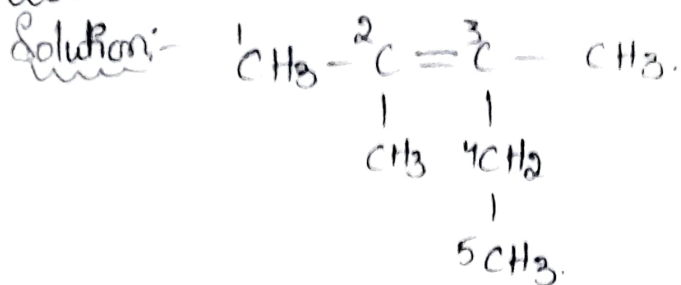
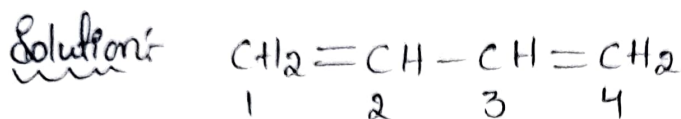


Q5) Ans:- 4.



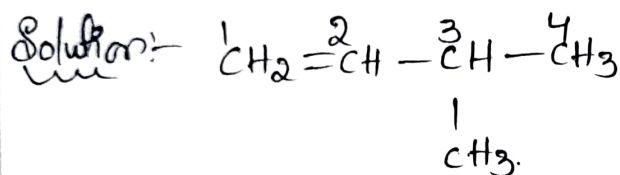
2,3-dimethyl pent-2-ene

Q6) Ans:- 2.



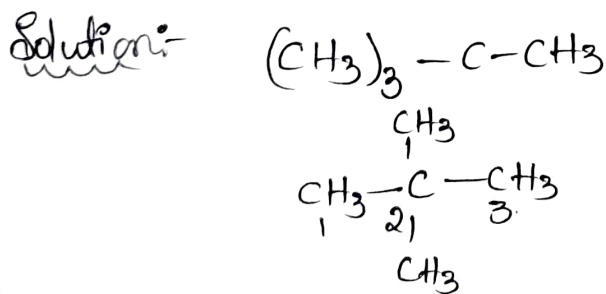
1,3-Butadiene

Q7) Ans:- 2



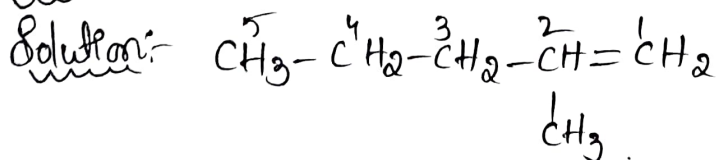
3-methyl But-1-ene

Q8) Ans:- 4



2,2-dimethylpropane

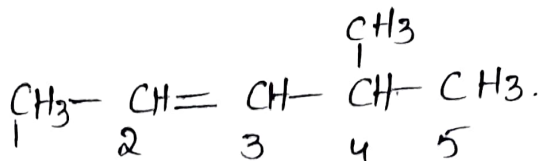
Q9) Ans:- 1



2-methyl pent-1-ene

Q10) Ans:- 2

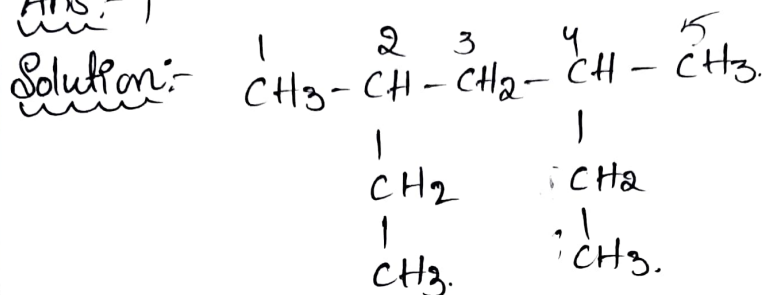
Solution:-



4-methylpentene-2

Q11) Ans:- 1

Solution:-



2,4-diethyl pentane

Advanced Level Questions

Q12) Ans:- 1, 2, 3, 4.

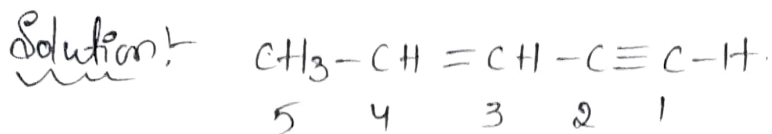
Solution:- Saturated hydrocarbons are called alkanes or paraffins which contains only single bond with general formula C_nH_{2n+2} .

→ Hydrocarbons contains double or triple bond are called unsaturated hydrocarbons

Q13) Ans:- 1

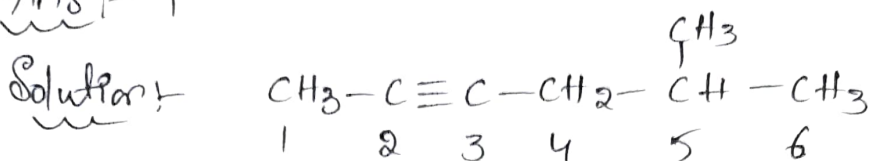
Solution:- The lowest locant rule is a fundamental principle in IUPAC nomenclature which ensures that the substituents get the smallest possible numbers.

Q14) Ans:- 1



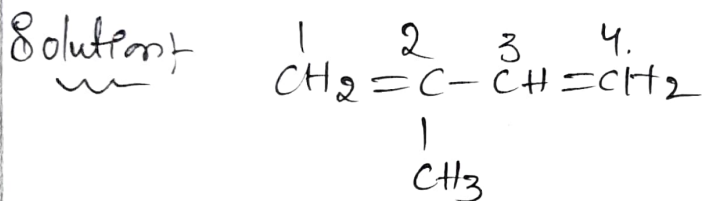
pent-3-en-1-yne.

Q15) Ans:- 1



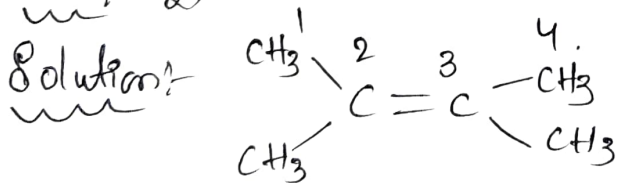
5-methyl-2-Hexyne.

Q16) Ans:- 2



2-Methyl Buta-1,3-diene

Q17) Ans:- 2



2,3-dimethyl but-2-ene

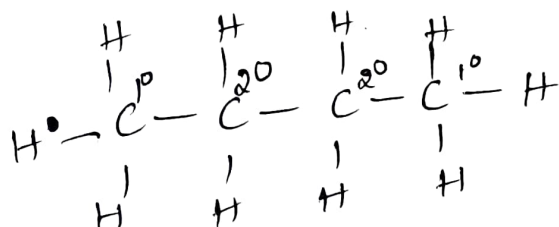
Integer Type

Q18) Ans:- 1

Solution:- The difference in hydrogen count
blw an alkane and an alkyl group is
one

Q19) Ans:- 2

Solution:- n-Butane $\rightarrow C_4H_{10}$



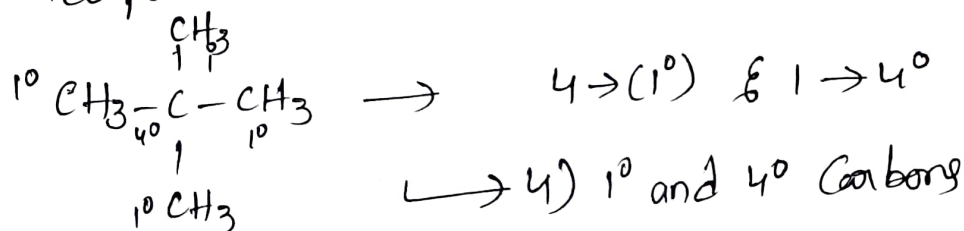
Primary (1°) Carbon means a carbon attached to only one other carbon

Matrix Matching

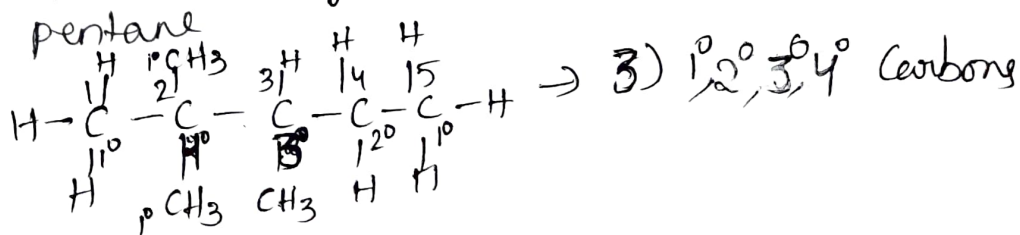
Q20) Ans:- A) 4 B) 3 C) 2 D) 1

Solution:-

A) Neo pentane



B) 2,2,3-Trimethyl

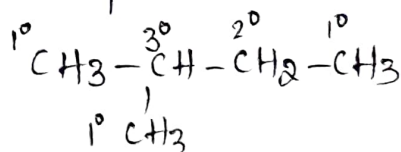


C) Cyclo hexane

$\rightarrow 2) \text{ All are } 2^\circ \text{ Carbons}$

D) Iso pentane

$\rightarrow 1) 1^\circ, 2^\circ, 3^\circ \text{ Carbons}$



Learners Task

Q1) Ans:- 1

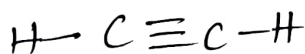
Solution:- When a hydrogen atom removed from an alkene, the remaining structure is called an alkenyl group.

Q2) Ans:- 2

Solution:- Alkenes are unsaturated hydrocarbons that contain at least one carbon-carbon double bond ($C=C$)

Q3) Ans:- D.

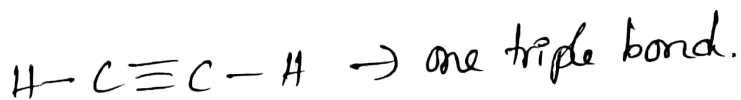
Solution:- Acetylene $\rightarrow C_2H_2$



IUPAC name Ethyne

Q4) Ans:- C.

Solution:- C_2H_2



Q5) Ans:- B.

Solution:- General formula of alkyne $\rightarrow C_nH_{2n-2}$.

Q6) Ans:- D.

Solution:- Alkyne $\rightarrow C_nH_{2n-2}$

Alkane $\rightarrow C_nH_{2n+2}$

Alkene $\rightarrow C_nH_{2n}$

Alkynes have 4 'H' atoms less than alkanes & 2 'H' atoms less than alkenes.

Q7) Ans: C

Solution: General formula of Alkanes $\rightarrow C_nH_{2n+2}$

Q8) Ans: 4

Solution: Saturated hydrocarbons $\rightarrow$ Primary suffix is 'ane'
For unsaturated hydrocarbons $\rightarrow$ 'ene' or 'yne'

Q9) Ans: 4

Solution: Alkane $\rightarrow$ 'ane'

Alkene $\rightarrow$ 'ene'

Alkyne $\rightarrow$ 'yne'

Q10) Ans: 2, 3

Solution: The primary suffix for unsaturated hydrocarbons, indicating the presence of double or triple bonds is -ene for double bonds and -yne for triple bond

JEE Main Level Questions

Q11) Ans: B

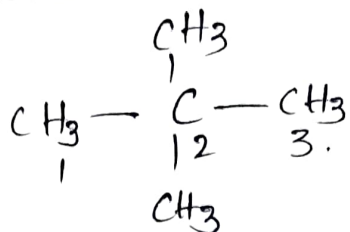
Solution: Alkene contains at least one carbon-carbon double bond ($C=C$)

Q12) Ans: C

Solution: $\text{CH}_3 - \text{CH}_2 - \text{CH}_2 - \text{CH}_3$
 1 2 3 4.
 Butane

Q19) Ans:- 3.

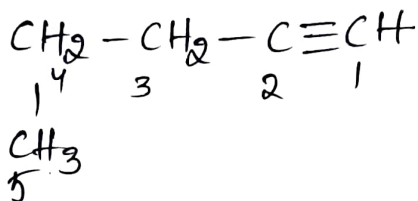
Solution:- Neopentane (C_5H_{12}) has a branched structure



2,2-dimethyl propane

Q20) Ans:- A

Solution:-



pent-1-yne $\rightarrow$ pentyne

Advanced Level Questions

Q21) Ans:- 1, 2, 3, 4.

Solution:-

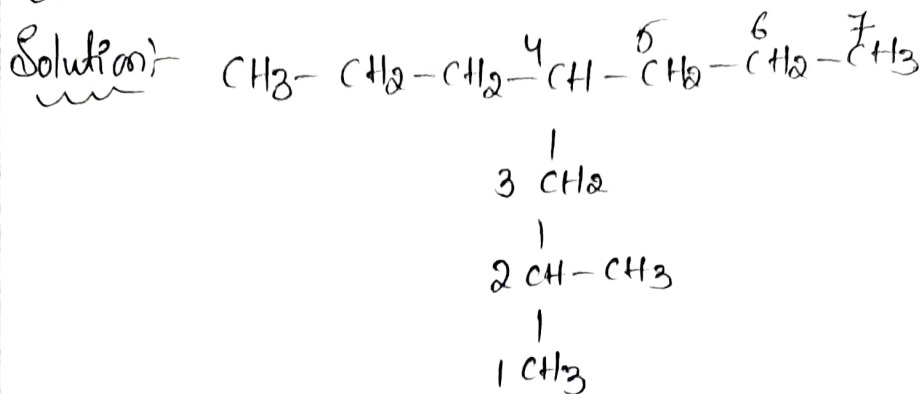
$\rightarrow$ Alicyclic compound is a saturated cyclic hydrocarbon

$\rightarrow$ Aromatic compounds are unsaturated cyclic hydrocarbons

$\rightarrow$ Ethyne (C_2H_2) is commonly known as Acetylene

$\rightarrow$ Propyne ($CH_3-C \equiv CH$) is also called methyl Acetylene

Q22) Ans: 1

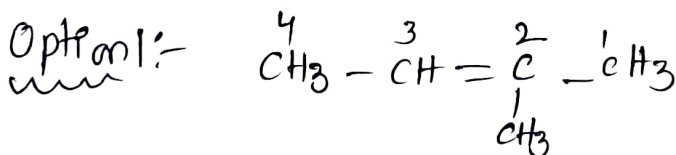
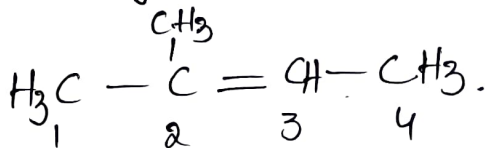


2-methyl-4-propyl heptane

Select the longest carbon chain which have more branched chain

Q23) Ans: 1

Solution: 2-methyl-2-butene



Integer Type

Q24) Ans: 6.

Solution: Hex $\rightarrow$ 6.

Q25) Ans: 1) q ii) r iii) s iv) p.

Solution:

i) CH_4	$\rightarrow$	q) Methyl
ii) C_2H_6	$\rightarrow$	r) Ethyl
iii) C_3H_8	$\rightarrow$	s) Propyl
iv) C_4H_{10}	$\rightarrow$	p) Butyl