



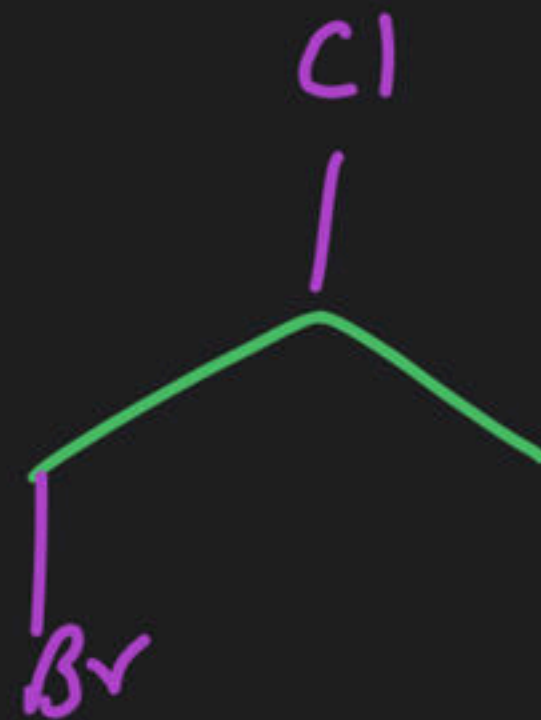
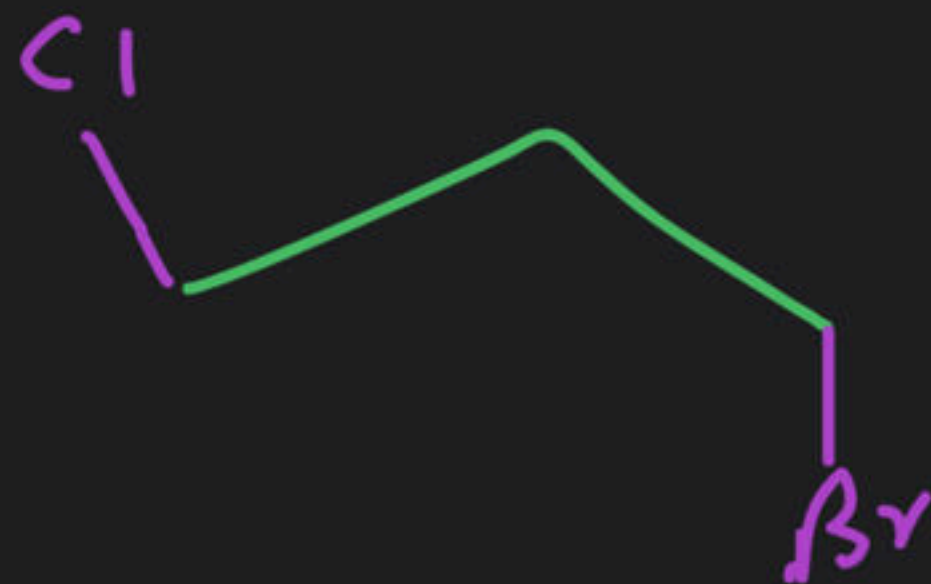
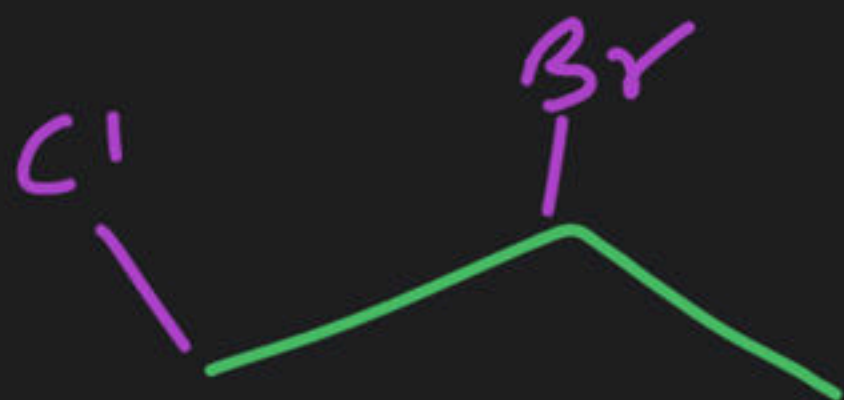
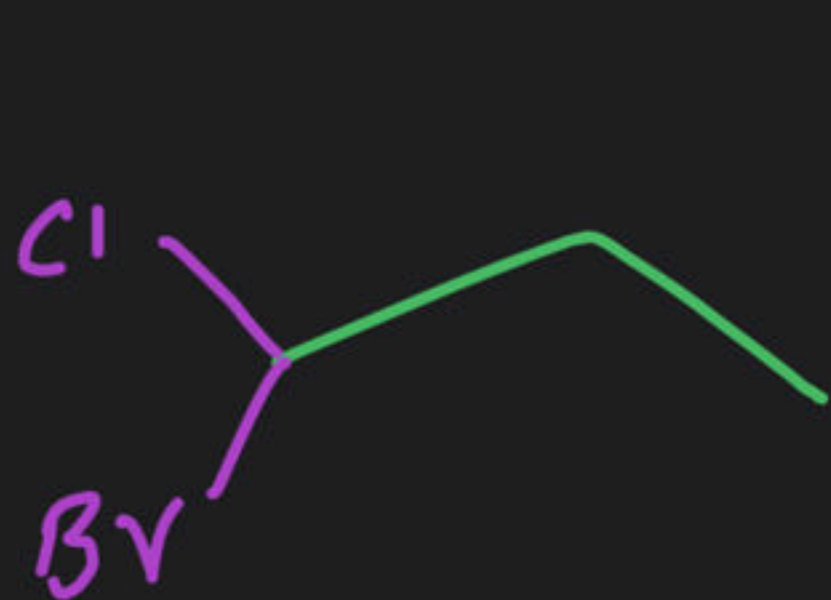
Rules for Numbering Principle Chain, IUPAC Naming of Hydrocarbon

Course on Nomenclature of Organic Compounds for Class XI

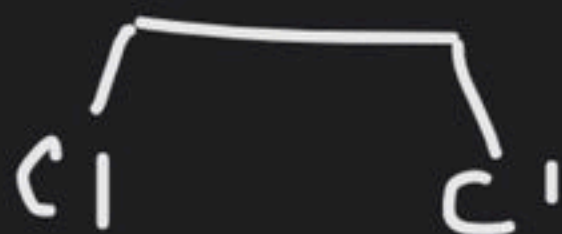
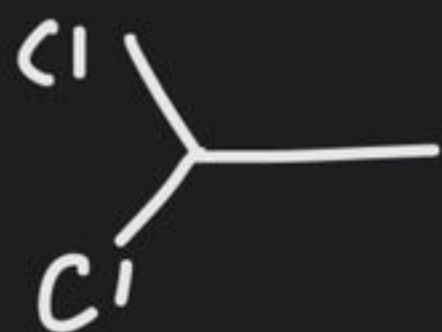
HW (discussion)

(13) C_3H_6ClBr (IND=0)

(A) 1 (B) 2 (C) 3 (D) 4 (E) 5

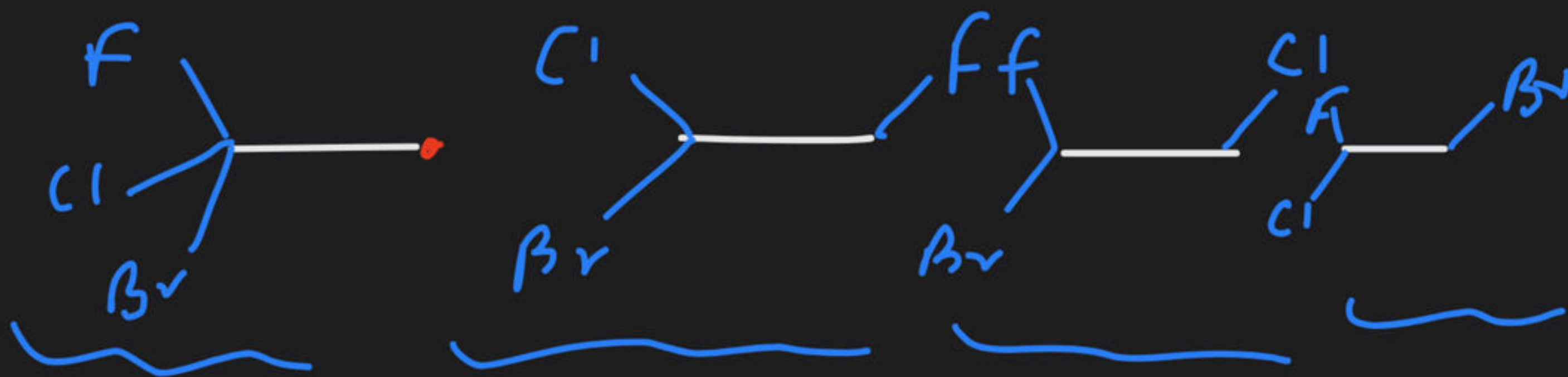


(15) $(C_2H_4Cl_2)$ (IND=0)



②

(14) C_2H_3FClBr (IND=0)



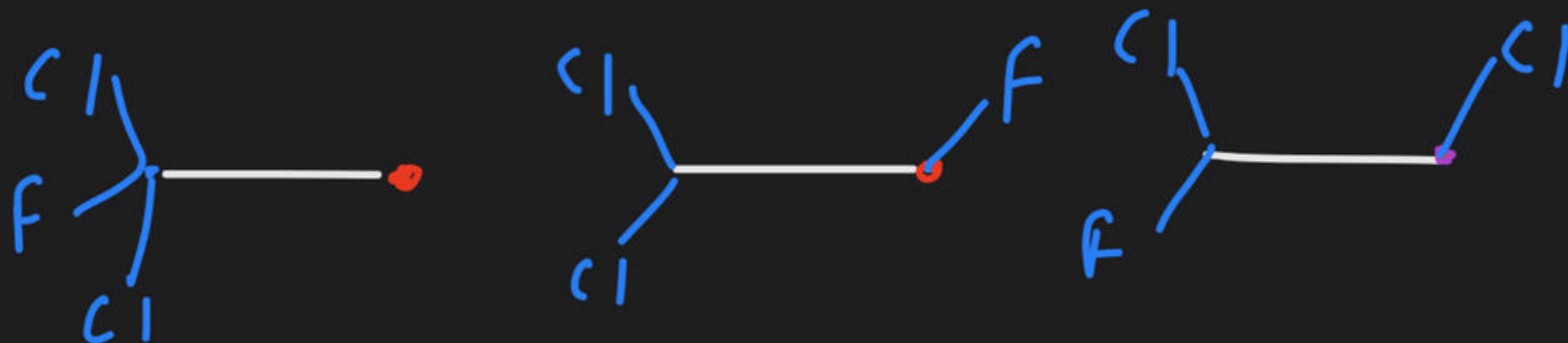
(A) 2^0

(B) 2^1

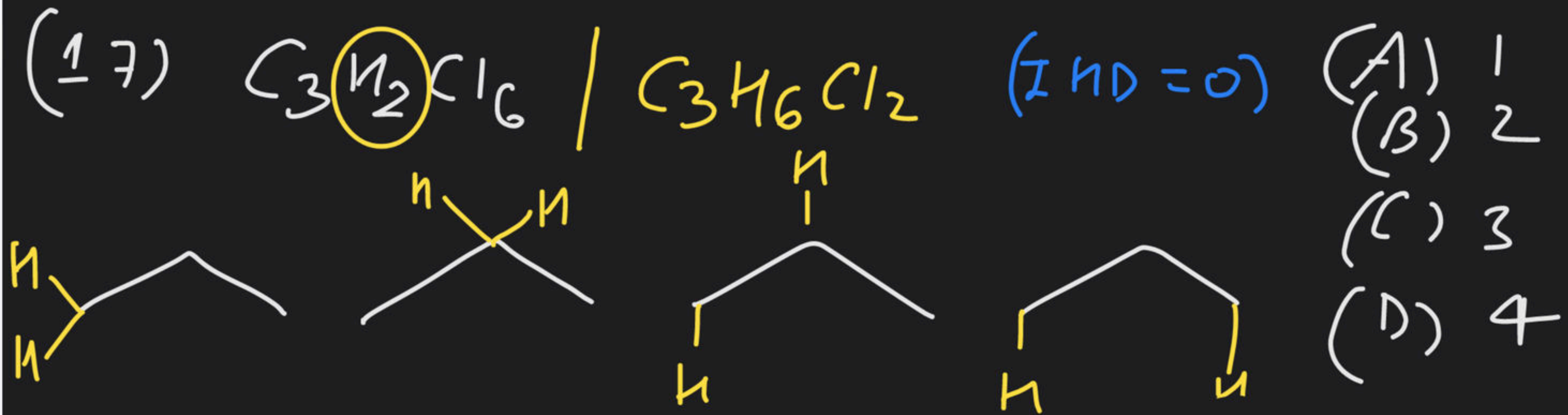
(C) 2^2

(D) $2^2 - 2^0 = 4 - 1 = 3$

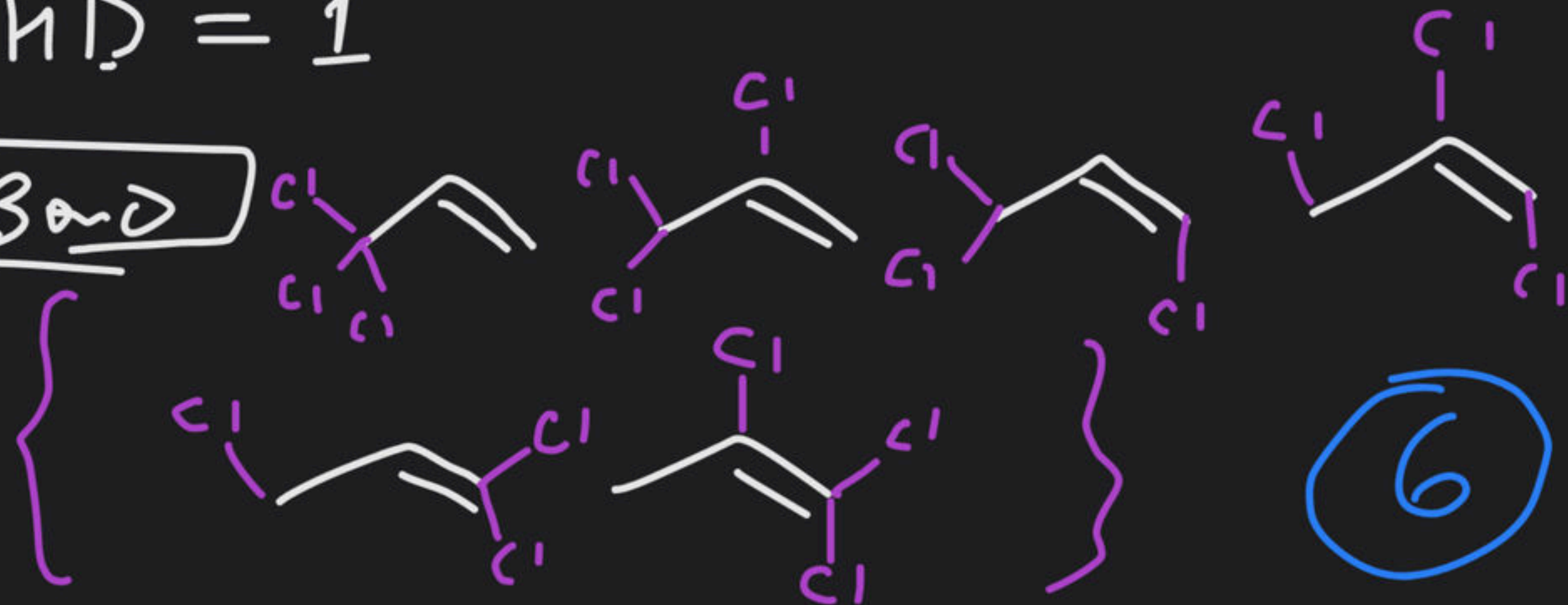
(16) $C_2H_3Cl_2F$ (IND=0)



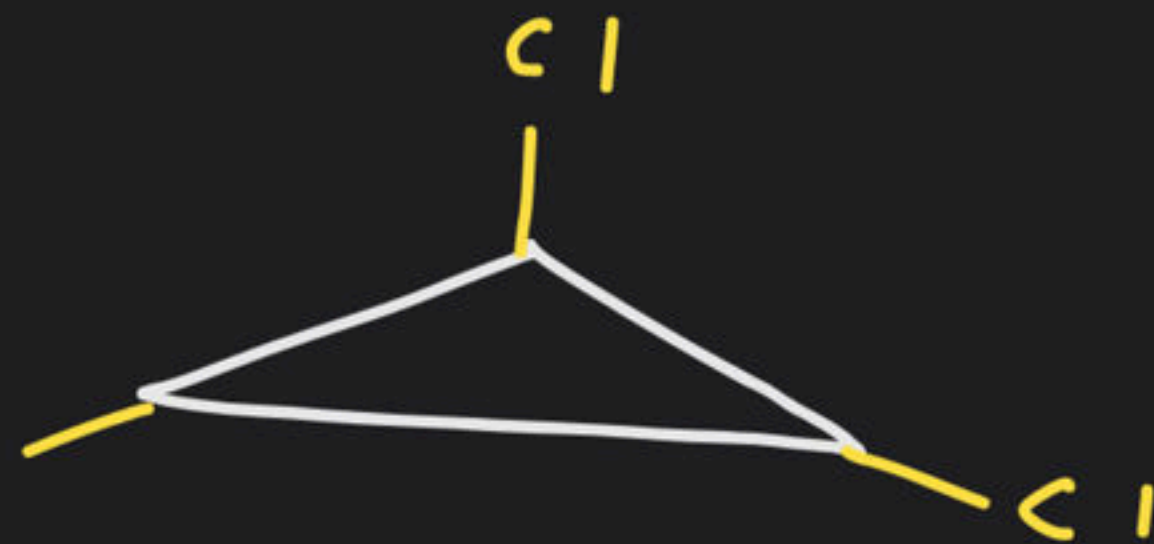
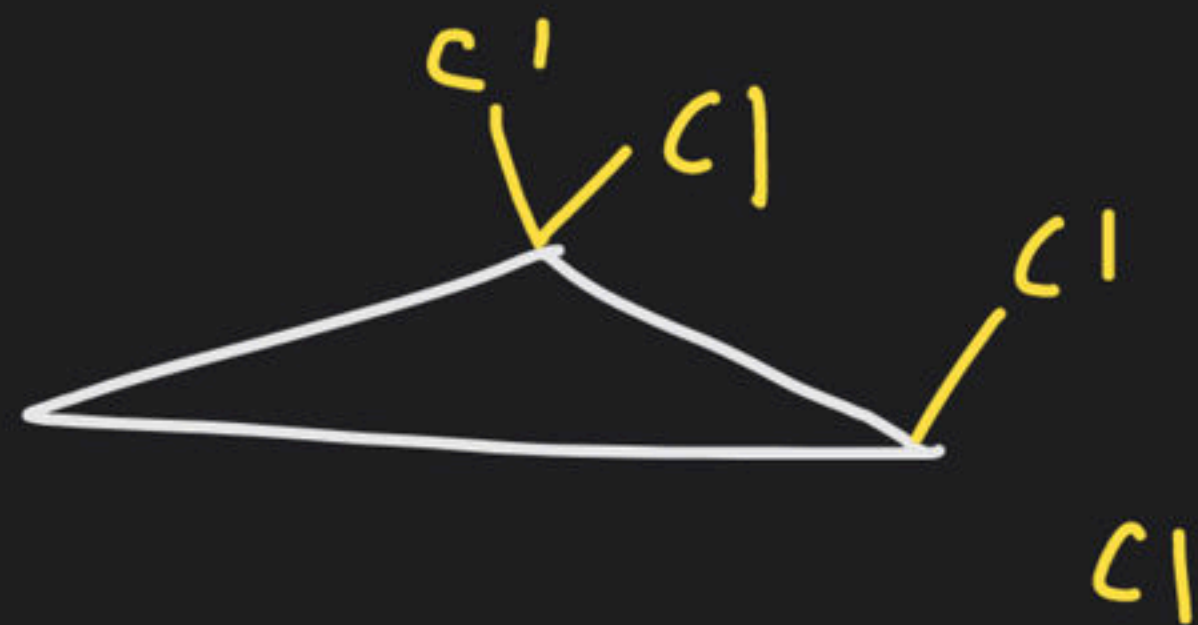
3



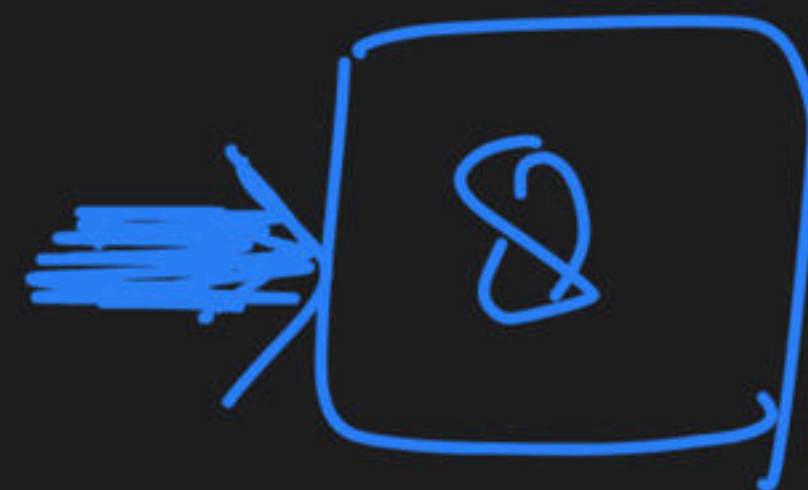
1 double Bond



1 Ring



2

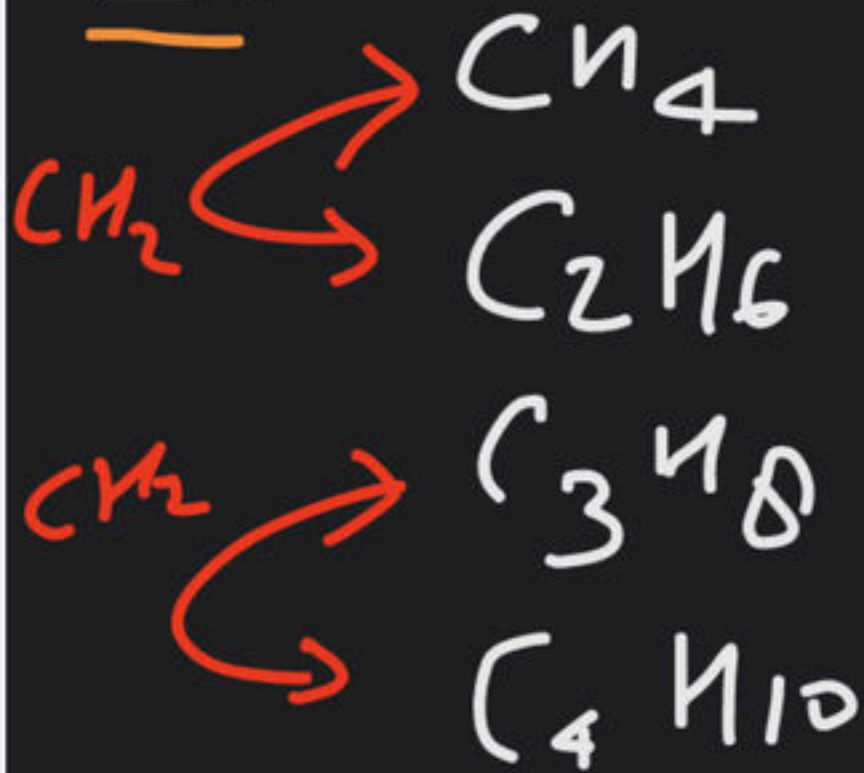


Homologous Series

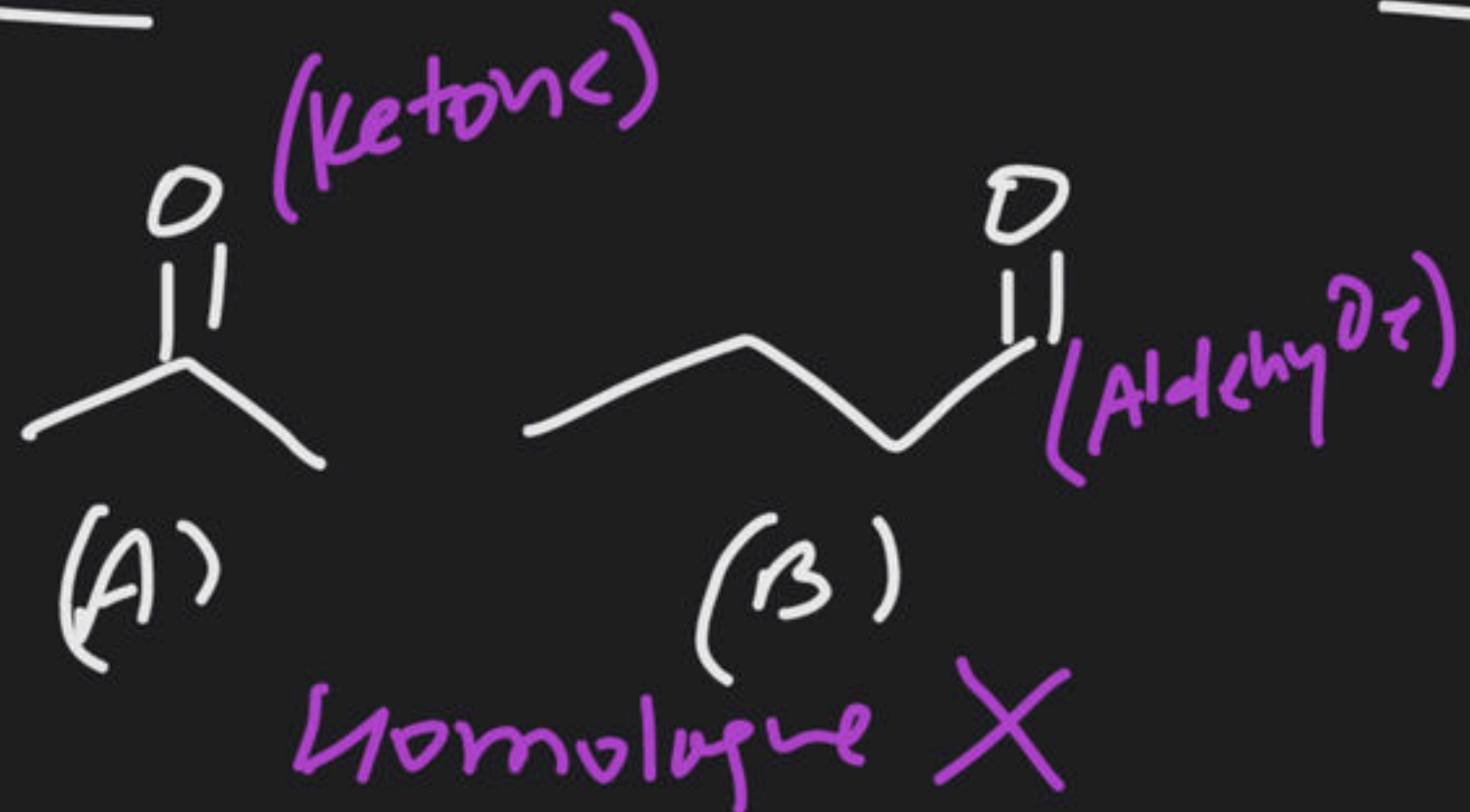
⇒ A series of Compounds having same chemical properties but diff. physical properties is known as Homologous Series.

- Note
- (i) members of series are known as Homologues
 - (ii) Each member must have same functional group.
 - (iii) Each member of H.S must have same G.F.
 - (iv) difference of CH_2 (14gm) b/w two consecutive Homologues.
 - (v) Physical properties like B.P, m.p, density, solubility varied gradually.

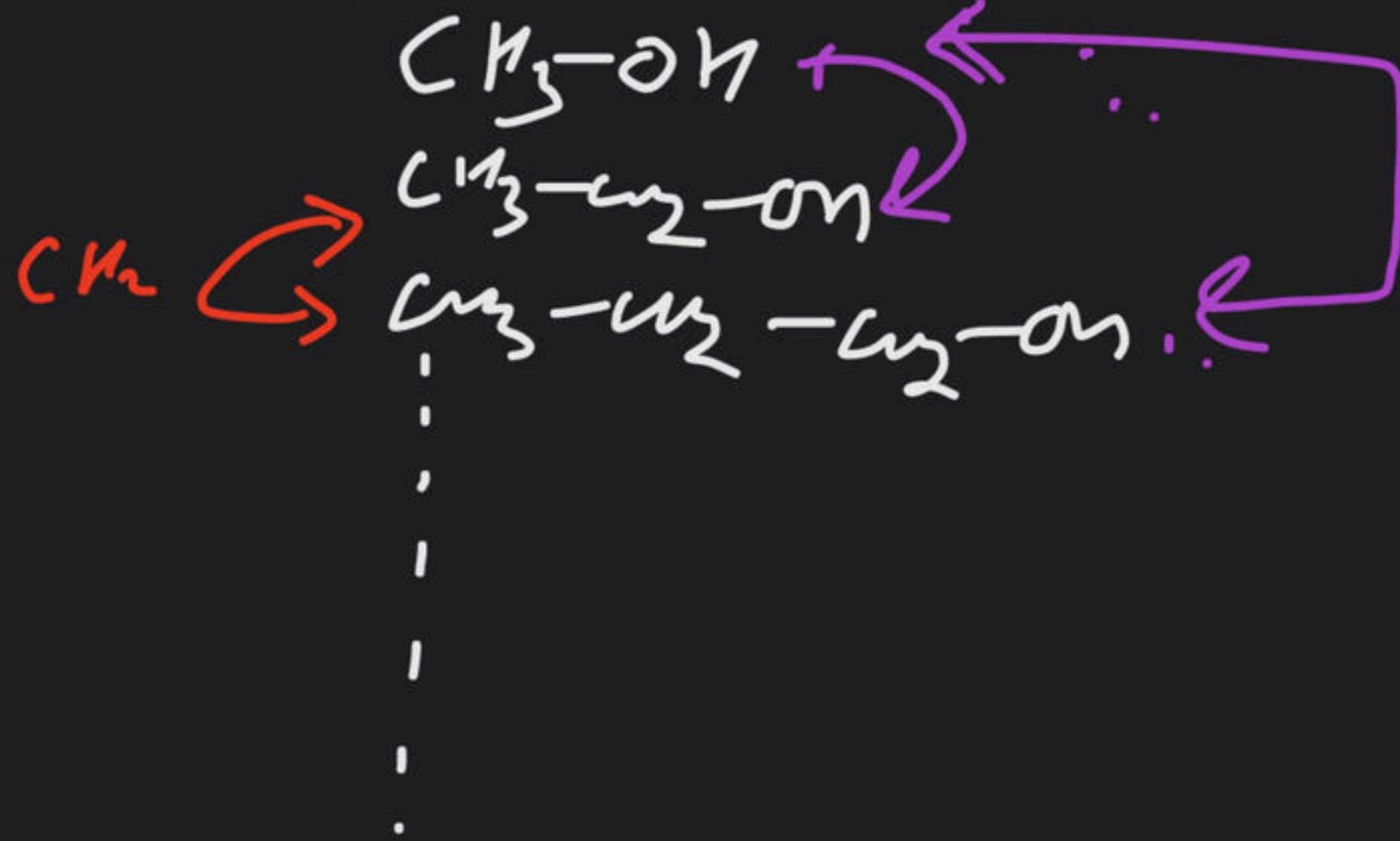
Ex: Alkane H-Series



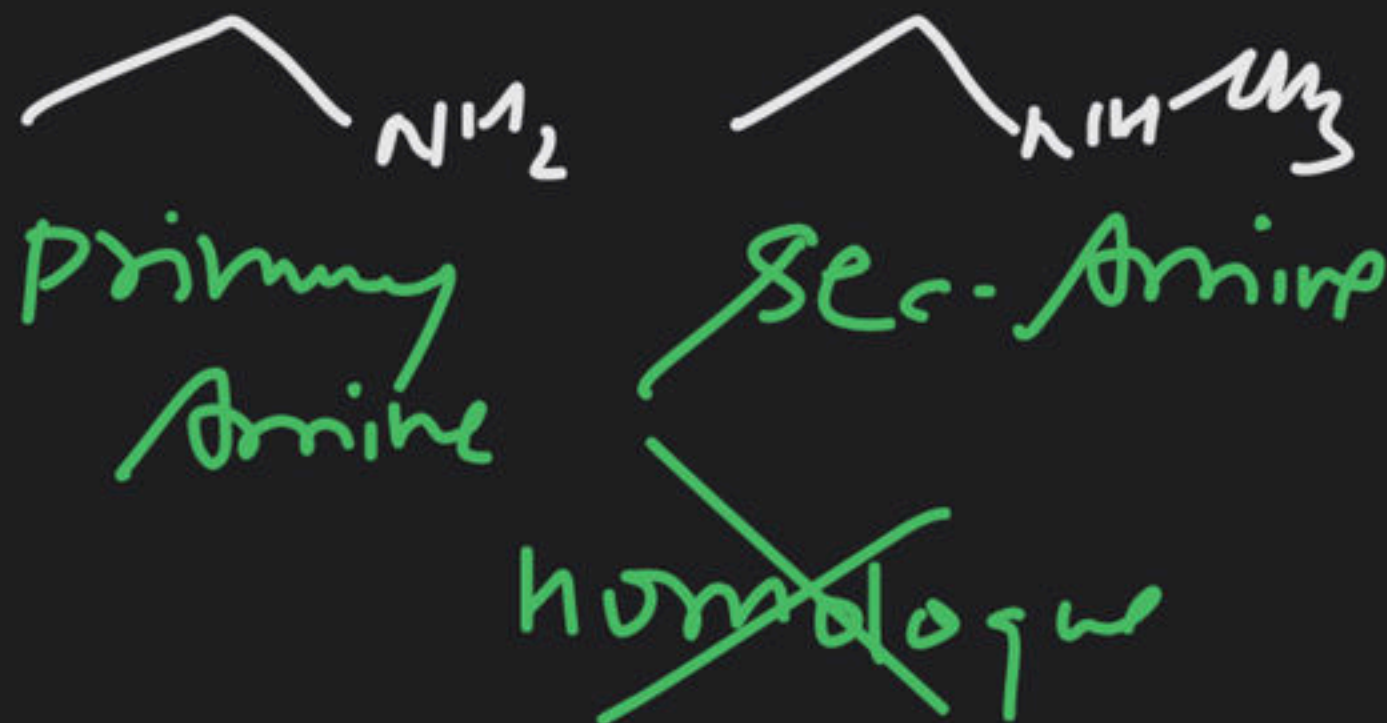
Ex-1:



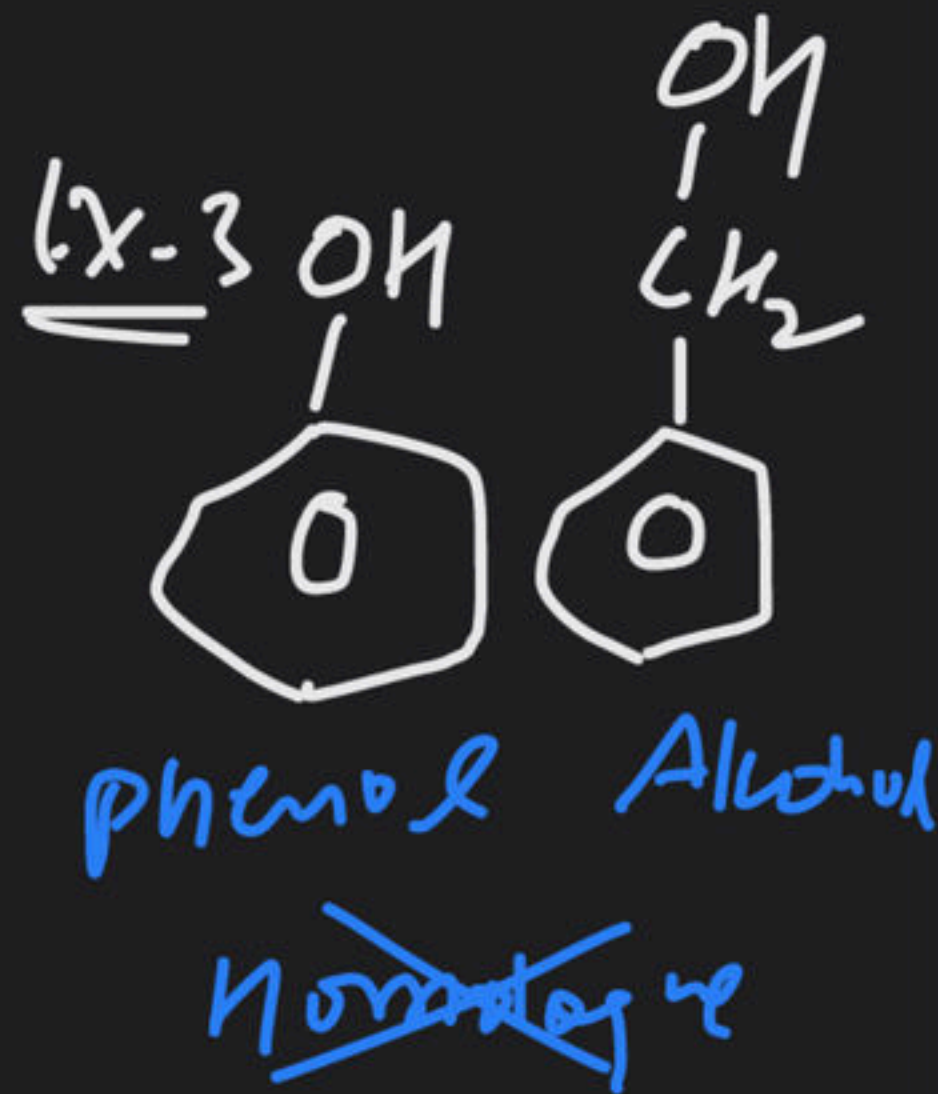
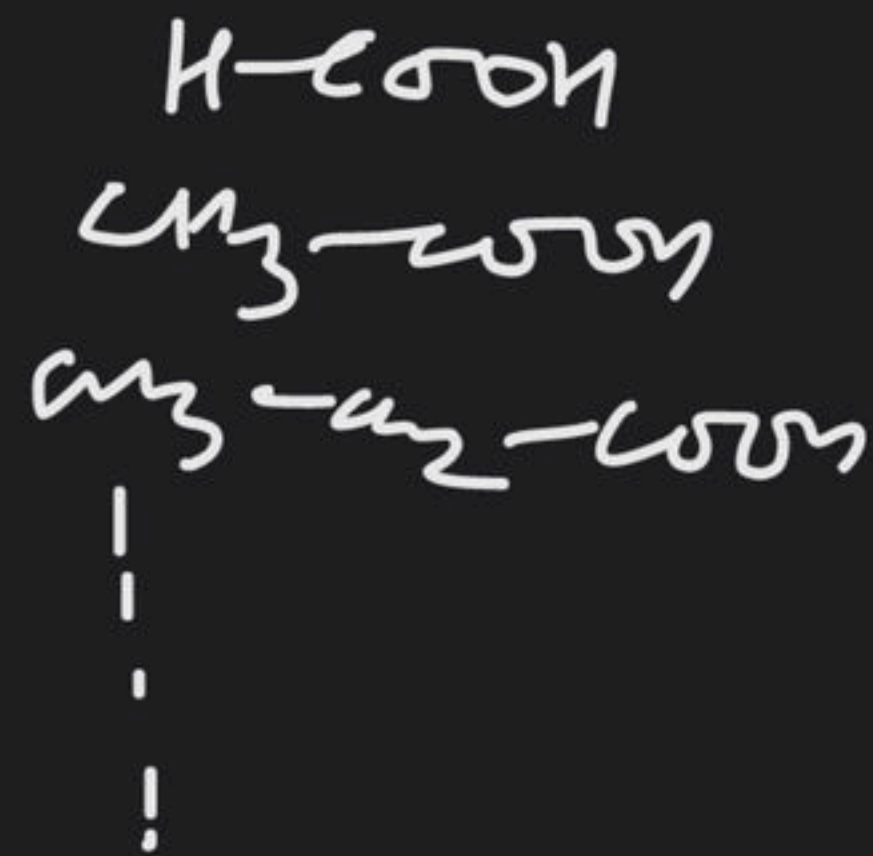
Alcohol H-Series



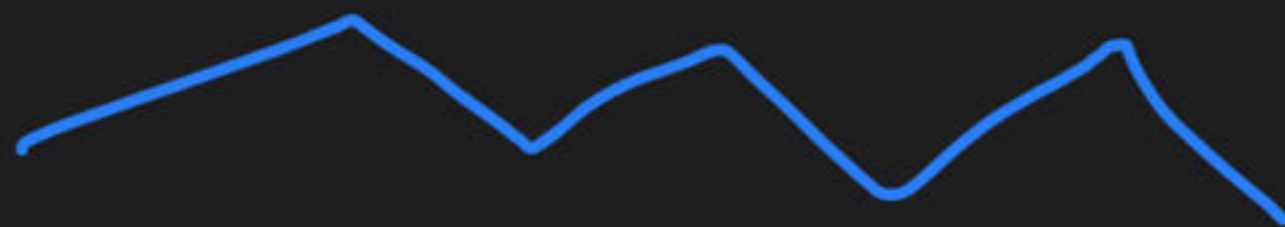
Ex-2



Acid H-Series



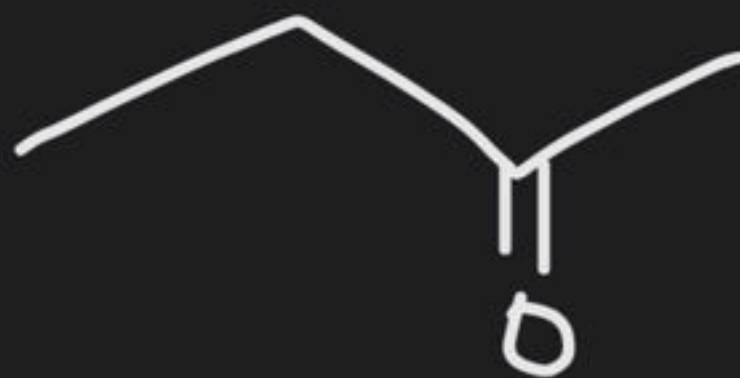
Ex-4:



✓ Homologs

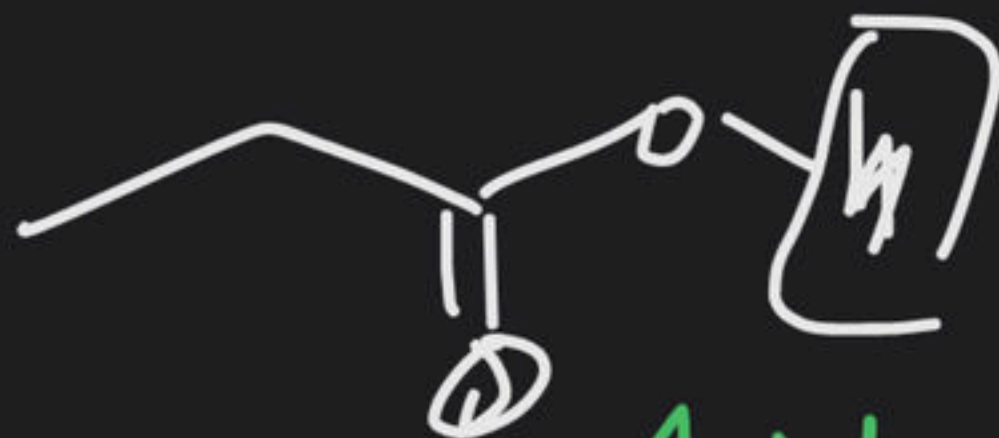
(A) Yes
(B) No

Ex-5



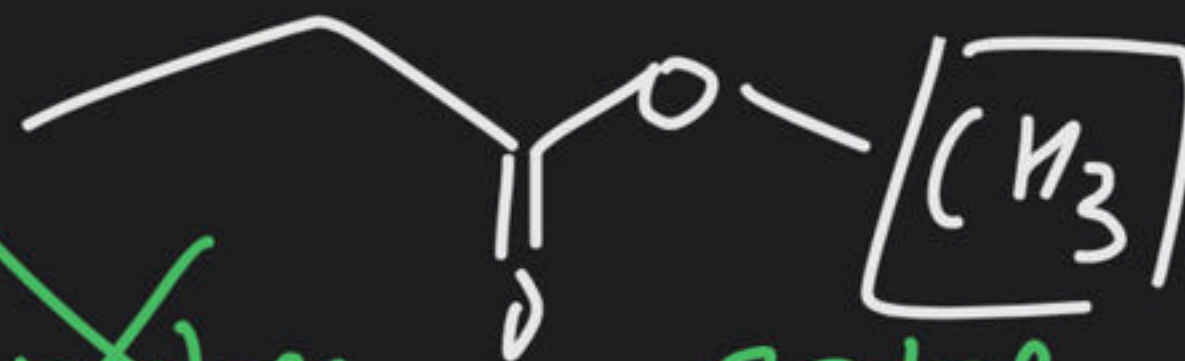
✓ Homologs

Ex-6



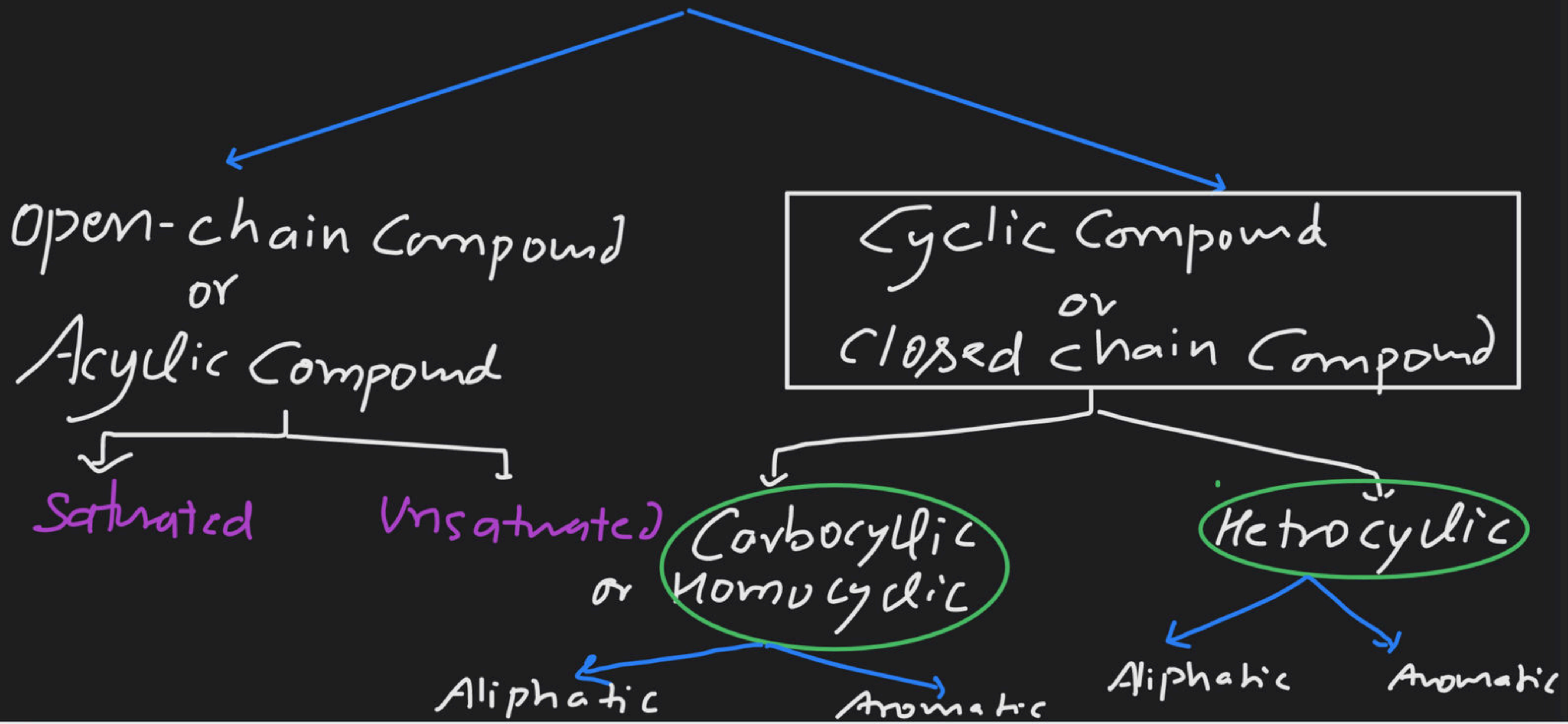
Acid

~~Homologs~~



Ester

Classification of Organic Compound



(1) Open chain / Acyclic Compound

⇒ Compounds having no any cyclic segment are known as open / Acyclic Compounds

Ex:

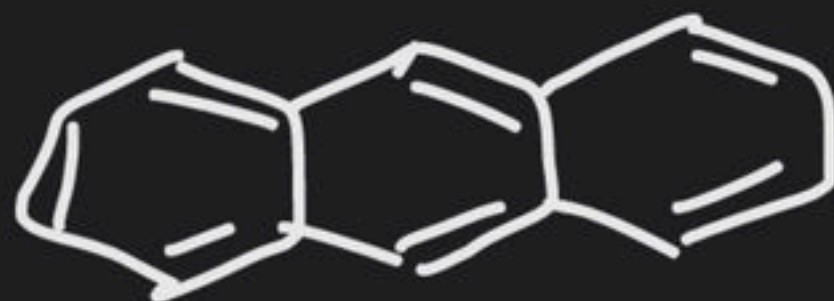
(Aliphatic)



(2) Cyclic / Closed chain Compound

⇒ Compounds having at least one cyclic segment is known as Cyclic / closed chain Compound.

Alicyclic

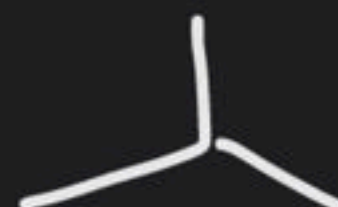


Saturated Compound

⇒ Compounds having all sigma bonds / which shows substitution Reaction.



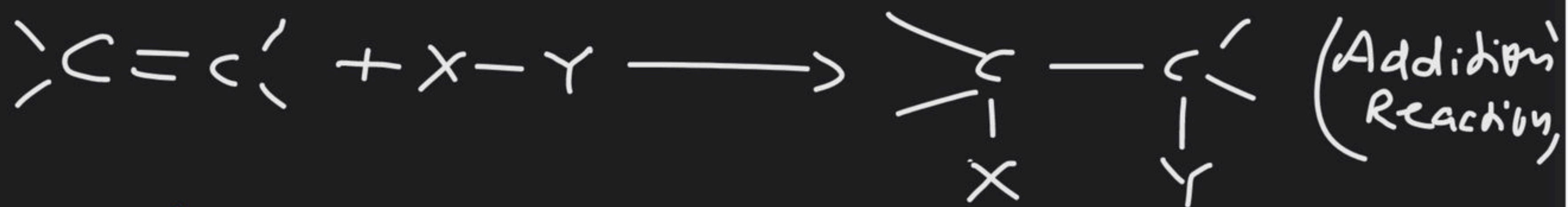
Ex:



etc

Unsaturated Compound

⇒ Compounds having at least 1 π bond / Compounds which show addition reactions

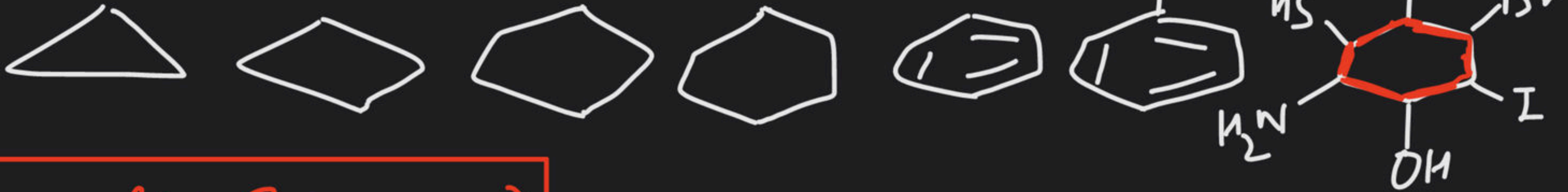


⇒ Carbocyclic / Homocyclic Compound:-

⇒ Cyclic Compound having only Carbon in Cyclic segment / Carbon ring only are

known as Carbocyclic / Homocyclic Compound.

EX:



Heterocyclic Compound

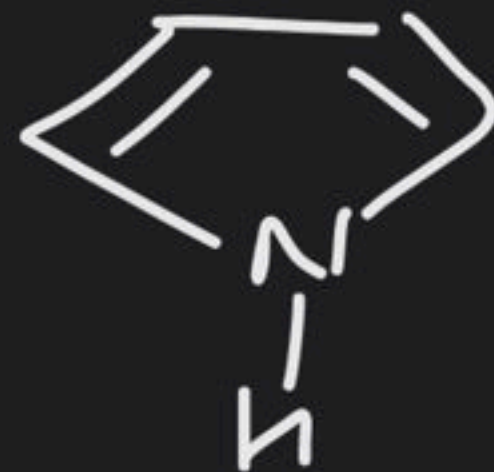
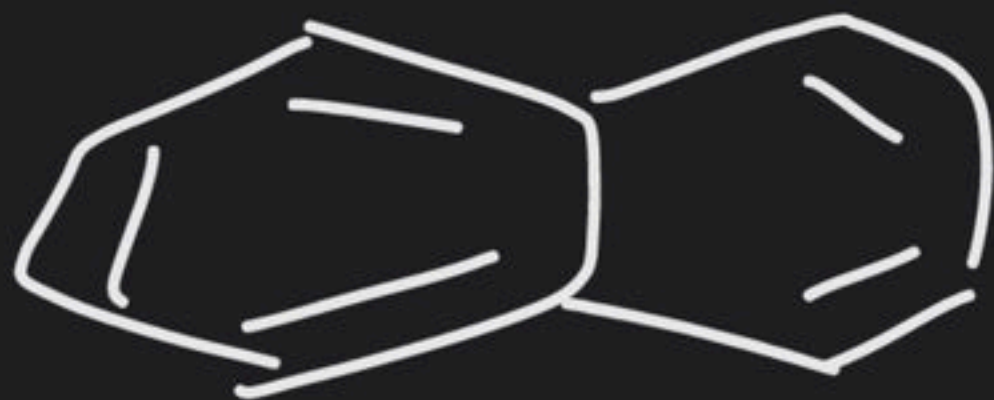
⇒ Cyclic compounds having at least one atom other than Carbon in Ring segment are known as Heterocyclic Compounds.



Aromatic Compound:

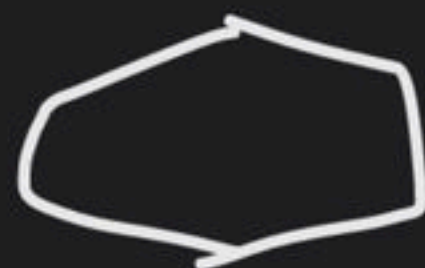
⇒ Compounds obtained on fractional distillation of coal tar having characteristic aroma are known as Aromatic Compounds

Ex:



Aliphatic Compound.

⇒ Compounds which are not Aromatic are known as Aliphatic Compounds.



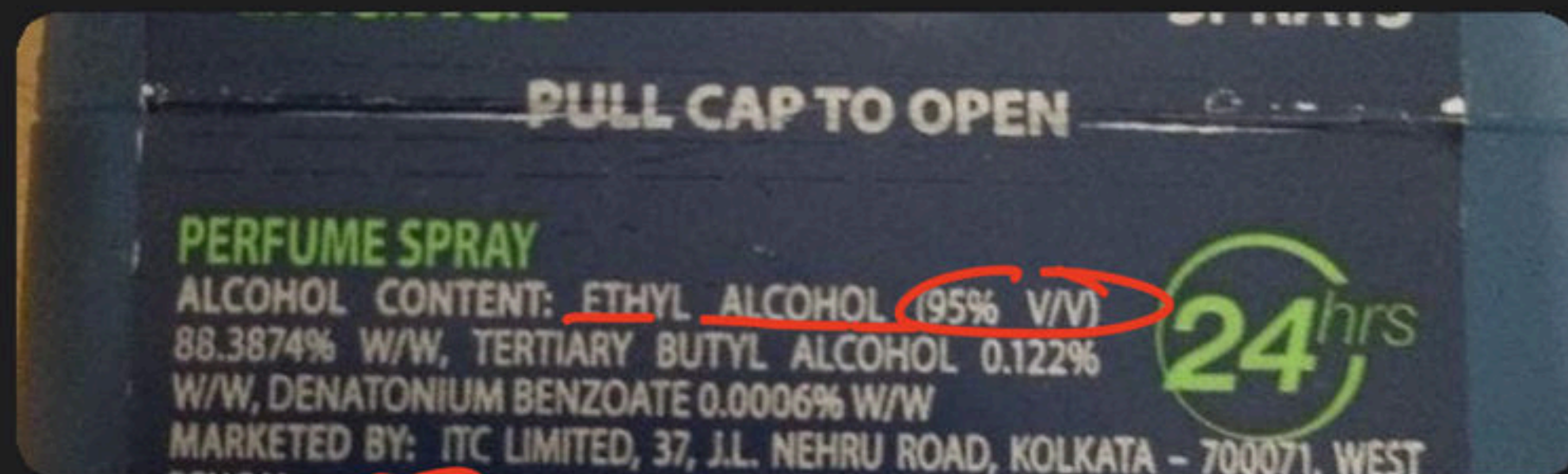
etc



Question

from Sagar Tiwari

Ethyl Alcohol itni jyaada maatra mein..



43%



Question

from Aasish kumar

Quadratic Equation

[JEE(Advanced) 2017, Paper-2, (3, 0)/61]

Comprehension (Q-12 & 13)

Let p, q be integers and let α, β be the roots of the equation, $x^2 - x - 1 = 0$ where $\alpha \neq \beta$. For $n = 0, 1, 2, \dots$, let $a_n = p\alpha^n + q\beta^n$.

$$\alpha + \beta = 1$$
$$\alpha\beta = -1$$

FACT : If a and b are rational numbers and $a + b\sqrt{5} = 0$, then $a = 0 = b$.

12. $a_{12} =$
(A) $a_{11} + 2a_{10}$ (B) $2a_{11} + a_{10}$ (C) $a_{11} - a_{10}$ (D) $a_{11} + a_{10}$
13. If $a_4 = 28$, then $p + 2q =$
(A) 14 (B) 7 (C) 21 (D) 12

Question

from Kritika Mehta

Sir.. My notes

• Ek compound ke formulae par bahot saare functional group ho sakte hai.

7. C_2H_3N

→ Cyanoethyne
 Iso-cyanoethyne

8. Phenol
 Benzyl alcohol

Q9. Total number of compounds with different functional groups are possible.

9. C_2H_6O (IHD=0)

→ Ether
 → Alcohol

• Total number of different functional groups = 2

10. C_3H_9N

→ Amine

- $(H_3C-CH_2-CH_2NH_2)$ Primary
- $(CH_3-CH_2-NH-CH_3)$ Secondary
- $(H_3C)_3N$ Tertiary

3 Ans



Question

from Birina Sarma

Sir mujhe samjh nhi aaya hydrocarbon kaise nhi hoga

(C) 1-bromo-3-vinylcyclobutane (D) 3-bromocyclobutyl ethene

30. Select the option in which common name correctly match with IUPAC name.

(A) Acetic acid \Rightarrow Propanoic acid (B) Crotonaldehyde \Rightarrow But-2-enal

(C) Formyl chloride \Rightarrow Ethanoyl chloride (D) Acetamide \Rightarrow Methanamide

31. The compound of molecular formula $C_5H_{10}O$ may have

(A) Alcohol (B) Aldehyde (C) Ketone (D) Ether

32. The correct order for *ortho* xylene and *para* xylene is/are

(A) $(\sigma\text{-bond})_{o\text{-xylene}} > (\sigma\text{-bond})_{p\text{-xylene}}$ (B) $(\pi\text{-bond})_{o\text{-xylene}} < (\pi\text{-bond})_{p\text{-xylene}}$

(C) $IHD_{o\text{-xylene}} > (\pi\text{-bond})_{p\text{-xylene}}$ (D) $(\sigma\text{-bond})_{o\text{-xylene}} > (\pi\text{-bond})_{p\text{-xylene}}$

33. The compound having molecular formula C_6H_8 . The correct statement is/are

(A) It must be benzene (B) It must be cyclic

(C) It must be hydrocarbon (D) It must have 4 double bond equivalent

34. The general formula C_nH_{2n-2} may represent

(A) Allene (B) Alkyne (C) Bicycloalkane (D) Cycloalkene

35. The name of following compound is

$$\begin{array}{c} CH_3-CH-CH_3 \\ | \\ CH_3 \end{array}$$

(A) Tertiarybutyl (B) Iso-butane (C) Butane (D) Tertiary propane

nw

Sheet Update (Q.No - - - -)

Chapter-10
Book:

14, 19, 28, 37, 47, 50, 74

77, 83, 86, 87, 88, 90, 91, 96

97, 98, 99, 105, 106, 108

109, 110, 112, 113, 115

117, 118, 119, 120, 121

122, 123, 124, 125,





