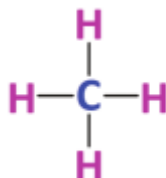


## Nomenclature of organic compounds and isomerism

### Nomenclature of Unbranched Alkanes

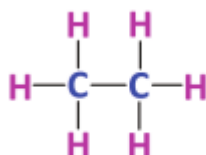
Eg:1



Molecular formulae : CH<sub>4</sub>

**IUPAC Name: Methane**

Eg: 2



Molecular formulae : C<sub>2</sub>H<sub>6</sub>

**IUPAC Name: Ethane**

Word roots are selected based on the number of carbon atoms.

C<sub>1</sub> = Meth

C<sub>2</sub> = Eth

C<sub>3</sub> = Prop

C<sub>4</sub> = But

C<sub>5</sub> = Pent

C<sub>6</sub> = Hex

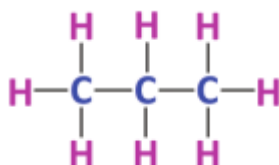
C<sub>7</sub> = Hept

C<sub>8</sub> = Oct

C<sub>9</sub> = Non

C<sub>10</sub> = Dec

Eg:3



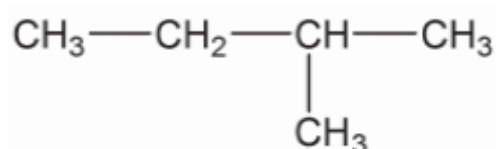
Molecular formulae :  $C_3H_8$

**IUPAC Name: Propane**

## Nomenclature of Branched Hydrocarbons

Let us find the IUPAC name of the following compounds.

a)



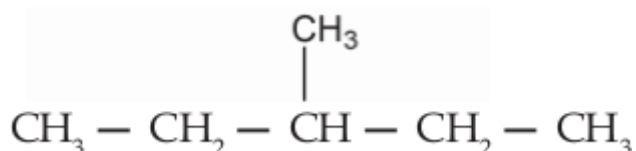
Number of carbon atoms in the main chain: 4

Name of the alkyl radical coming as branch: Methyl

Position of the branch: 2

IUPAC name = **2-Methyl butane**

b)



Number of carbon atoms in the main chain: 5

Name of the alkyl radical coming as branch: Methyl

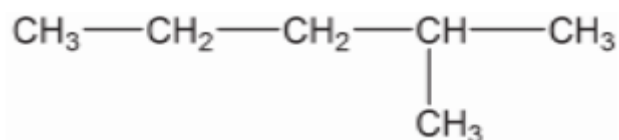
Position of the branch: 3

IUPAC name = **3-Methyl pentane**

**Questions**

1. Find the IUPAC names of the following compounds

a)



b)  $\text{CH}_3\text{-CH}_2\text{-CH}_2\text{-CH}_2\text{-CH}_2\text{-CH}_2\text{-CH}_3$

2. Draw the structure of following compounds

a) Heptane

b) 3-Methyl Octane

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