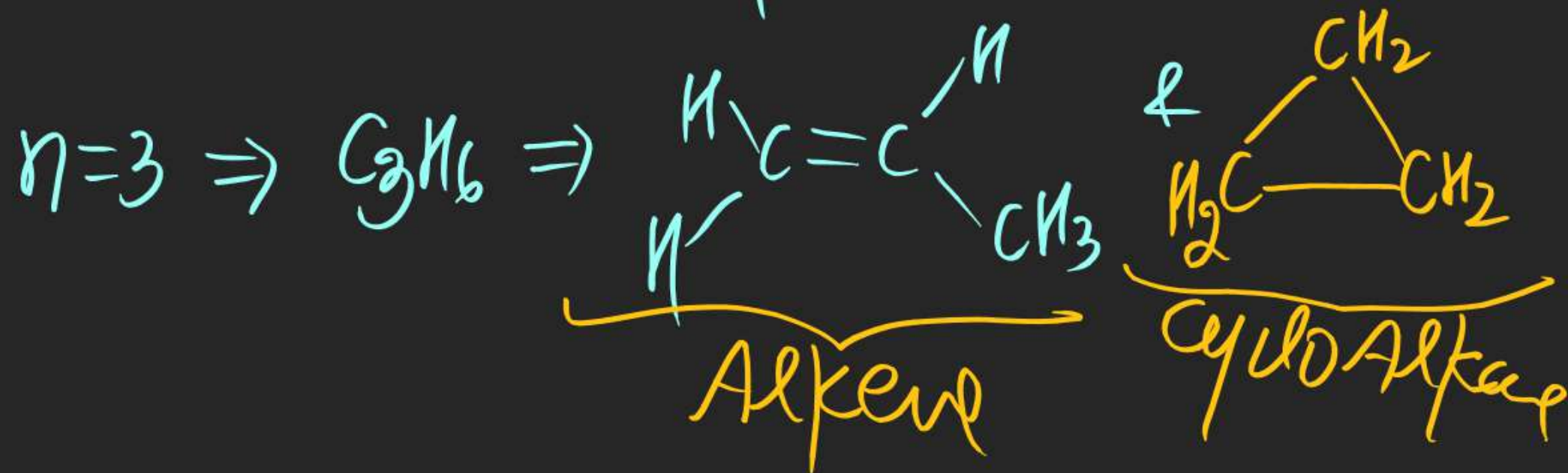
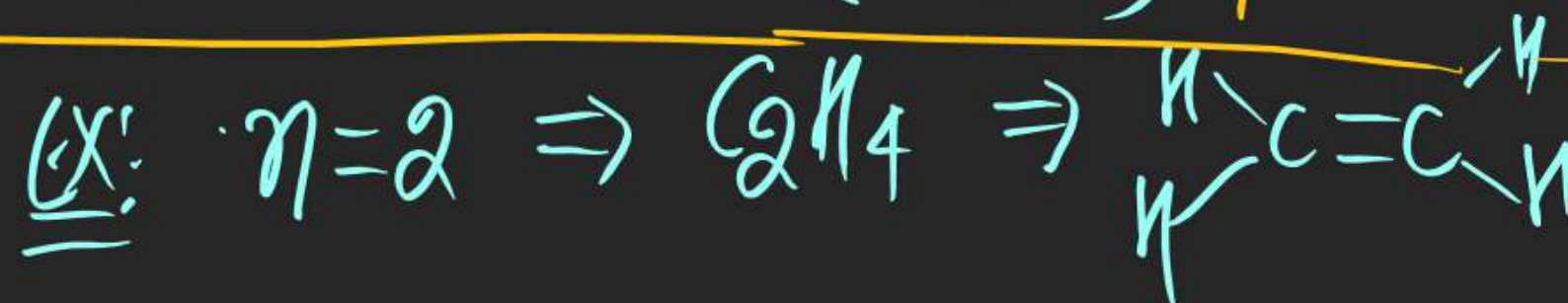
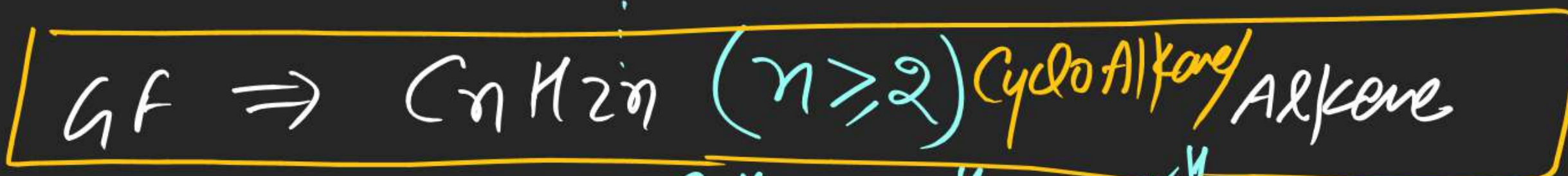
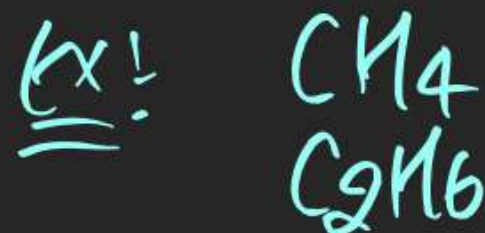
(#)

- ① Bond line
- ② isomers
- ③ Types of Carbon
- ④ Types of Hydrogen
- ⑤ σ & π Bond
- ⑥ σ & π e.s
- ⑦ Condensed form

(*)

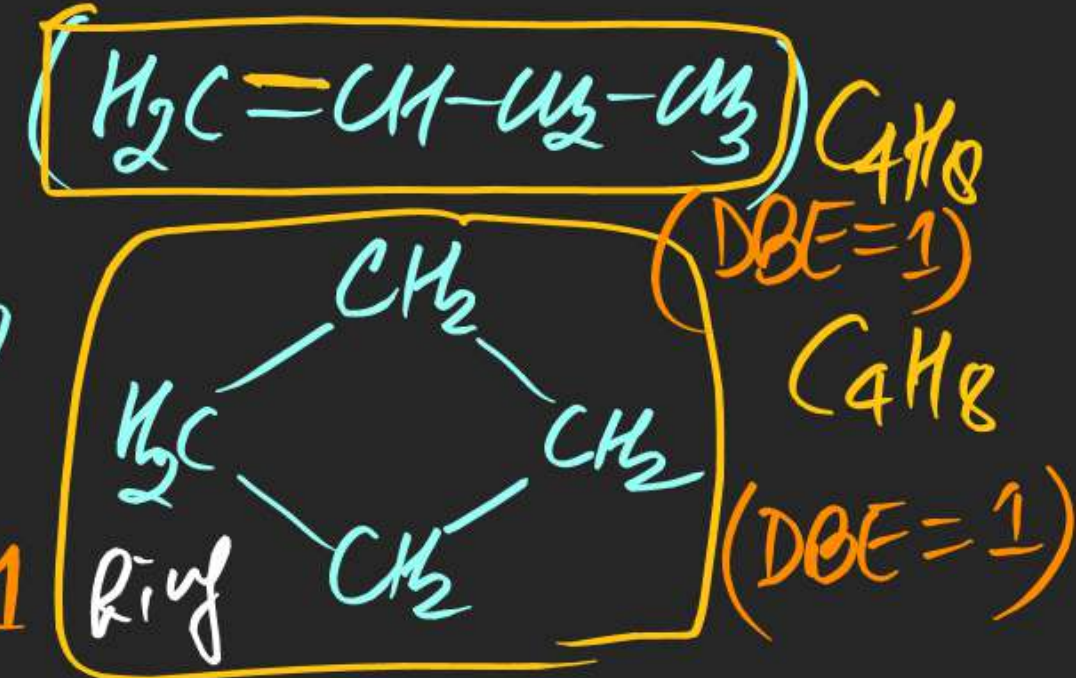


Alkane



Ex!

double Bond present
double Bond Absent



Double Bond Equivalent (DBE) = 1

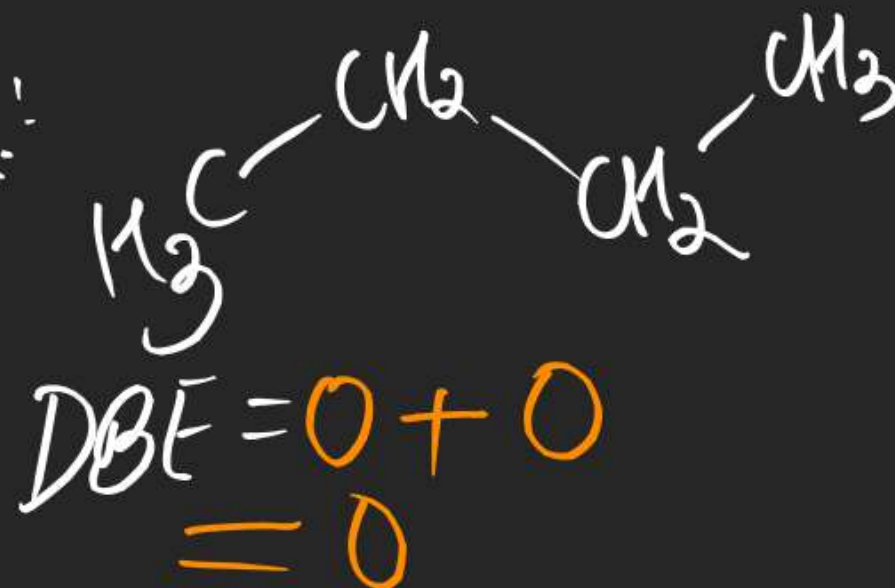
$\Rightarrow 1 \pi \text{ Bond} \Rightarrow DBE = 1$

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

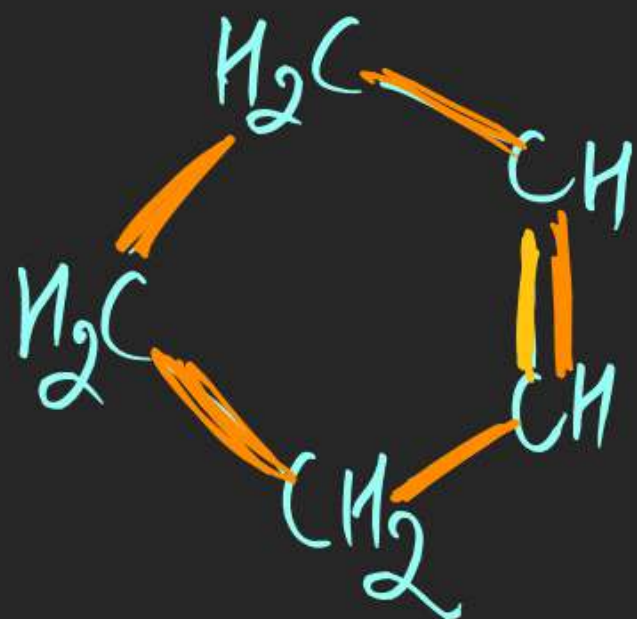
$\Rightarrow \text{All Single} \Rightarrow DBE = 0$

No π / No Ring

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

Ex-1:

Ex-2!



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

Ex-3!

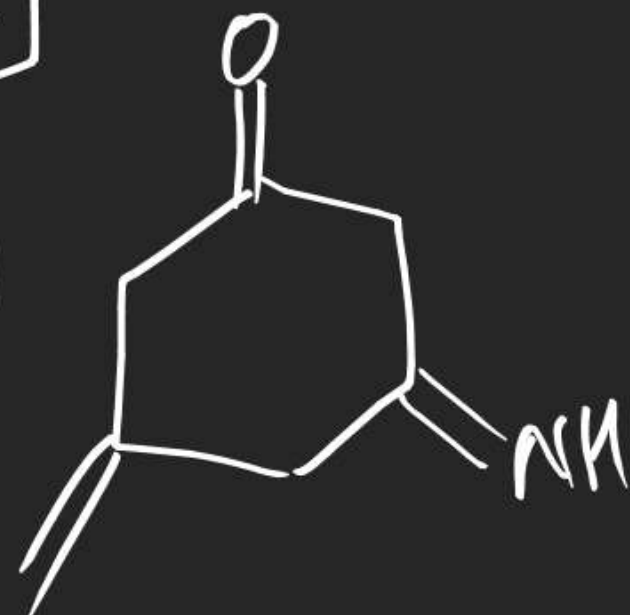


$$\text{DBE} = 3 + 1 = 4$$

(4)



(5)

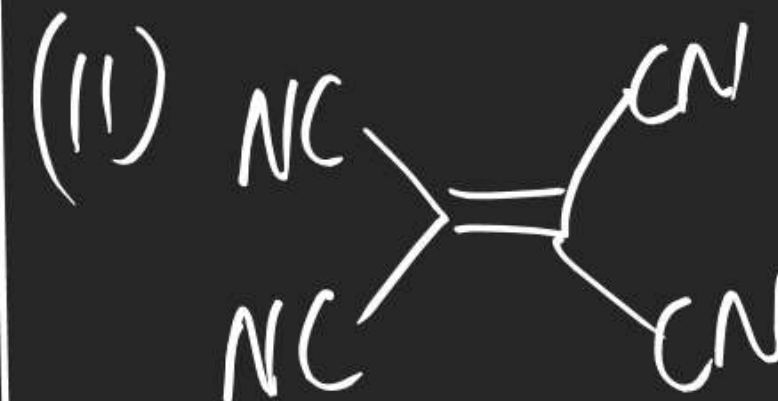


(6) Ph_4C

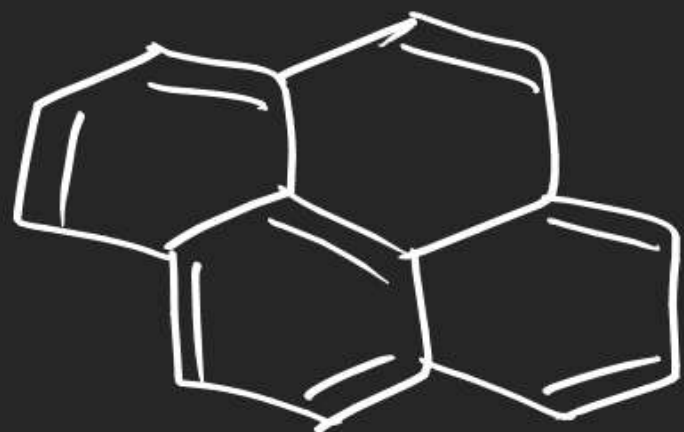
(7) Ph_4C_2

(8) Ph_2C_2

(9) Ph_6C_2



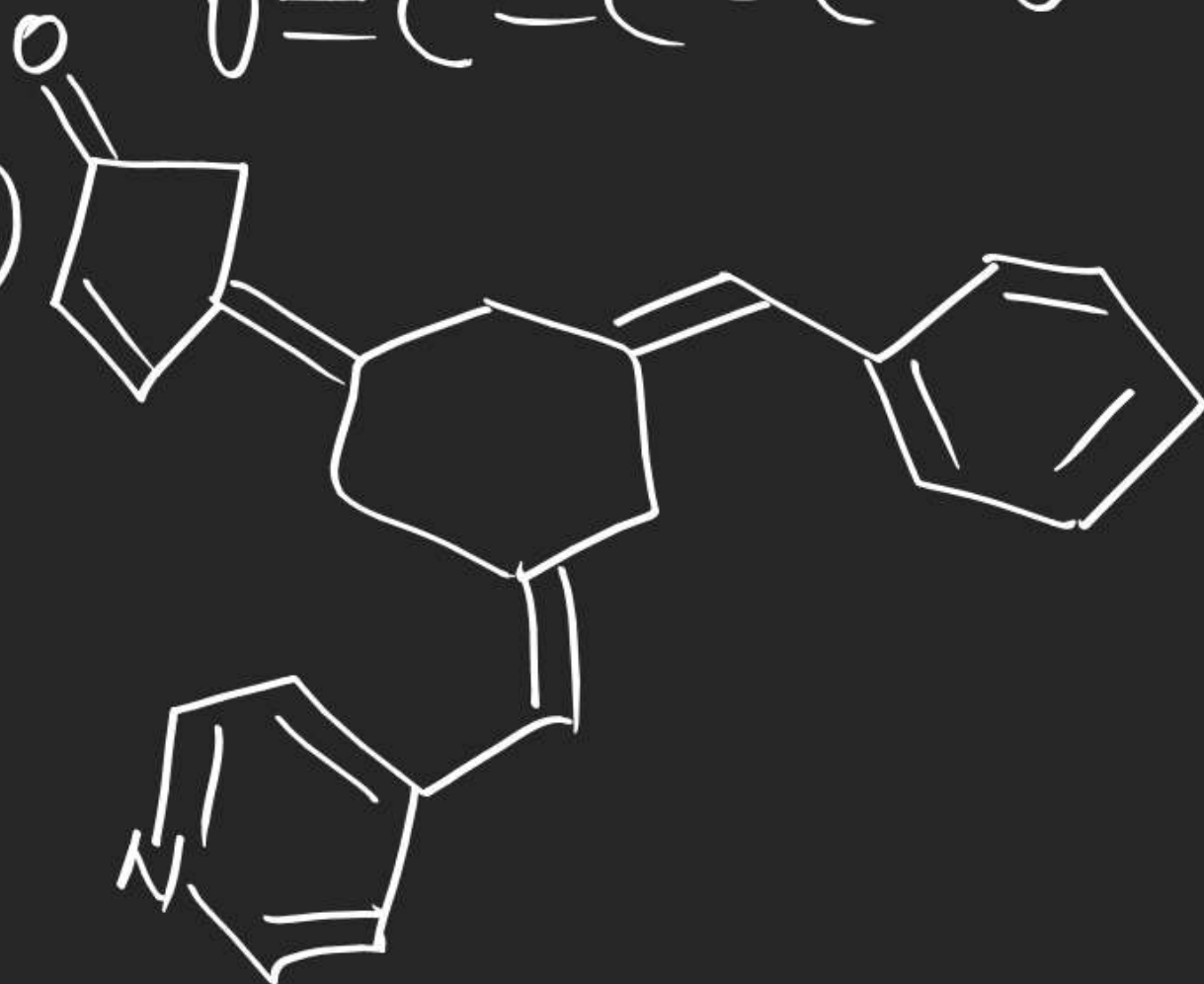
(12)



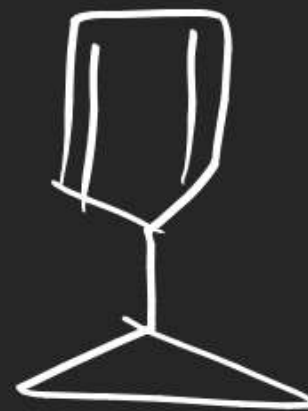
(13)



(14)



(15)



(16)



(17)



(18)

