Nishant Jindal

(#) Numbering of Principal chain:-

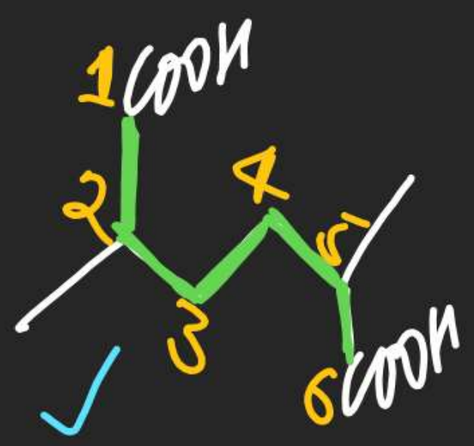
⟹ Number Principal chain so that following gets least possible No.

Boss > M. Bond > Side chain

Boss

- $-COOH$
- $-CN$
- $-COOR$
- $-COX$
- $-CONH_2$
- $-CHO$

Ex-1

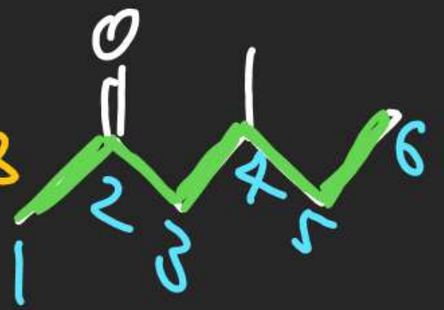


Boss

- $-OH$
- $-NH_2$
- $C=O$

Ex:2

Ex:3



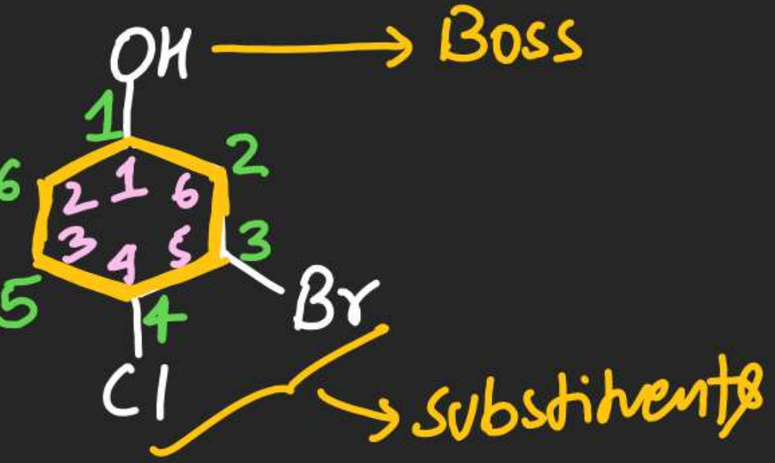
Nishant Jindal

Ex-4:

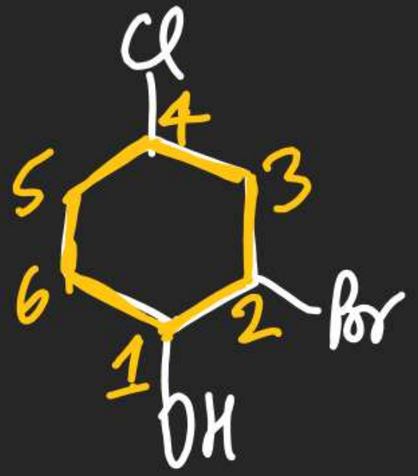
(lowest locat)

1 3 4 ✓

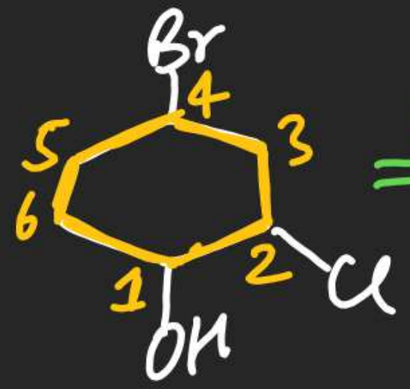
1 4 5 X



Ex-5

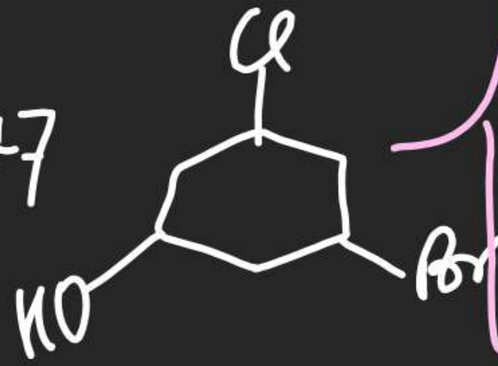


Ex-6

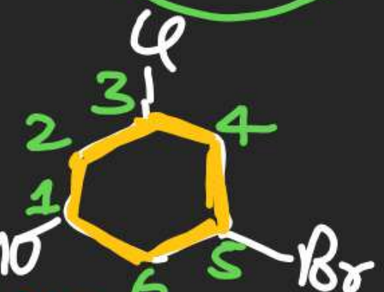


1, 2, 4 (lowest locat)

Ex-7

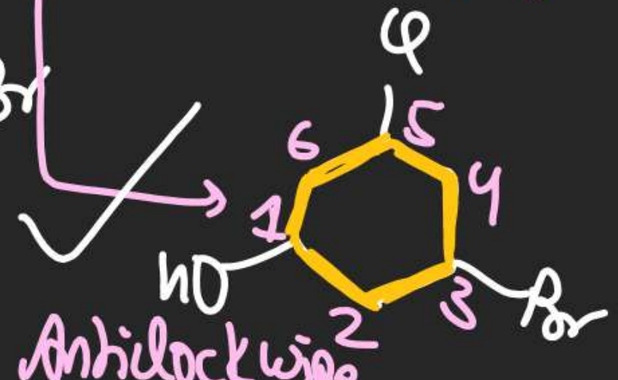


Clockwise



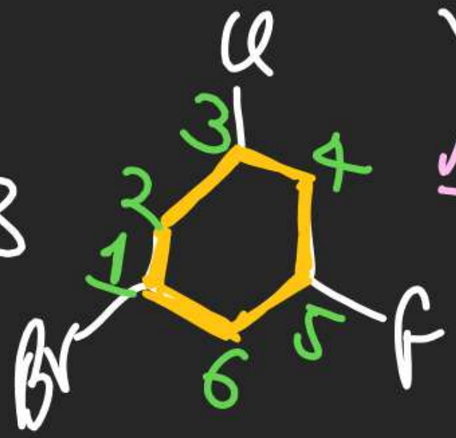
1, 3, 5

Anticlockwise



1, 3, 5

Ex-8



∴

Nishant Jindal

⇒ when No. is same from all possible sides then provide least no according to alphabatical order.

2,3,6 ✗
1,4,5 ✓

IUPAC Nomenclature of Hydrocarbon & its derivatives

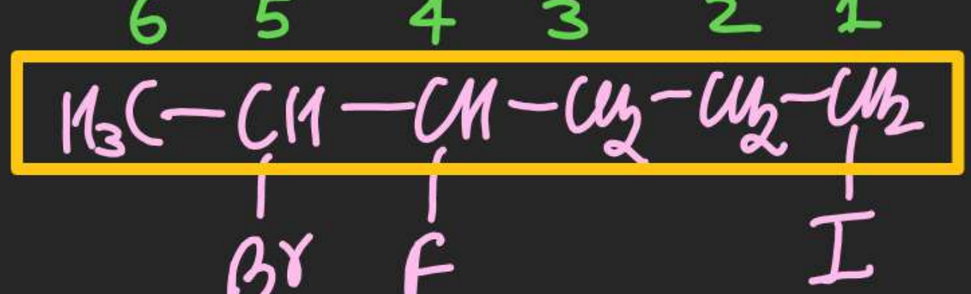
P_1-2° Prefix + 1° Prefix + WR + P_2-1° Suffix + P_3-2° Suffix

Alkane ⇒ All C-C Bond Single

Alkene ⇒ At least one C=C

Alkyne ⇒ At least one C≡C

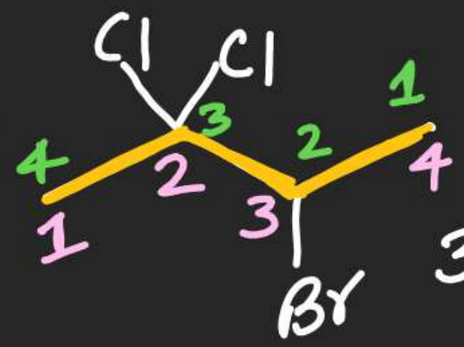
(1)



5-Bromo-4-fluoro-1-Iodo Hexane

Nishant Jindal

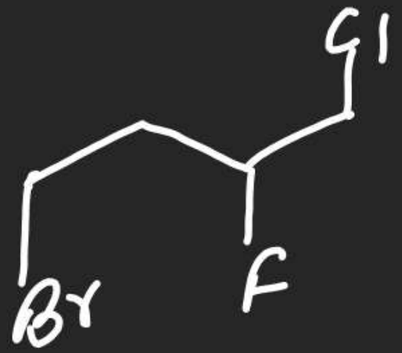
(2) ✓



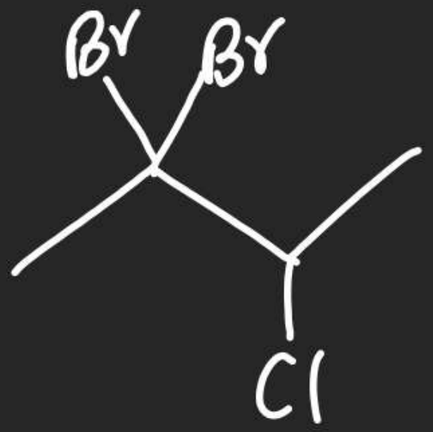
✓ 2 2 3 lowest
2 3 3 ✗

3-Bromo-2,2-Dichloro Butane

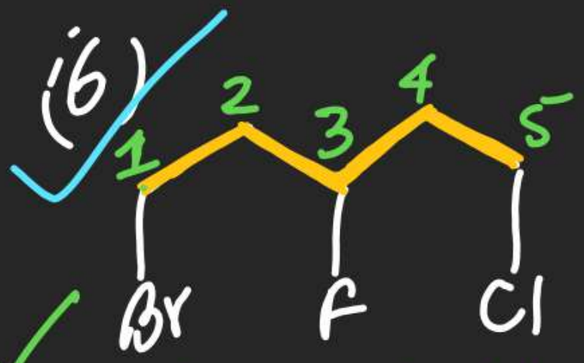
(5)

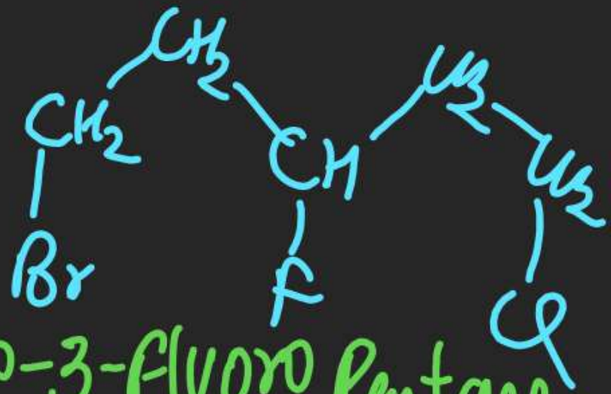


(3)



(6) ✓





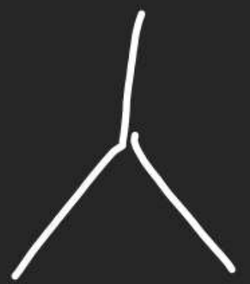
1-Bromo-5-chloro-3-fluoro Pentane

(4) ✓

R→L (1) 3 3 ✓
L→R 2, 2, 4 ✗

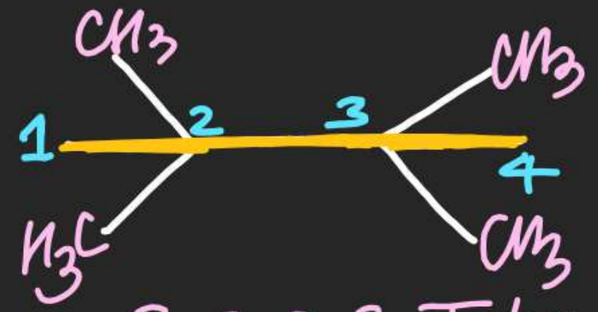
3,3-DiBromo-1-Chloro Butane

(7)



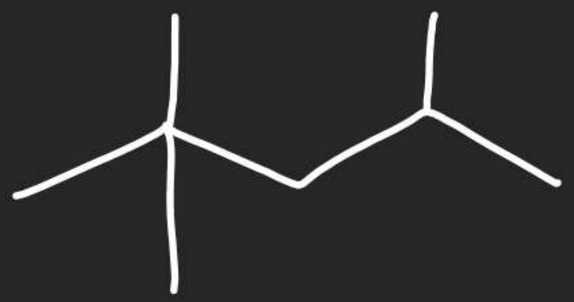
Nishant Jindal

(8)

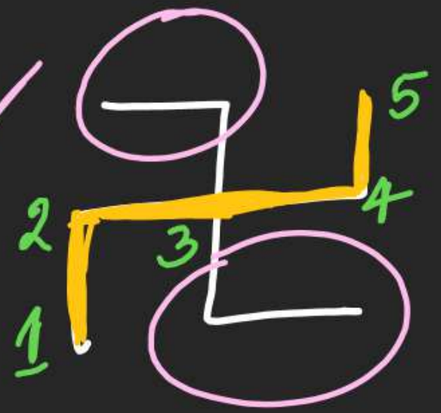


2,2,3,3-Tetramethyl Butane

(9)



(10)



3,3-Di Ethyl Pentane

(11)

2P+1P+WR+1S+2S

(12)

Cyclopentane

(13)

(14)

Nishant Jindal

Me ⇒ $-CH_3$ (Methyl)

Et ⇒ $-CH_2-CH_3$ (Ethyl)

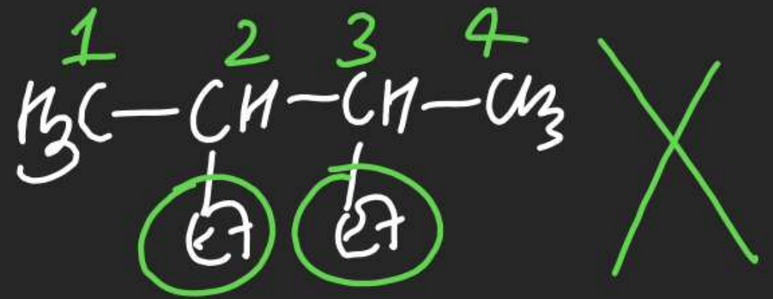
(15) Correct IUPAC name of following

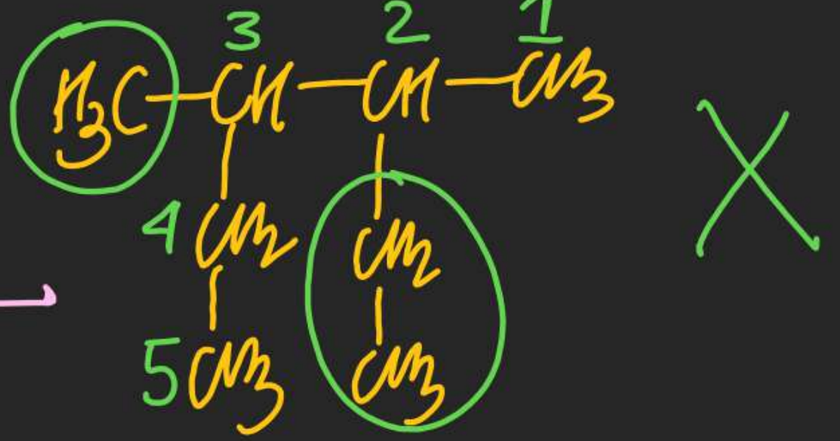
(A) 2,3-Di Ethyl Butane

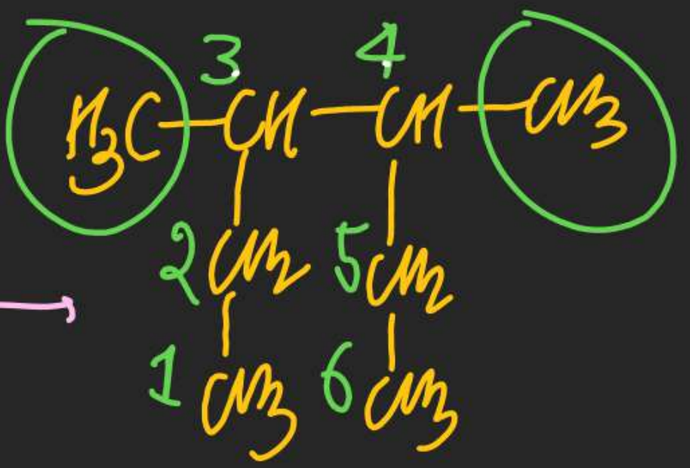
(B) 2-Ethyl-3-methyl Pentane

(C) 3,4-Dimethyl Hexane

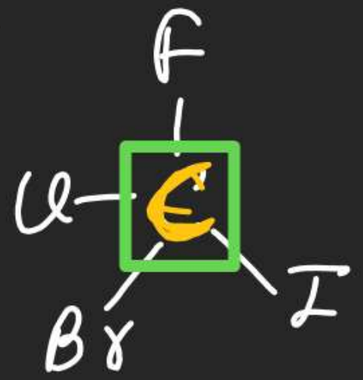
(D) N.O.T



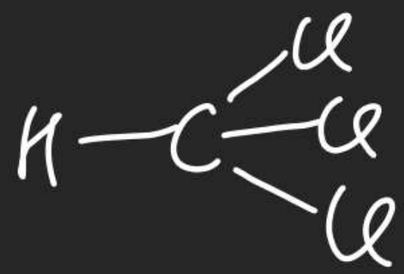




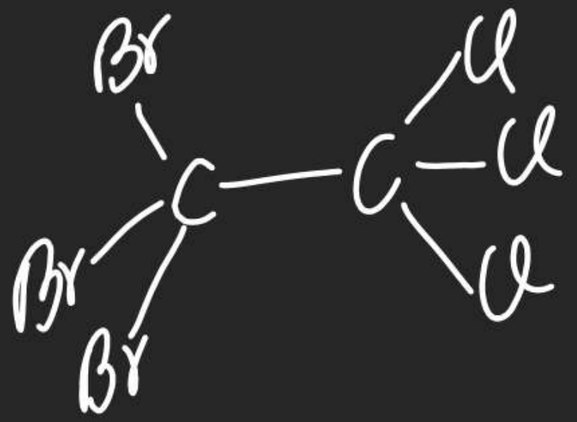
(16)



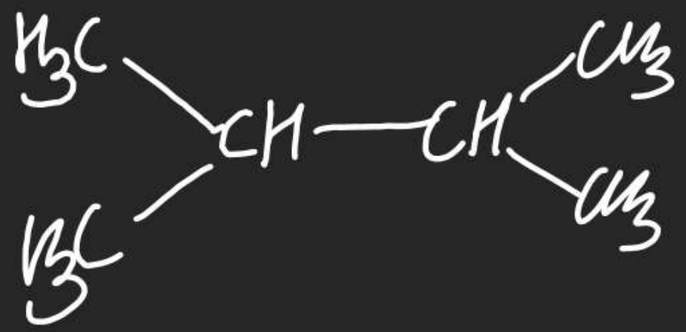
(17)



(18)

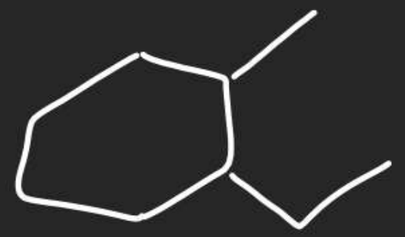


(19)

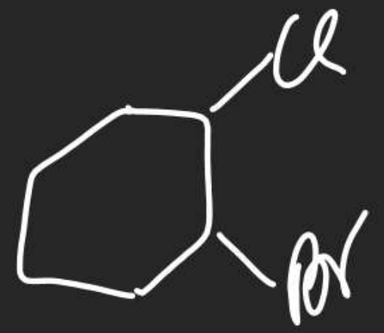


(20)

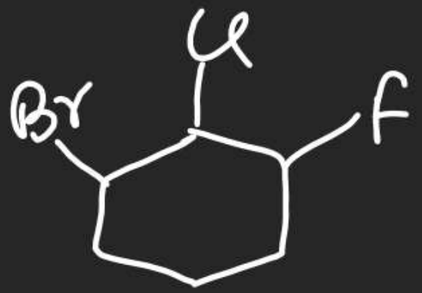
(21)



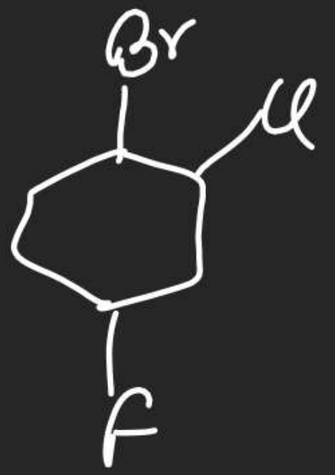
(22)



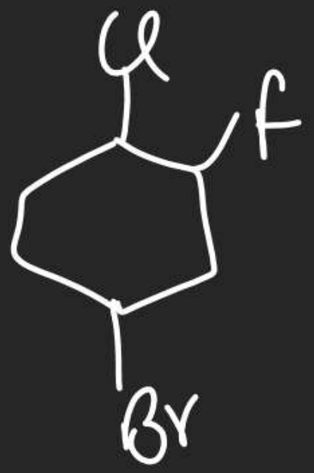
(23)



(24)



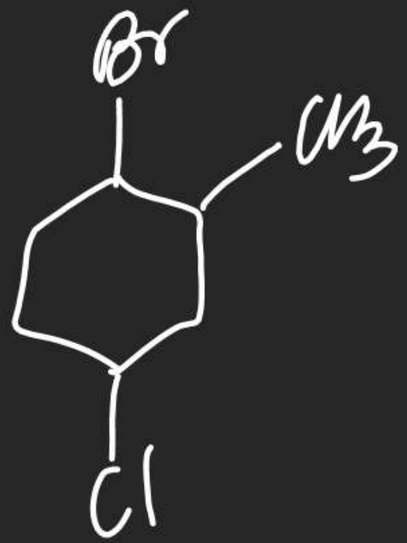
(25)



(26)

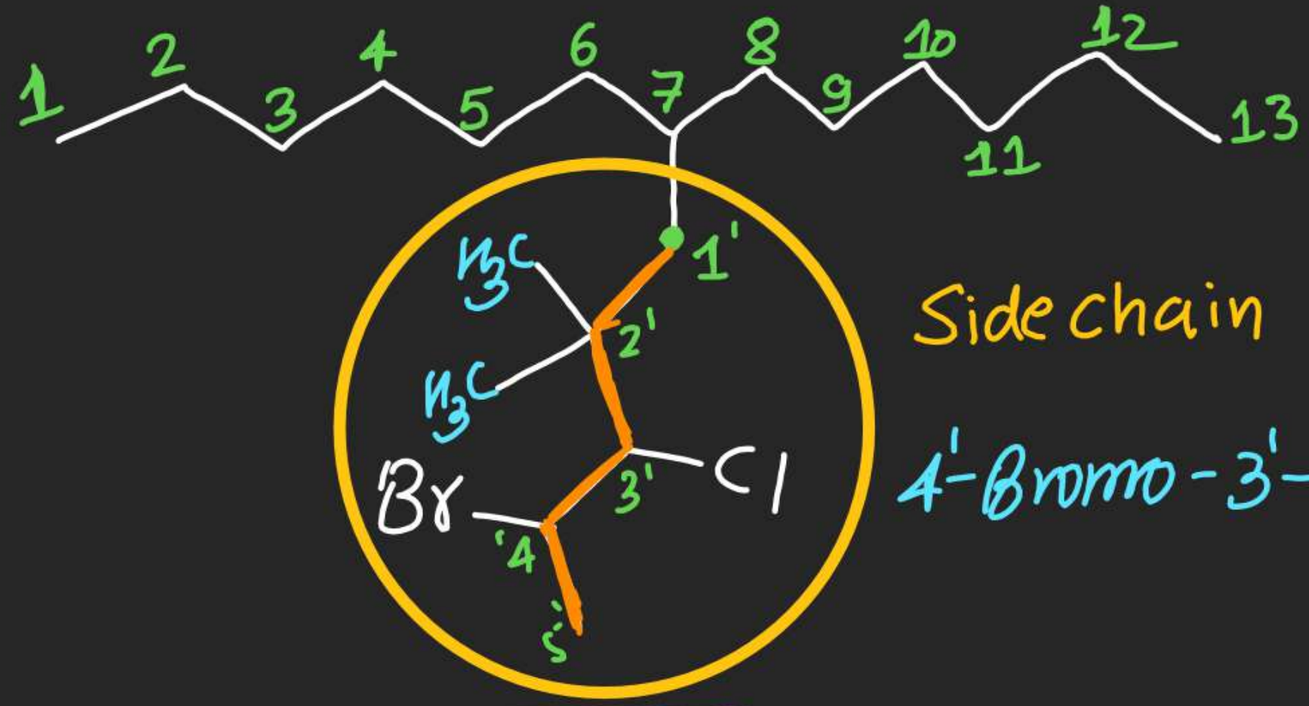
(27)

(28)



Nishant Jindal

(29)



Side chain

4'-Bromo-3'-chloro-2',2'-Dimethyl Pentyl

Naming of Side chains

Rule-1 always assign No. 1 during No. to that Carbon which is directly connected principal chain

Rule-2: 1° Suffix ⇒ yl

Nishant Jindal

(30)