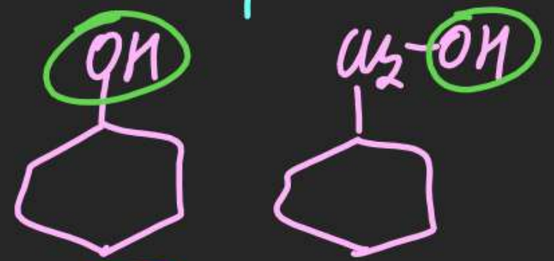
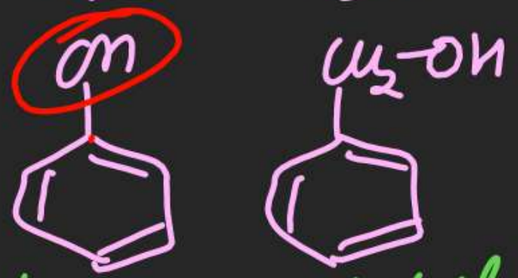
(iii) Each member of HS contains diff Physical property

(iv) Homologues can be represented by same General Formula

Ex:  Homologues

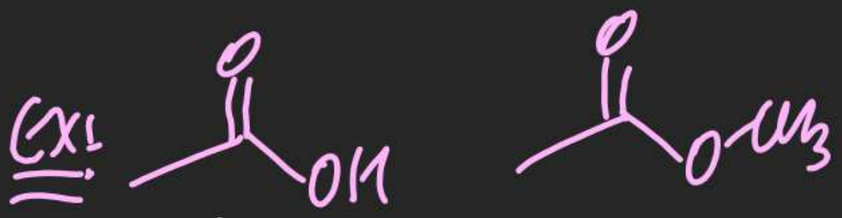
Ex:  Not Homologues

Phenol Alcohol

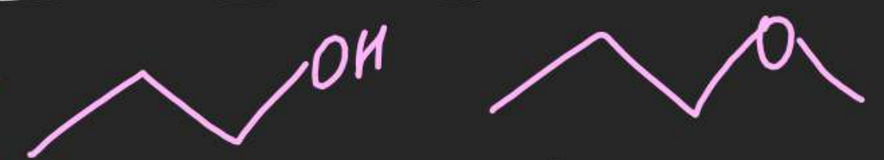
Ex: $CH_3-CH_2-OH$ $CH_3-CH_2-CH_2-CH_2-OH$ (Homologues)

Ex: $CH_3-CH_2-NH_2$ $CH_3-CH_2-NH-CH_3$ (Not Homologues)

(diff F.grp)

Ex: 

Not Homologues

Ex: 

Not Homologues

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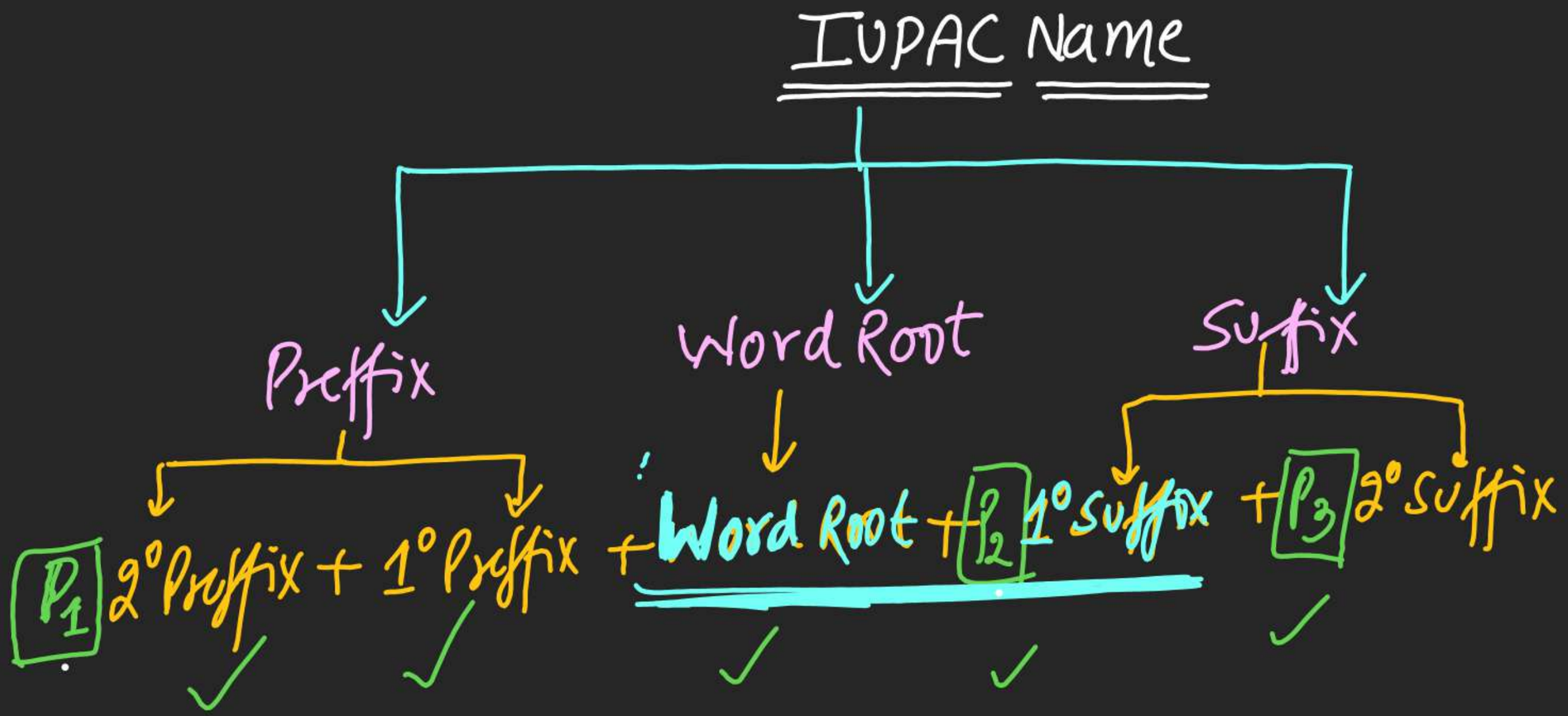

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**Prefix :** It is used at starting of IUPAC Name.

**2° Prefix :** It is used for naming of side chains / substituents

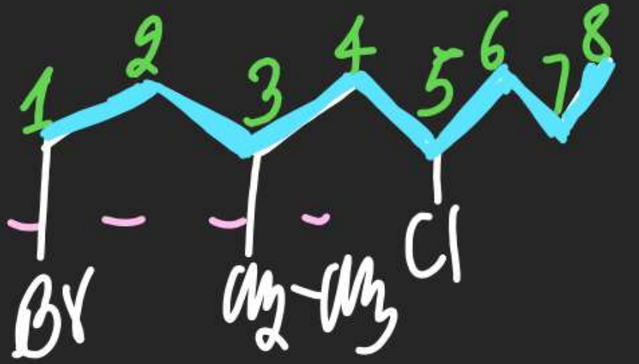
| | | | | | |
|---|---|---|---|---|---|
| —Cl | Chloro | —OH | Hydroxy | —OR | Alkoxy |
| —Br | Bromo | $-NO_2$ | Nitro | —NO | Nitroso |
| —I | Iodo | $-CH_3$ | Methyl (Me) | —ONO | Nitrito |
| —F | Fluoro | $-CH_2-CH_3$ | Ethyl (Et) | | |

**Note** (i) 2° Prefix is always written in Alphabatical order

(ii) ——— with position

For Ex 1-Bromo-5-chloro-3-Ethyl- - - - - - - -

Ex :



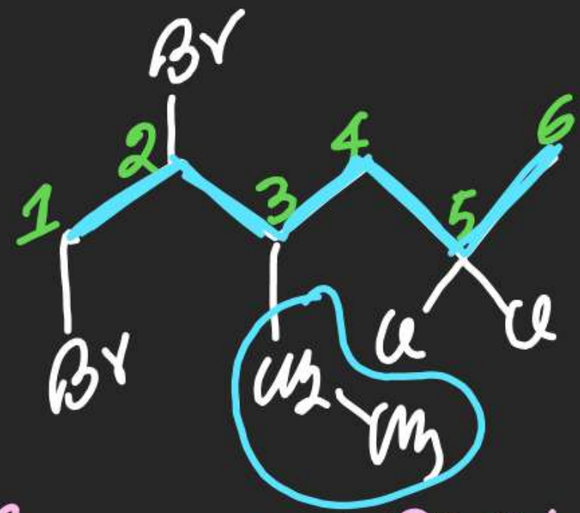
(iii) If Side chain/Substituents are more than once then use twice ⟶ di

thrice ⟶ Tri

⟶ Tetra

⟶ Penta

Ex!




1,2-DiBromo-5,5-DiChloro-3-Ethyl

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(iv) If Name of Side chain already includes di, Tri, Tetra ...etc then on Repetition of such Side chains use following

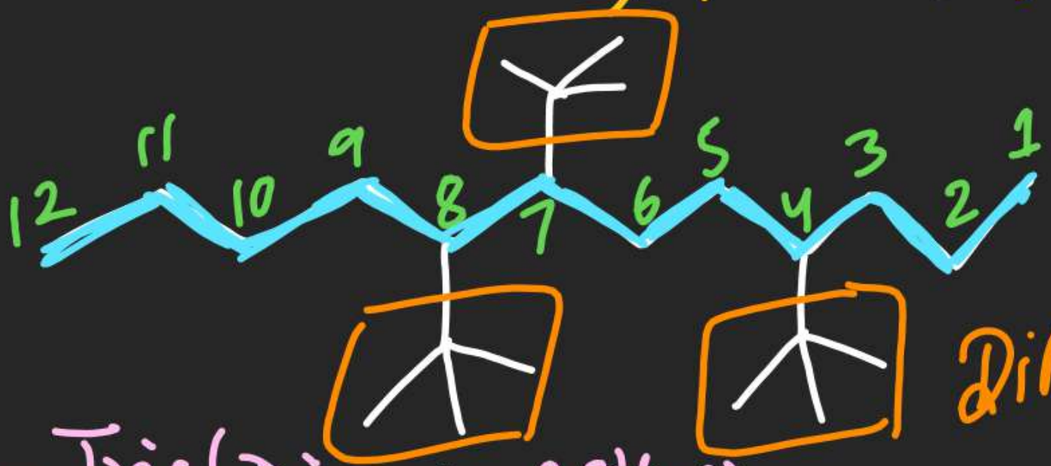
twice → Bis

thrice → Tris

→ Tetra Kis

→ Penta Kis

Ex:




Dimethyl ethyl

4,7,8- Tris (Dimethyl ethyl)

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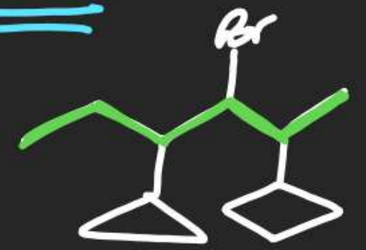
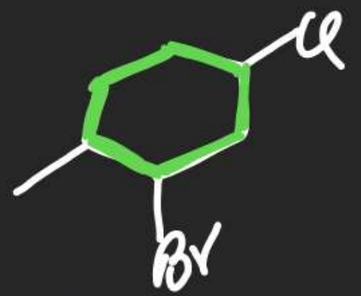
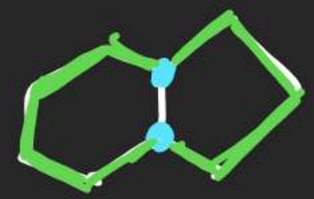
# (#) 1° Prefix

It is used for nature of Principal chain

| Principal chain | 1° Prefix |
| --- | --- |
| Acyclic | |
| Cyclic | Cyclo |
| Two Rings having at least 2 atom common — Bicyclic | Bicyclo |
| Two Rings having Exactly 1 atom common. — Spiro | Spiro |



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## (#) Word Root: It is used for Total No. of Carbon atom in Principal chain

| No. of Carbon atom | Word Root |
|---|---|
| 1 | Meth |
| 2 | Eth |
| 3 | Prop |
| 4 | But |
| 5 | Pent |
| 6 | Hex |
| 7 | Hept |
| 8 | Oct |
| 9 | Non |
| 10 | Dec |

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11 Undec

12 Dodec

13 Tridec

14

15

⋮

20

30

40

50

60

70

80

90

100

**Note:** (i) If Principal chain is  then we use Benzene in place of [WR + 1° suffix]

(ii) An additional alphabet "a" is added when 1° suffix includes di, tri, tetra - - - - -

| | Word Root |
|---|---|
| Meth | Metha |
| Eth | Etha |
| Prop | Propa |
| But | Buta |
| Pent | Penta |
| Hex | Hexa |
| ⋮ | ⋮ |

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## (#) 1° Suffix

It is used for nature of Carbon–Carbon bond in Principal chain.

| Nature of C–C Bond | 1° Suffix |
|---|---|
| All Single | ane |
| multiple Bond: 1 double | ene |
| multiple Bond: 1 Triple | yne |

Note (i) If multiple Bond appears

| | |
|---|---|
| twice | then use di |
| thrice | tri |
| ⋮ | tetra |
| | ⋮ |

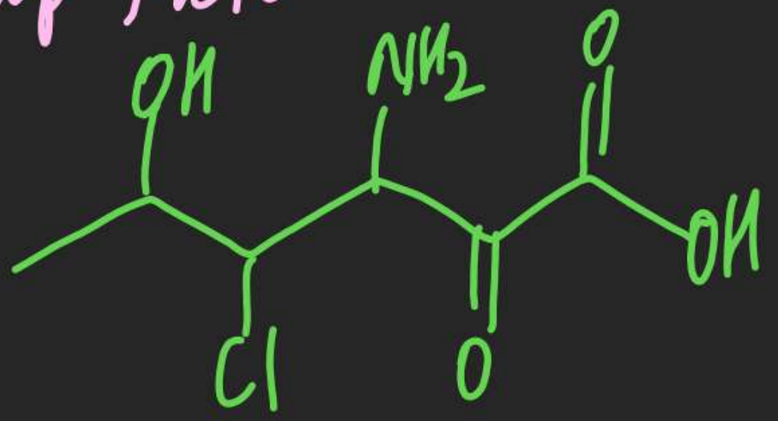
(ii) 1° Suffix is always written in alphabadical order

(iii) ——————— with Position

(iv) 1° suffix omitted last alphabet "e" if 2° suffix starts with vowel.

(#) **2° suffix** It is used for main functional group (Boss) in Principal chain By help of functional group table

Ex!




—COOH Boss 2° suffix


Side chain substituents 2° Prefix

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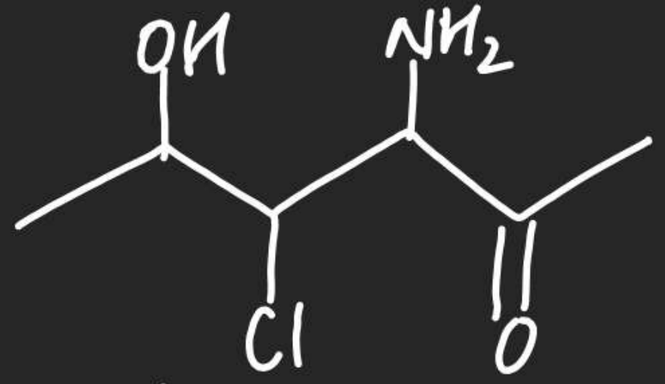
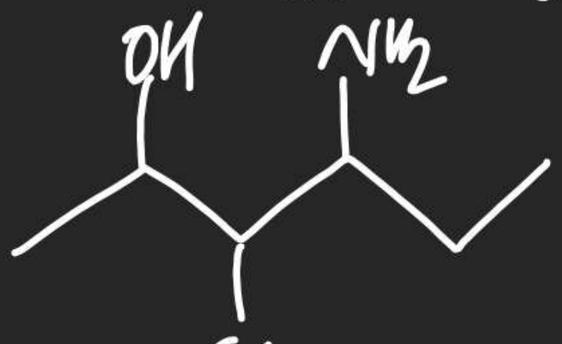
Ex:




$>C=O$ Boss (2° suffix)

$-OH$
$-NH_2$
$-Cl$
] Side chain or Substituents. (2° Prefix)

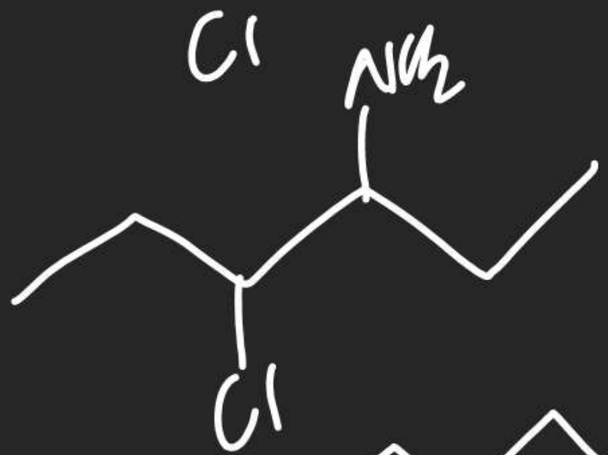
Ex:-




$-OH$ Boss (2° suffix)

$-NH_2$
$-Cl$
] Side chain (2° Prefix)

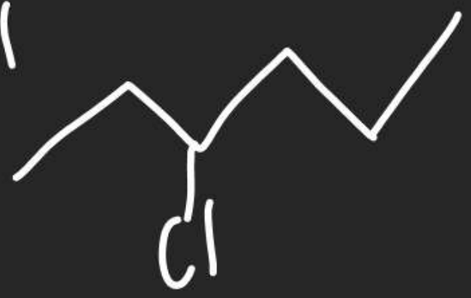
Ex!




$-NH_2$ Boss (2° suffix)

$-Cl$ ] Side chain (2° Prefix)

Ex!




$-Cl$ ] Side chain (2° Prefix)

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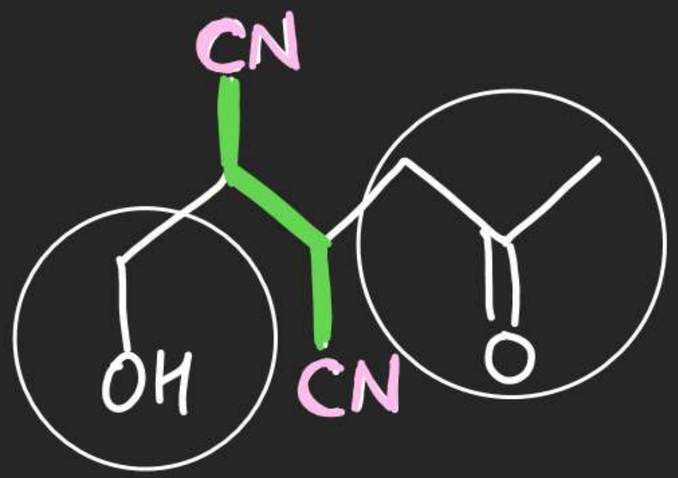
# (#) Selection of Principal Chain :-

⟹ Select Prinicipal chain so that it contains following in higher No.

B > M > L > S

- B — Boss
- M — Multiple Bond
- L — length of Cabon chain
- S — Side Chains

Ex-1



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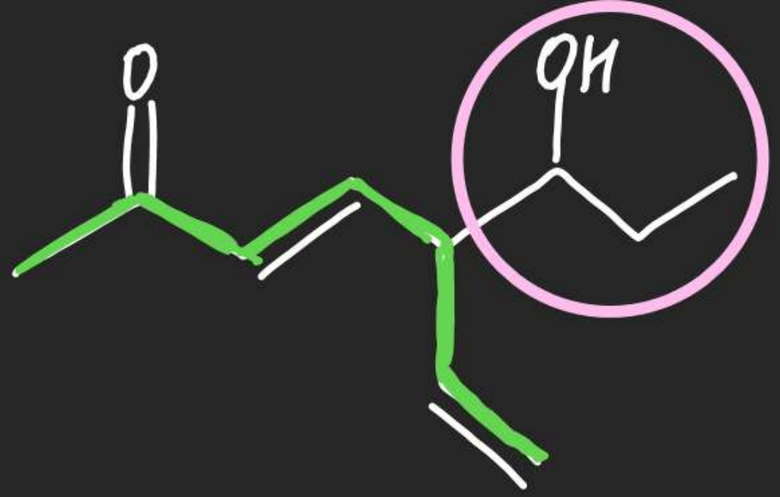
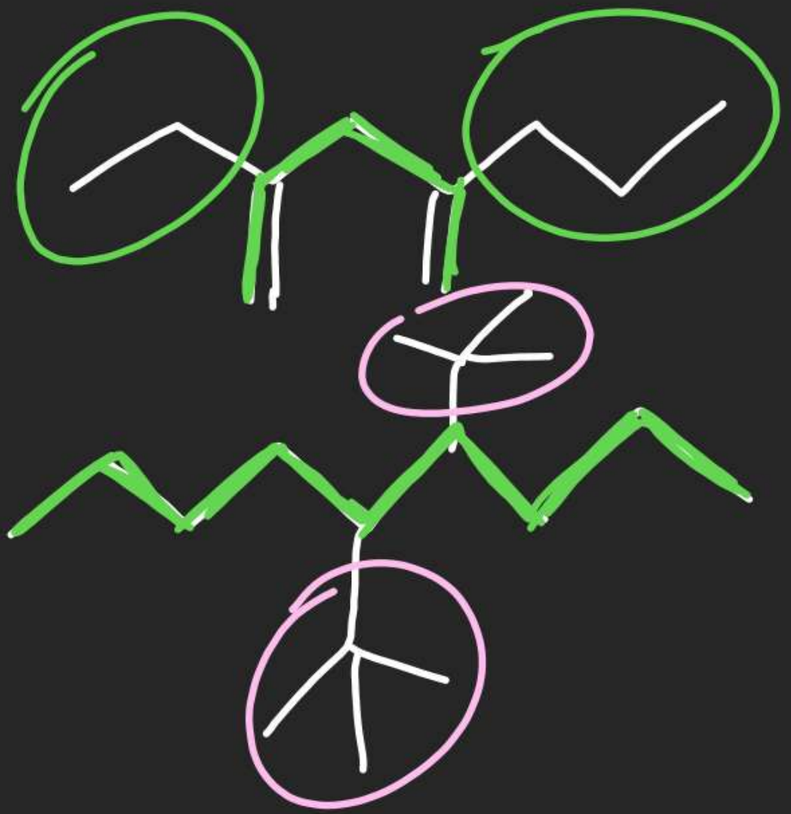
Ex-2:

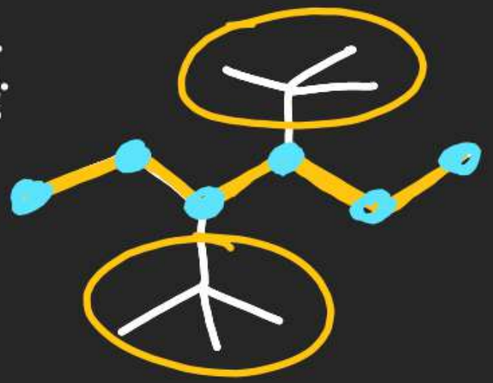



Ex-3:



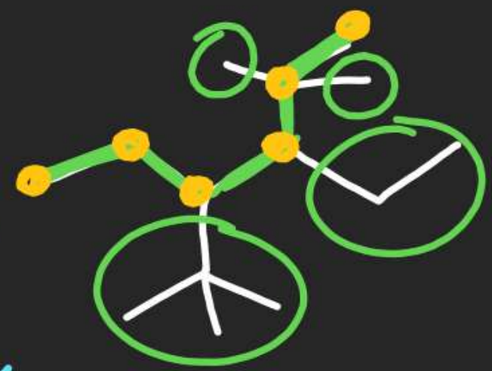
Ex-4:

Ex-5:

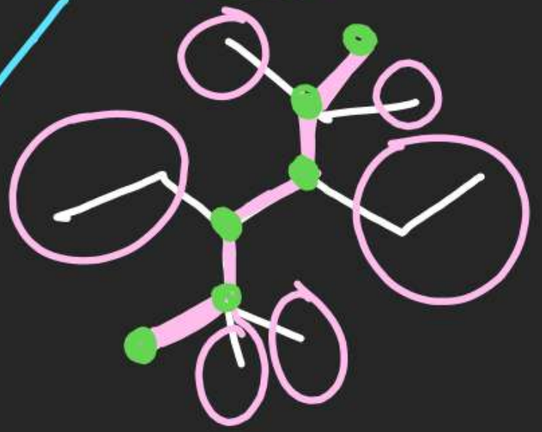


P.C 6C

S.C 2



6C 4



6C 6

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# (#) Numbering of Principal chain:-