Format for IUPAC name :

s – prefix	+	p – prefix	+	word root	+	p – suffix	+	s – suffix
Substituents with locants		cyclo		Alk word according to carbon in parent C chain		– ane – ene – yne		According to main functional group given in priority table

(a) Locant : Locants are link by (,) comma.

- Locants and alphabets are separated by hyphen (–). [2, 3 – dimethyl pentane]
- di, tri, iso, neo and cyclo are neither separated by comma nor by hyphen

(b) Prefix :- According to substituents .

Prefix (es) are written in alphabetical order before root word.

Prefix ← 1° or p – prefix
Prefix ← 2° or sec. – prefix

Cyclo is 1° prefix and used for cyclic compound.

2° prefix is used for substituents and written before 1° prefix.

For acyclic compounds : 2° prefix + Root word + 1° suffix + 2° suffix.

Substituents	Prefix
— R	Alkyl group
— X (F, Cl, Br, I)	Halo
— O — N=O	Nitrite
— CH_2OH	Hydroxymethyl
— NHC_2H_5	Ethylamino

Substituents	Prefix
— OR	Alkoxy
— $N(=O)-O$	Nitro
— N = O	Nitroso
— CH_2Cl	Chloromethyl

(c) Word root : According to number of carbons in parent C–chain.

Number of carbons	Root word
1	Meth
2	Eth
3	Prop
4	But
5	Pent

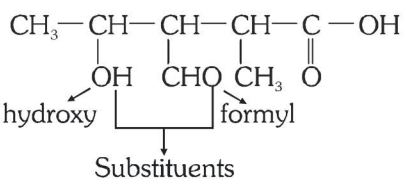
Number of carbons	Root word
6	Hex
7	Hept
8	Oct
9	Non
10	Dec

Number of carbons	Root word
11	Undec
12	dodec
13	tridec

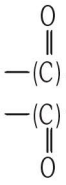
(d) Primary suffix :- According to saturation and unsaturation.

C — C ⟶ ane C=C ⟶ ene C≡C ⟶ yne

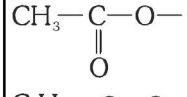
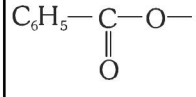
(e) Secondary Suffix :- According to senior most of F. G.

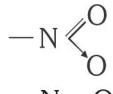
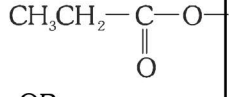


3-Formyl-4-hydroxy-2-methyl pentanoic acid

S. NO.	Functional group	Prefix	Suffix
1.	— (C) OOH (carboxylic acid)	×	oic acid
	— COOH	carboxy	carboxylic acid
2.	— SO_3H (sulphonic acid)	sulpho	sulphonic acid
3.		×	oic anhydride
4.	— (C)OOR (ester)	×	alkyl ------ oate
	— COOR	alkoxycarbonyl or carbalkoxy	alkyl ----- carboxylate
5.	— (C)OX (acid halide)	×	oyl halide
	— COX	haloformyl	carbonyl halide
6.	— (C)ONH_2 (amide)	×	amide
	— $CONH_2$	carbamoyl	carboxamide
7.	— (C)N (cyanide)	×	Nitrile
	— CN	cyano	carbonitrile
8.	— N ≡ C (isocyanide)	isocyano/carbylamino	isonitrile/carbylamine
9.	— (C)HO (aldehyde)	oxo	al
	— CHO	formyl	carbaldehyde
10.	 (Ketone)	keto/oxo	one
11.	— OH (alcohol)	hydroxy	ol
12.	— SH (thio alcohol)	mercapto	thiol
13.	— NH_2 (amine)	amino	amine

Note : (C) atom written in brackets means that it has been included in the parent chain.

SUBSTITUENTS	PREFIX
— R	alkyl
— NH_2	amino
—O—N=O	nitrito
— OCH_2CH_3	ethoxy
— CH_2—Cl	chloromethyl
— S —	thio
	acetoxy/ethanoyloxy
	benzoyloxy

SUBSTITUENTS	PREFIX
— X	halo
	nitro
— N = O	nitroso
— CH_2 – OH	hydroxymethyl
— NH – CH_3	methylamino
	propanoyloxy
–OR	Alkoxy
$-OC_6H_5$	Phenoxy