* IUPAC (International Union of Pure and Applied Chemistry)

eg: · $CH_3\,CH_2\,CH_3$ (n-propane)

· $CH_3-\underset{\underset{CH_3}{|}}{CH}-$ (Isopropane)

· $CH_3-CH_2-CH_2-CH_3$ (n-butane)

· $CH_3\,CH_2-\underset{\underset{CH_3}{|}}{CH_2}-$ (~~Isobutane~~) (sec-butyl)

$CH_3-\underset{\underset{CH_3}{|}}{CH}-CH_2-$ (Isobutyl)

· $CH_3-\underset{\underset{CH_3}{|}}{\overset{CH_3}{\overset{|}{C}}}-$ (~~tert-butyl~~) (Neobutane)

· $CH_2=CH-$ (Vinyl)

· $CH_2=CH-CH_2-$ (Allyl)

·  (Benzyl)

· (Benzylidyne) ·  (Benzylidene)

* IUPAC Nomenclature:

- Prefix + Word root + Suffix

Word Root

C_1 - Meth

C_2 - eth

C_3 - Prop

C_4 - But

C_5 - Pent

C_6 - Hex

C_7 - Hept

C_8 - Oct

C_9 - Non

C_{10} - Dec

Suffix

Primary

(−) → ane

(=) → ene

(≡) → yne

Secondary

COOH → oic acid

CHO → al

C=O → one , OH → ol

Prefix

· Alkyl → CH_3, C_2H_5

· Halogen → Fluoro (F), Chloro (Cl), Bromo (Br), Iodo (I)

· OH (carboxy) · C=O (keto)

· CHO (Aldo) (Formyl)

Cycle △

Bicyclo [ ]

Spiro ⋈

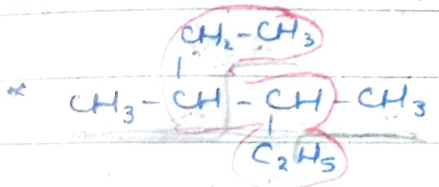
*Priority Order: COOH > CHO > C=O > OH > C=C > C≡C

RULES:

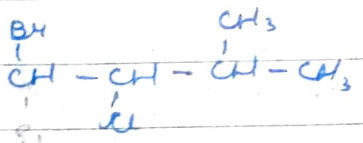
i) Select the longest chain.

ii) Number the selected chain along the side of nearest possible functional group.

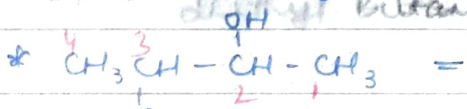
iii) Write the prefix in alphabetical order along with no. of carbon chain.



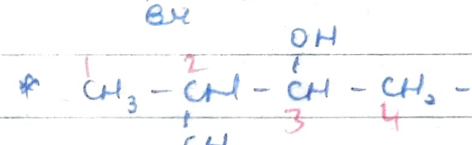
3, 4 dimethyl Hexane



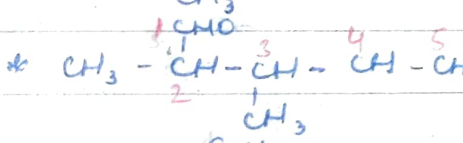
2 Bromo 3 chloro 4 methyl pentane



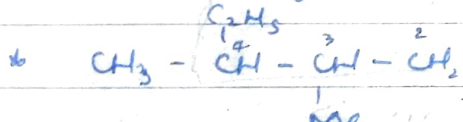
3 Bromo Butan-2-ol



2 Methyl Pentan-3-ol



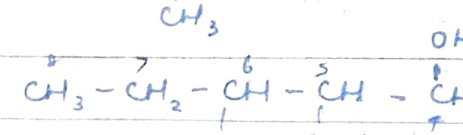
2,3 dimethyl ~~Hexane-2-al~~ Hexanal



3, 4 dimethyl Hexanoic acid.

4-AldoButanoic acid

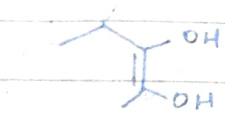
2 Methyl Hex-2,4 diene



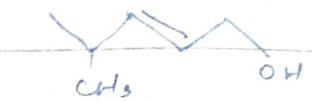
5-ethyl-4-Hydroxy-6-Methyl Octanoic acid

~~5 methyl 6 methyl~~

4 Hydroxy Octanoic acid



Pent-2-ene-2,3 diol



4 methyl Pent-2-ene-1-ol