Naming of Functional Group - I

Course on Nomenclature of Organic Compounds for Class XI

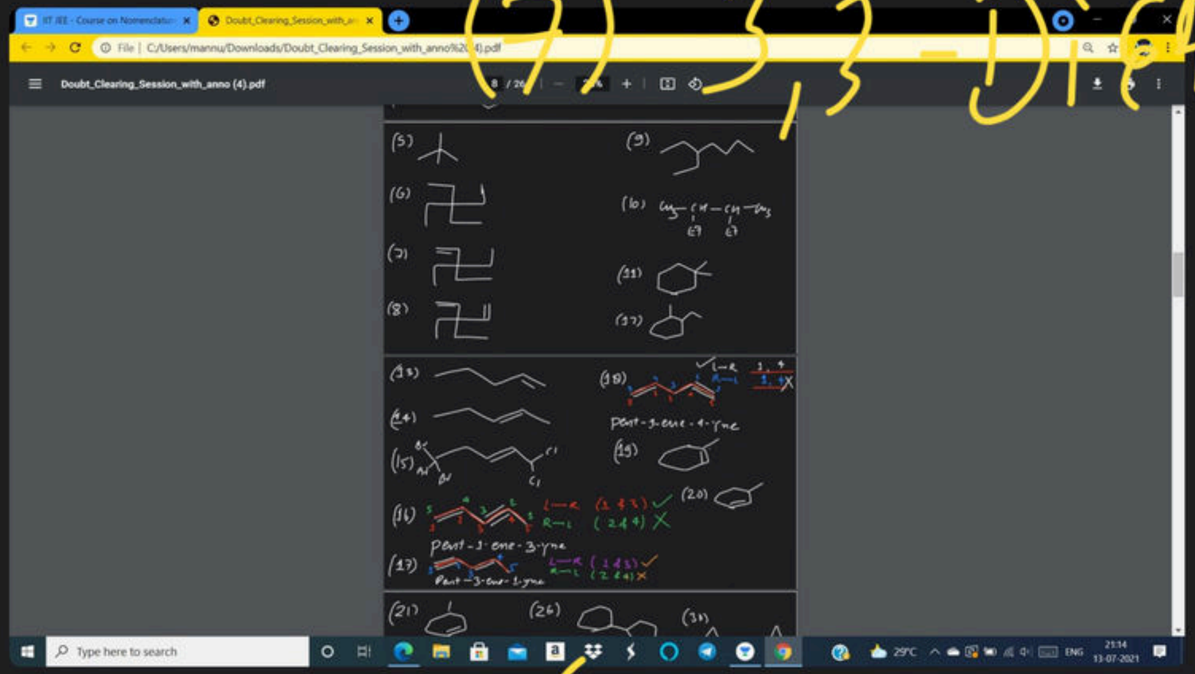
SURENDRA K MISHRA • Lesson 13 • July 13, 2021

Question
from MANOWAR

(5) 2,2-Dimethyl Propane

(6) 3,3-Diethyl Pentane

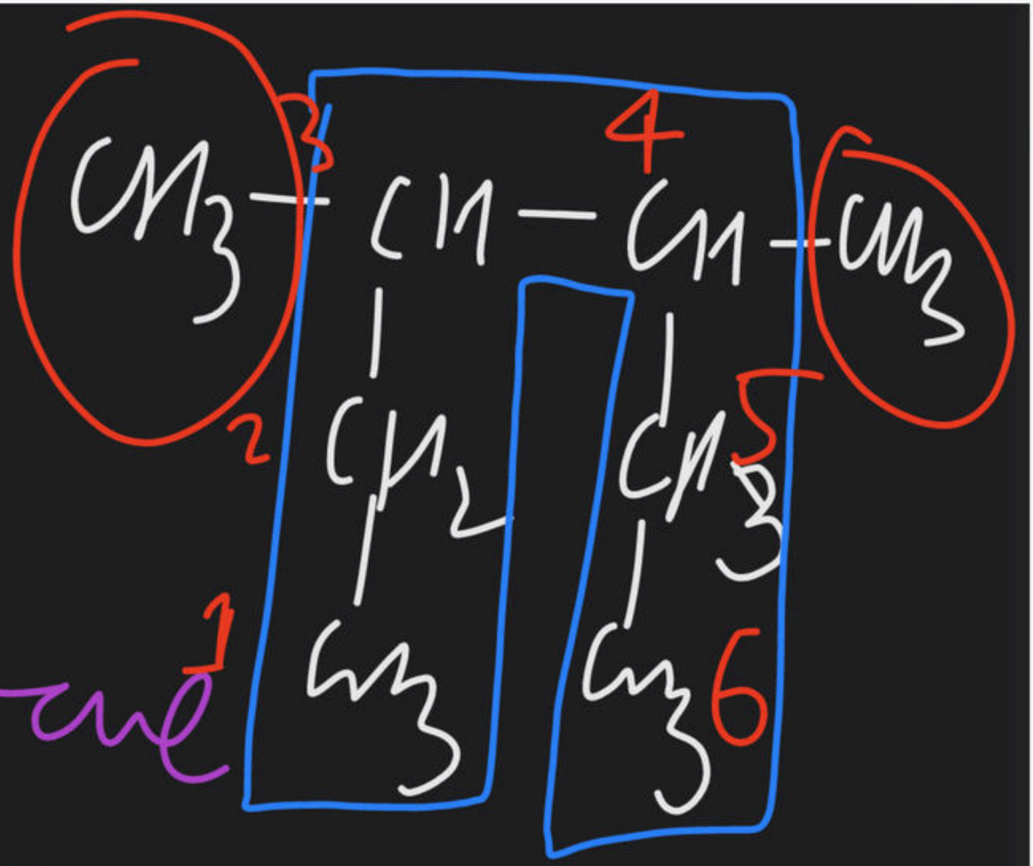
(7) 3,3-Diethyl Pent-1-ene



(8) 3,3-Diethylpenta-1,4-diene

(9) 3-Ethylheptane

(10) $CH_3-\underset{\underset{Et}{|}}{CH}-\underset{\underset{Et}{|}}{CH}-CH_3$



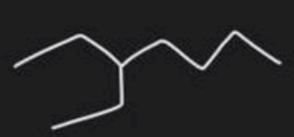
~~(A)~~ 2,3-Diethyl Butane

3,4-Dimethyl Hexane

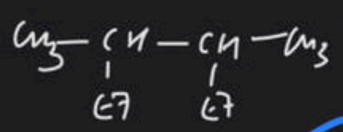
(11)

Question
from Aaditya Agarwal

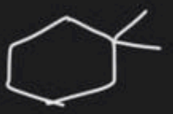
(5) 

(9) 

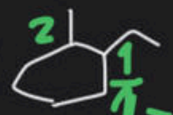
(6) 

(10) 

(7) 

(11) 

(8) 

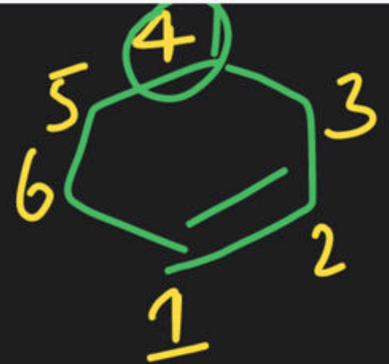
(12) 

1,1-Dimethyl Cyclohexane.

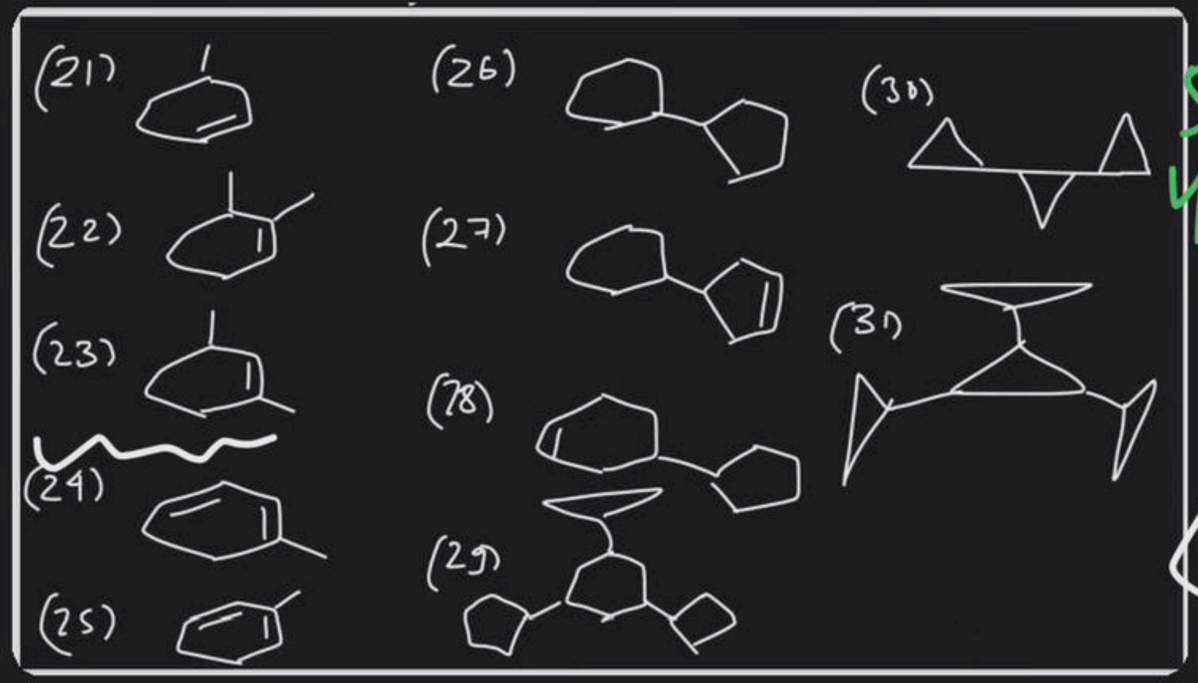
1-Ethyl-2-methyl Cyclohexane

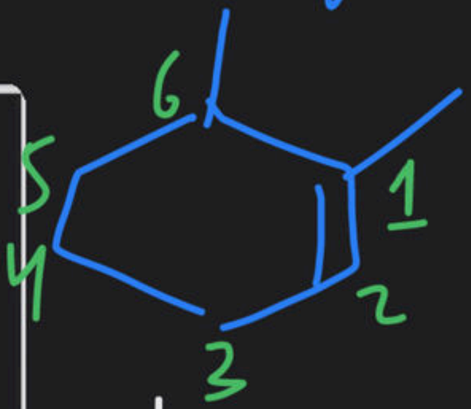
Question
from Aaditya Agarwal

(21)

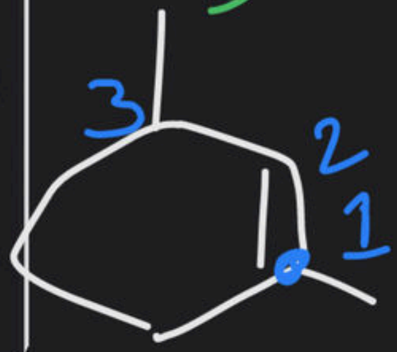


4-methyl cyclohex-1-ene



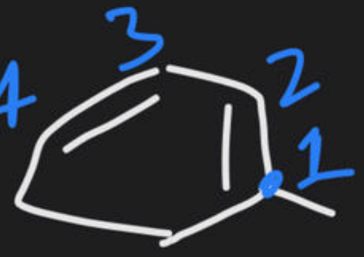


1,6-Dimethyl cyclohex-1-ene



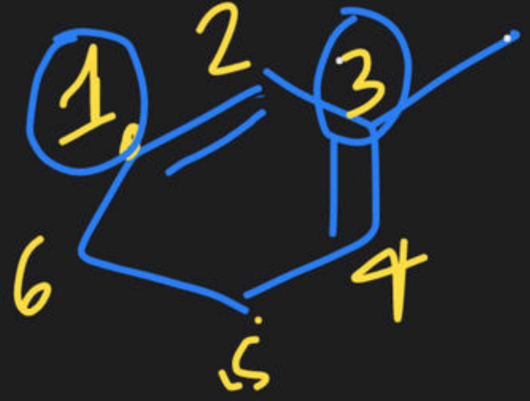
1,3-Dimethyl cyclohex-1-ene.

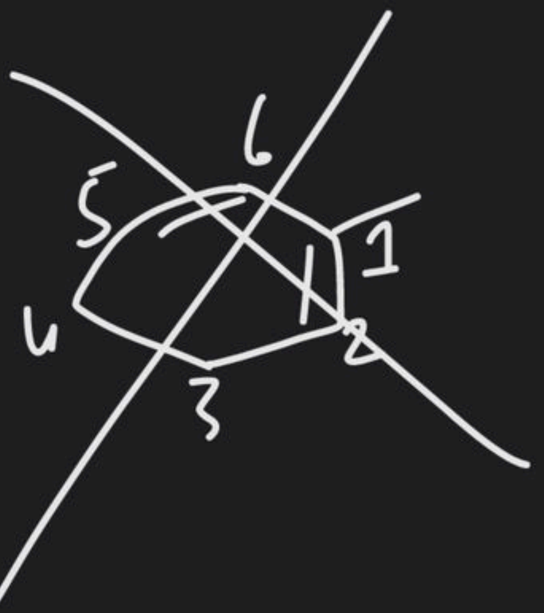
(24)



1-methyl cyclohexa-1,3-diene

(25)

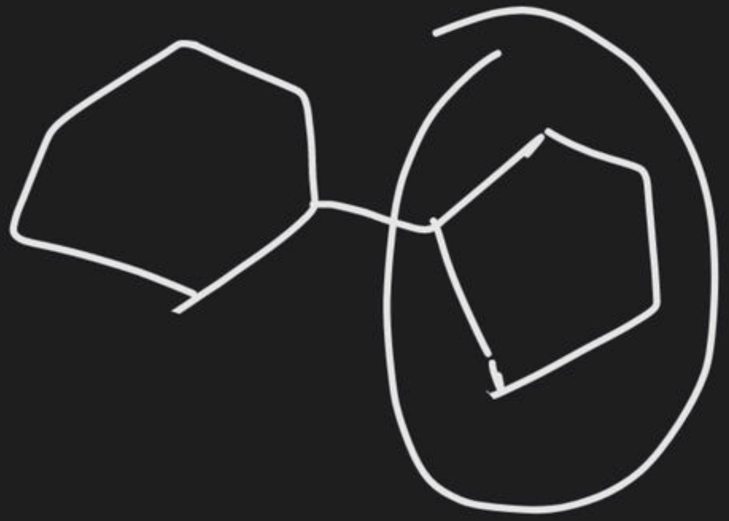




X

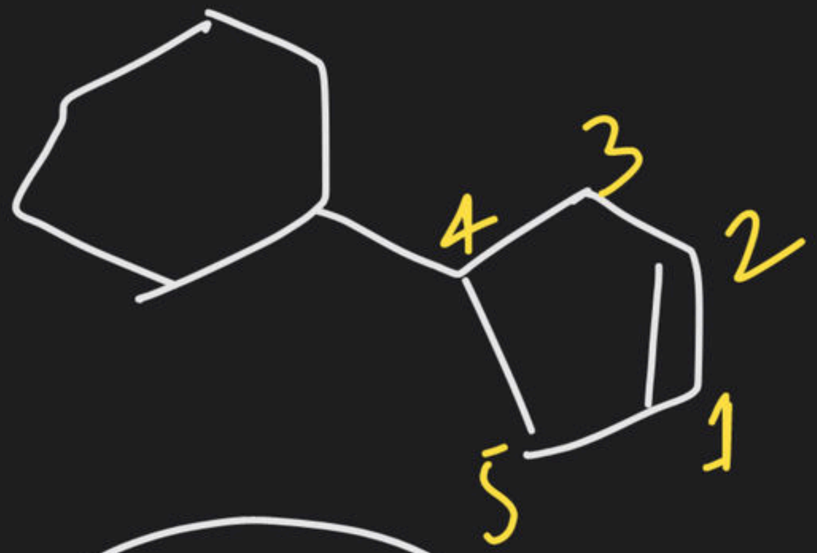
2-Methyl cyclohexa-1,3-diene

(26)



Cyclopentyl Cyclohexane

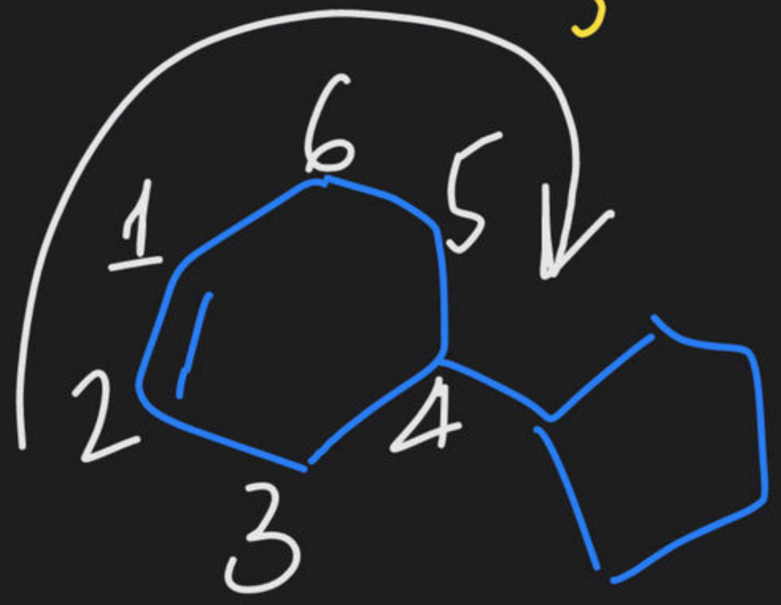
(27)



B M

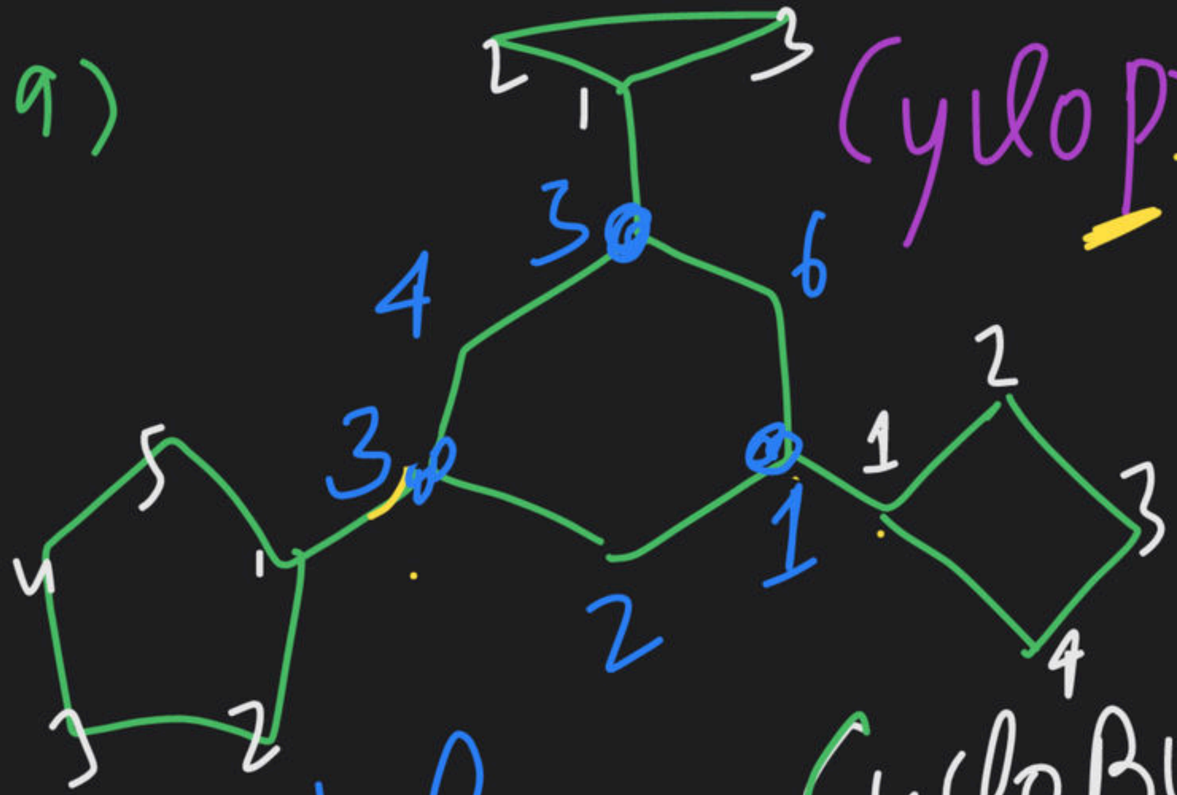
4-Cyclohexyl Cyclopent-1-ene

(28)



4-Cyclopentyl Cyclohex-1-ene

(29)

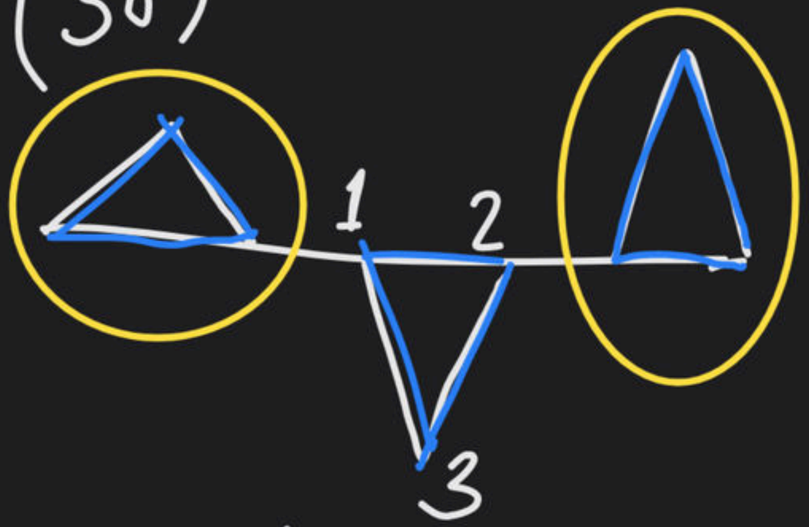


Cyclopropyl

Cyclopentyl

CycloButyl

(30)



1,2-di Cyclopropyl Cyclopropane.

1-CycloButyl-3-Cyclopentyl-5-Cyclopropyl Cyclohexane.

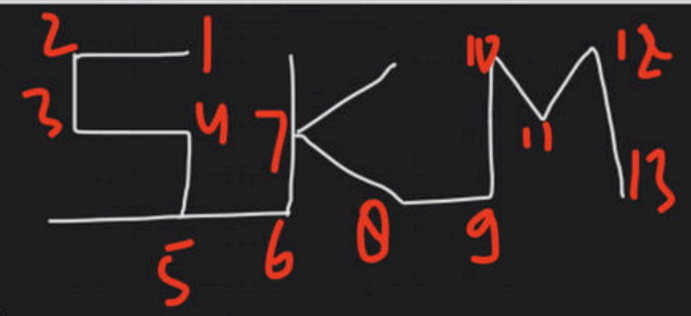
(31) 1,2,3 Tricyclopropyl glycopropane

Question
from Aaditya Agarwal

PC
4

5,7,7-Trimethyl Tridecane

(32)



(33)

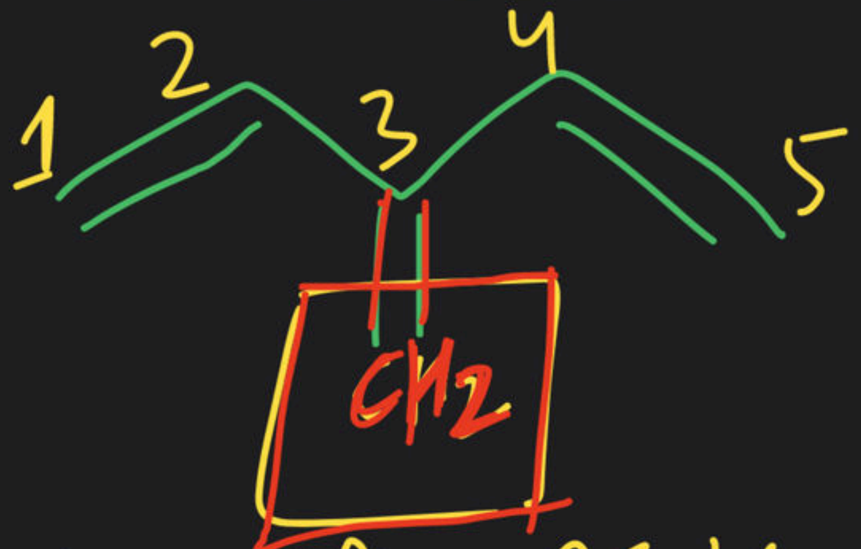
(34)

(35)

(36)

(37)

35

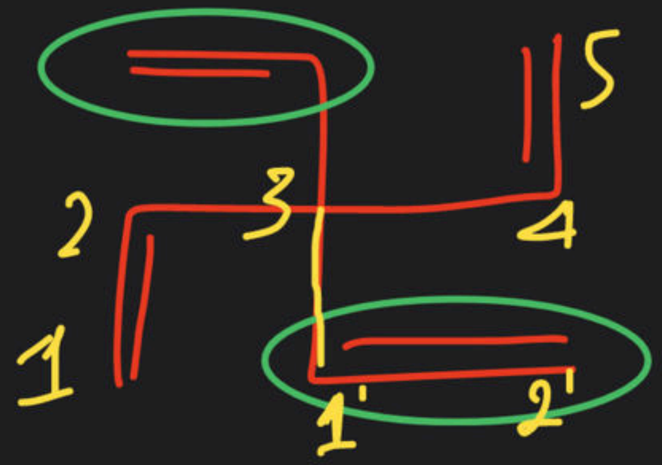


3-Methylidine Penta-1,4-diene

2-Ethyl But-1-ene

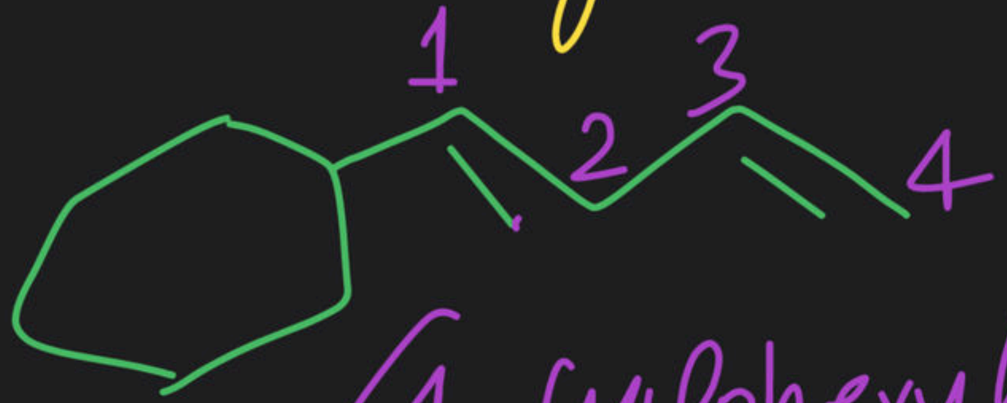
2-Ethyl Buta-1,3-diene

(36)



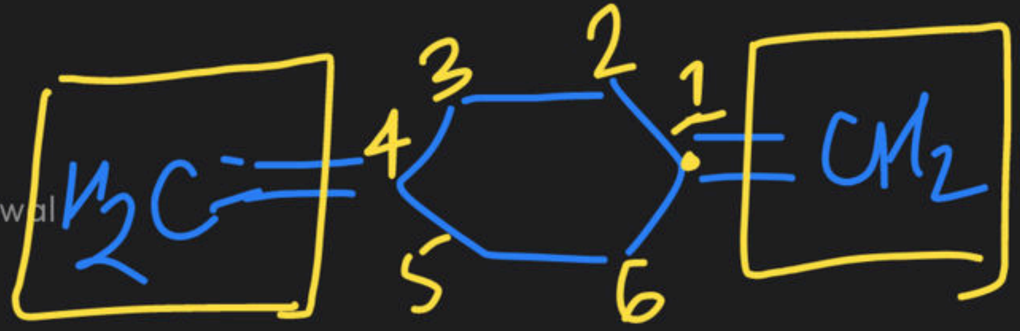
3,3-di(Eth-1'-enyl)penta-1,4-diene

(37)



(1-Cyclohexyl Buta-1,3-diene)

Question
from Aaditya Agarwal

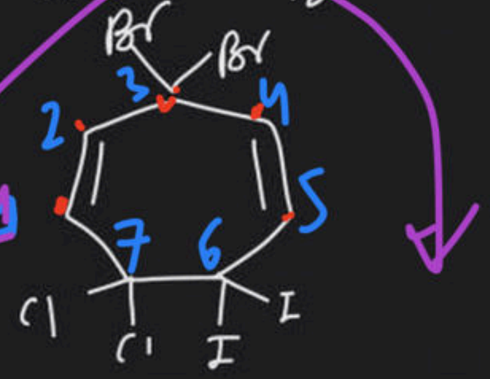


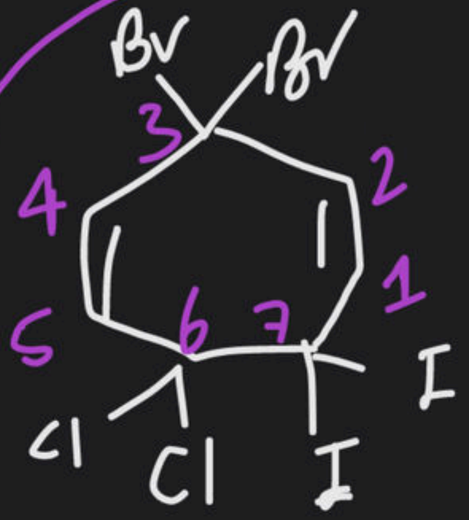
1,4-di Methylidine Cyclohexane

(38)

1,1,1-TriBromo-2,2,2 Trichloro Ethane

(39)

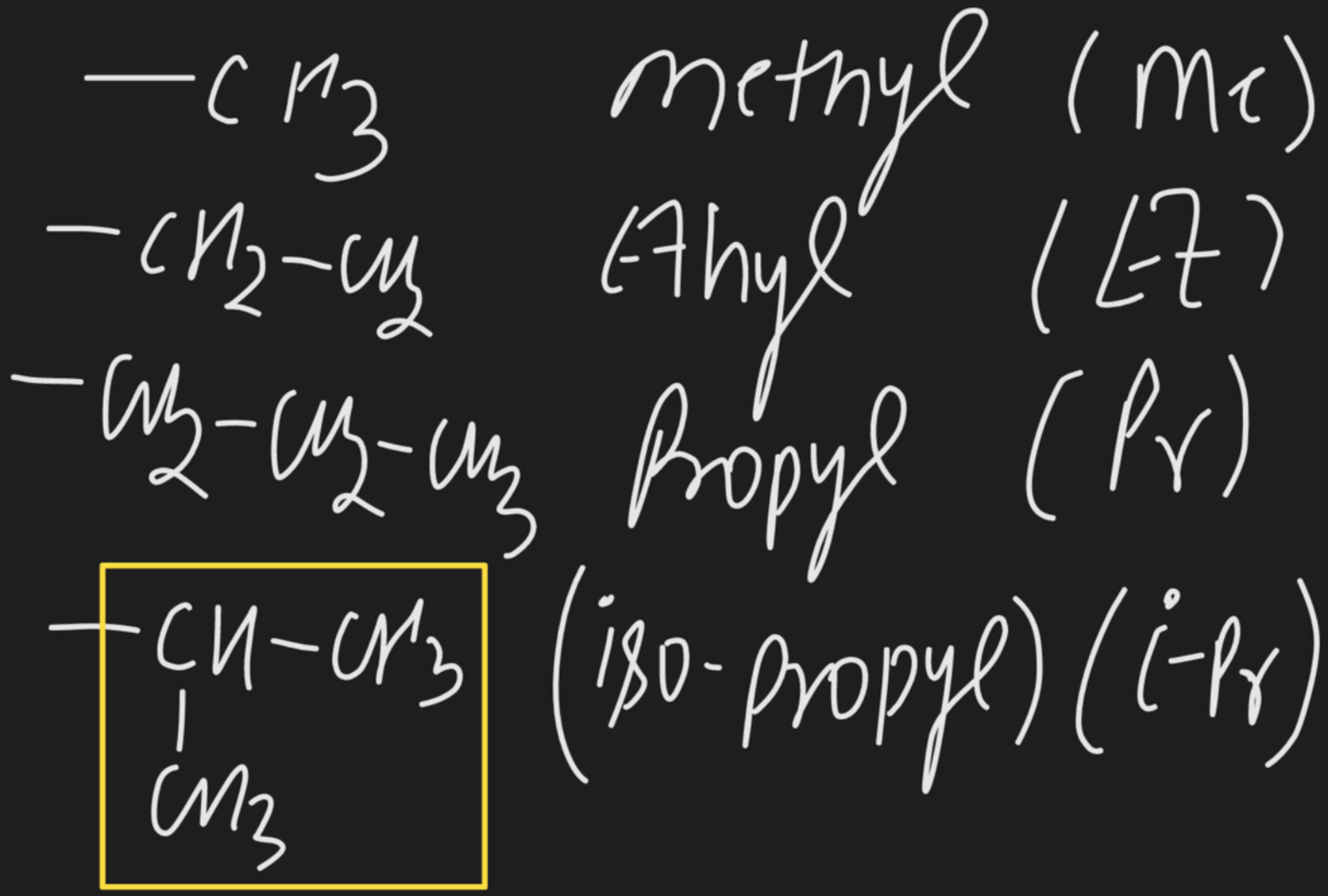


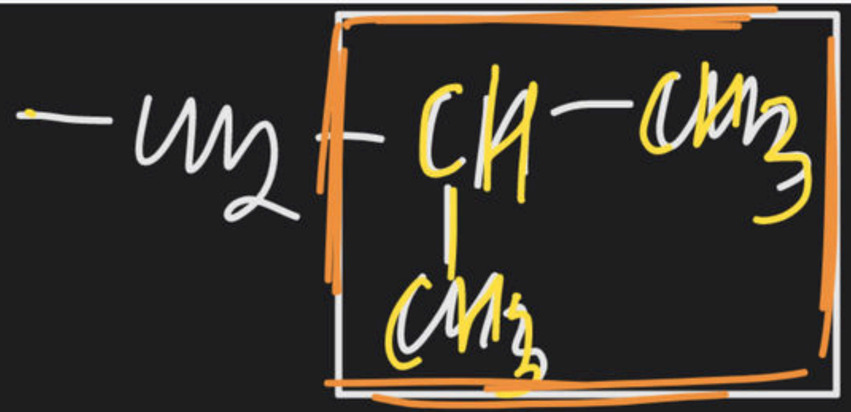


3,3-DiBromo-6,6-Dichloro-7,7-Di iodo Cyclo hepta-1,4-diene

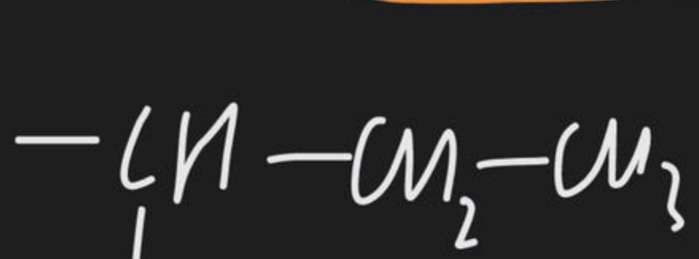
(40)

(#) Side-chain :-

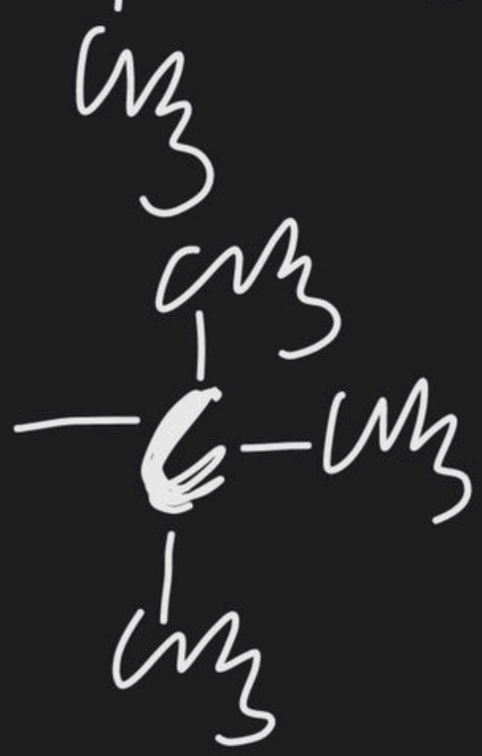

—CH3 methyl (Me)
—CH2—CH3 Ethyl (Et)
—CH2—CH2—CH3 Propyl (Pr)
—CH—CH3
CH3
(iso-propyl) (i-Pr)



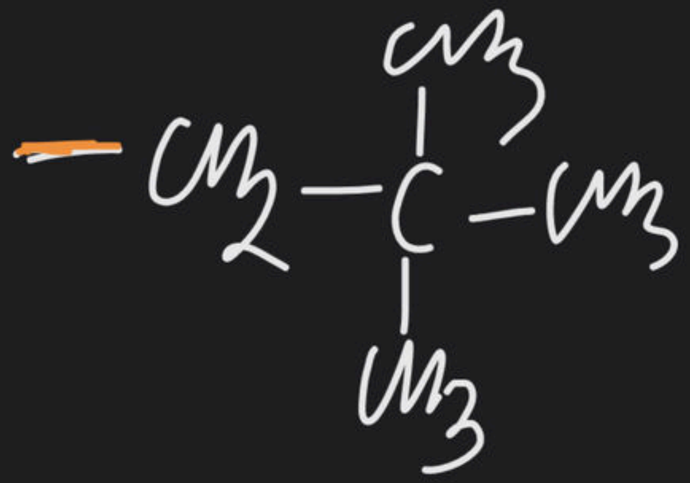
iso-Butyl (i-Bu)



sec-Butyl (sec-Bu)



tertiary Butyl (t-Bu)
(tert-Bu)



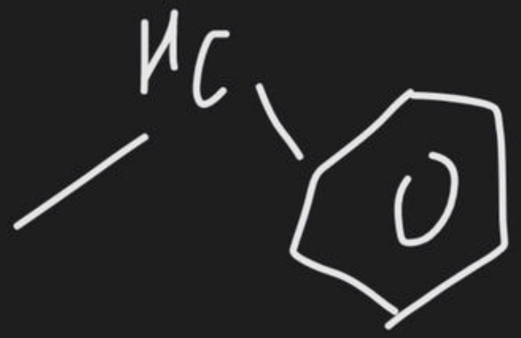
(Neopentyl)

$-CH=CH_2$ (Vinyl) (Ethenyl)

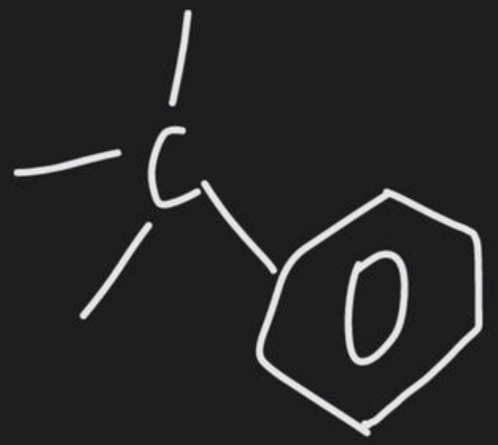
$-CH_2-CH=CH_2$ (Allyl) (Prop-2-enyl)

(Phenyl)

(Benzyl)

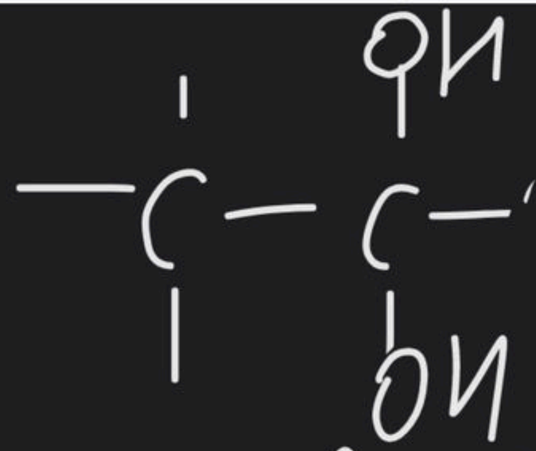


(Benzal)



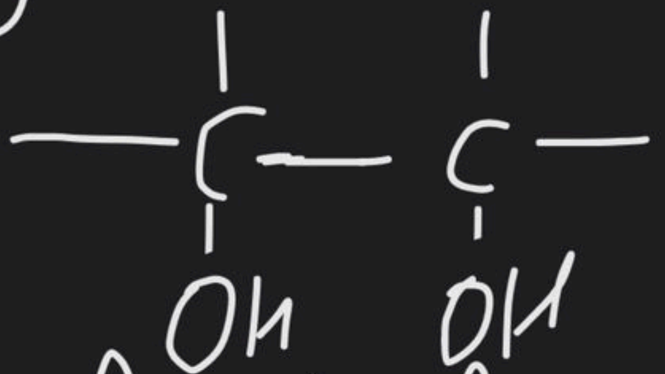
(Benzo)

#



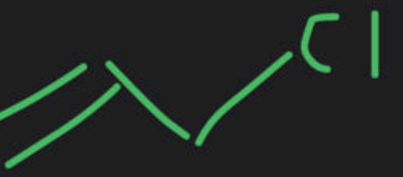
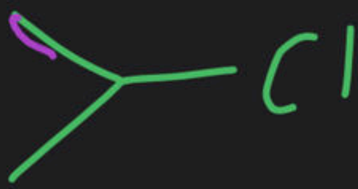
geminal-diol
(gem-diol)

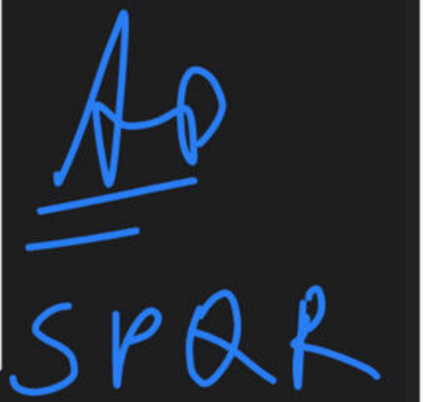
#



vicinal-diol
(vic-diol)

(61)

S	(A) Benzyl chloride	(P) 
P	(B) Vinyl chloride	(Q) 
Q	(C) Allyl chloride	(R) 
R	(D) isopropyl chloride	(S) 



SPQR

(62) Draw str. of

(a) isopropyl alcohol

(b) iso-Butanol

(c) tertiary Butanol

(d) Neopentyl chloride

(e) Sec. Butyl Bromide

write IUPAC name of compounds obtained on joining.

(63) isopropyl & isobutyl

(64) isopropyl & sec. Butyl

(65) isopropyl & tert. Butyl

(66) isopropyl & neopentyl

(67) isopropyl & vinyl

(68) n & Allyl

(69) isoButyl & sec.Butyl

(70) n & neopentyl

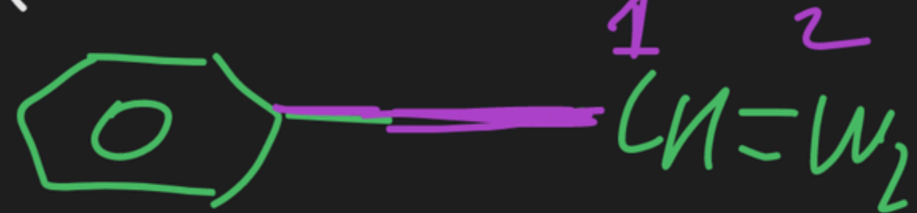
(71) n & t-Butyl

(72) n & vinyl

(73) n & Allyl

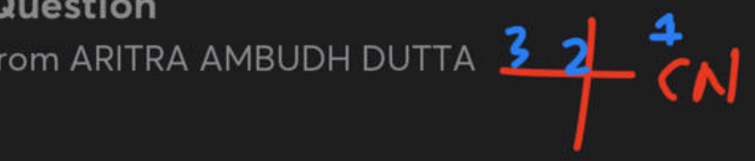
(74) Allyl & vinyl

(75) Phenyl & vinyl

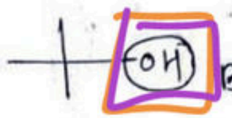


(1-Phenyl Ethene)

Question
from ARITRA AMBUDH DUTTA



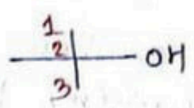
Q



F>M>S ⇒ First choose max no. of Boss, then Max no of M.Bond then max. no of side chain.

[LONGEST word was not introduced here at Defⁿ of Rule]

You gave Answer

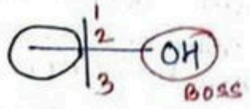
(A) 

But

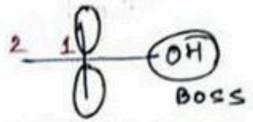
—OH (Boss)

No Multiple bond.

Now comes Side chain (in order F>M>S) (max no. of)



3 C Principal chain
1 side chain
(A)



2 C Principle chain
2 side chain
(B)

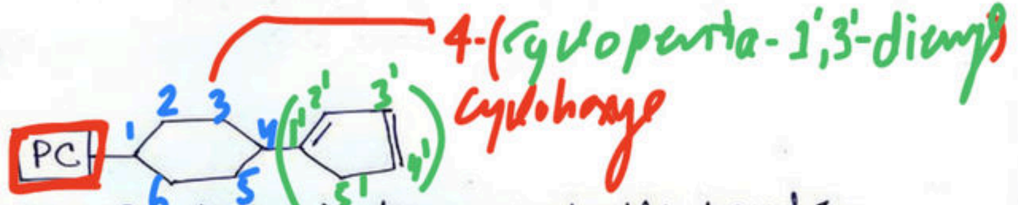
Acwrding to F>M>(S)
no. of side chain should be maximised then. why not? (B) ?

Question

from ARITRA AMBUDH DUTTA

Doubt

Q

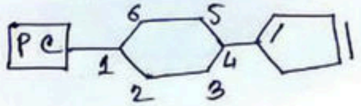


in this Q, right ring has 2 double bonds.

So as per this, if was part of P. chain, then Right Ring will be main chain.

BUT, from Rule 1, S-C attached with PC gets 1 no. And Only one Cyclic OR Acyclic Segment can be Principal chain PC at a time.

∴ So here numbering would be like



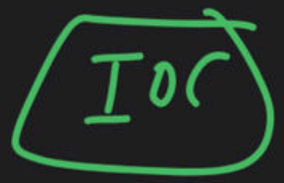
due to Rule 1
NOT due to F>M>S Rule

Am I right?

Question

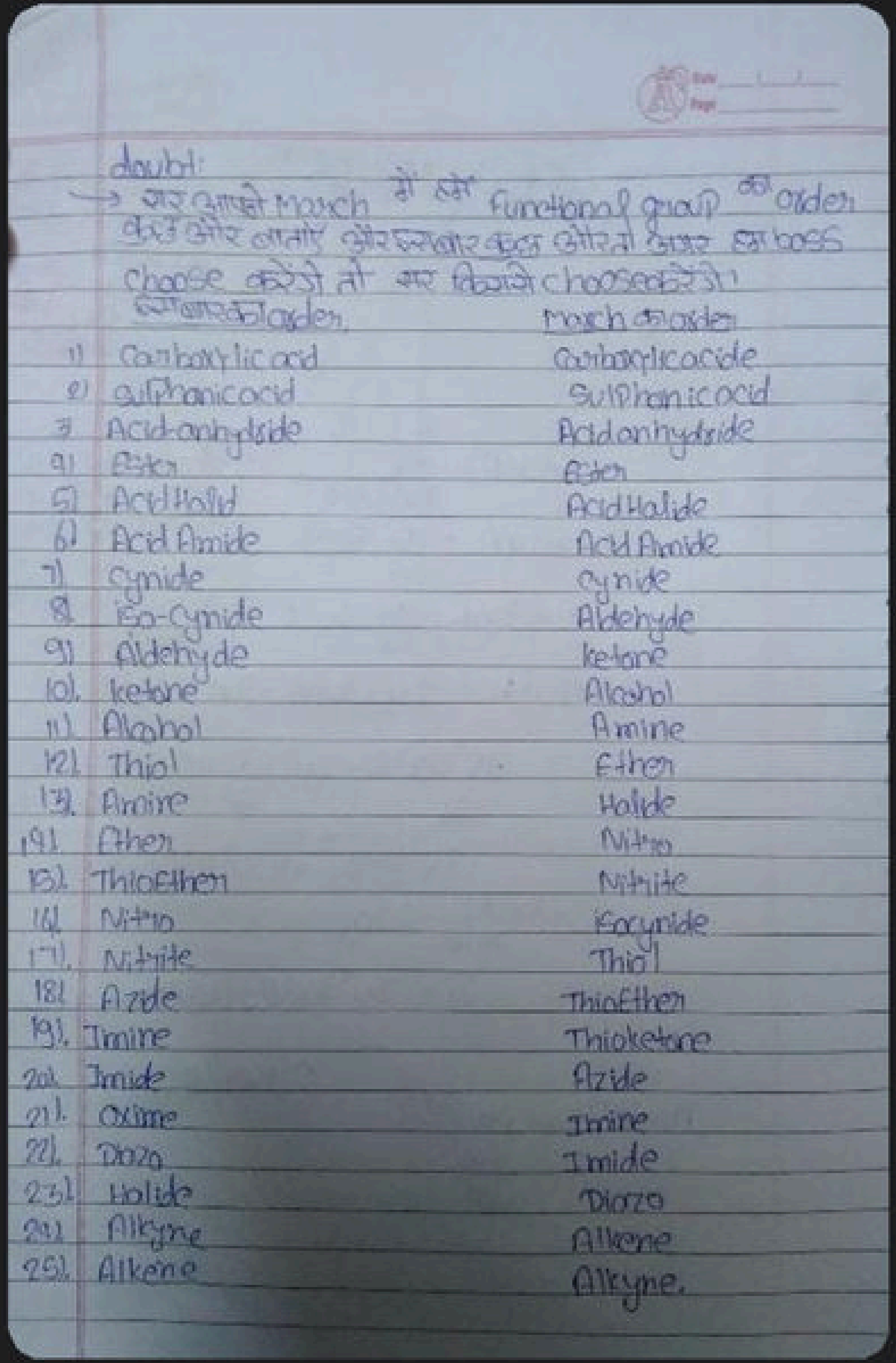
from Shivam Kumar

C four bond c kyu nahi exist hota hai sir



Question

from Srishti Vitika



doubt:

→ सर आपके March में जो Functional group का order [illegible] choose करेंगे तो सर किसको choose करेंगे।

[illegible] order	March का order
1) Carboxylic acid	Carboxylic acide
2) sulphonic acid	sulphonic acid
3) Acid-anhydride	Acid anhydride
4) Ester	Ester
5) Acid Halid	Acid Halide
6) Acid Amide	Acid Amide
7) Cynide	Cynide
8) Iso-Cynide	Aldehyde
9) Aldehyde	ketone
10). ketone	Alcohol
11) Alcohol	Amine
12). Thiol	Ether
13). Amine	Halide
14). Ether	Nitro
15). ThioEther	Nitrite
16). Nitro	Isocynide
17). Nitrite	Thiol
18). Azide	ThioEther
19). Imine	Thioketone
20). Imide	Azide
21). Oxime	Imine
22). Diazo	Imide
23). Halide	Diazo
24). Alkyne	Alkene
25). Alkene	Alkyne.