C11 - 5.1 - Alkane WS

Draw the following alkanes Full and Condensed Structure.

Propane:

Butane:

Octane:

Methane:

Name the following alkanes.

$$CH_3 - CH_2 - CH_3$$

$$H \longrightarrow \begin{matrix} H & & H \\ & & \\ C & \longrightarrow C \end{matrix} \longrightarrow H$$

$$H \longrightarrow \begin{matrix} H & H & H & H \\ \hline \\ C & -C & -C & -C & -C \\ \hline \\ H & H & H & H \end{matrix} \xrightarrow{H} \begin{matrix} H \\ \hline \\ H \end{matrix}$$

 CH_4

$$CH_3 - CH_2 - CH_2 - CH_2 - CH_2 - CH_3$$

Draw the following Ethyl Condensed Structure.

3 - methylpentane

2 – ethylbutane

2,3 dimethylbutane

2,3,4 - trimethylheptane

2,- Methyl - 3 ethylhexane

Name the following Ethyls.

$$CH_3-CH-CH_3\\ |\\ CH_3$$

$$CH_3 \\ | \\ CH_3 - CH_2 - CH_2 - CH_2 - CH_2 - CH_3$$

$$CH_{2}-CH_{2}-CH_{3}\\ |\\ CH_{3}-CH_{2}-CH_{2}-CH_{2}-CH_{2}-CH_{2}-CH_{3}\\ |\\ CH_{2}-CH_{3}$$

$$CH_3$$
 | $CH_3 - CH_2 - CH_2 - CH_3$ | CH_3

$$CH_3$$
 | $CH_3 - CH_2 - CH_2 - CH_3$ | $CH_2 - CH_2 - CH_3$

$$CH_2 - CH_3$$
 | $CH_3 - CH_2 - CH_2 - CH_3 - CH_3 - CH_3 - CH_3$

C11 - 5.2 - Cycloalkanes WS

Draw the following Cycloalkanes Condensed Structure.

Cyclobutane

Cyclopropane

Diethyl Cyclopropane

Ethyl 2 - Methyl Cyclobutane

Name the following Cycloalkanes.

$$\begin{array}{c|c} H_2C-CH-CH_3 \\ & | & | \\ H_2C-CH-CH_2-CH_3 \end{array}$$

$$H_{2}C \qquad CH - CH_{2}$$

$$H_{2}C - CH - CH_{2}$$

$$CH - CH_2$$

$$H_2C \quad CH - CH_3$$

$$H_2C \quad CH_2$$

$$CH - CH_2 - CH_3 - CH_3$$

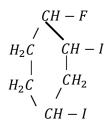
C11 - 5.2 - Alkyl Halides WS

Draw the following alkyl halides Condensed Structure.

$$CH_3 - CH - CH_2 - CH_2 - CH_3$$

$$| F$$

$$CH_3 - CH_2 - CH_2 - I$$



$$CH_3 \\ | \\ CH_3 - CH - CH - CH_2 - CH_3 \\ | \\ I$$

Name the following alkyl halides.

$$2-Chloropentane$$

$$2 - Flouro - 3,4,5 - Trichlorobutane$$

$$1-Iodo-2,3\ dichlorocyclobutane$$

C11 - 5.3 - Alkene= Bonds WS

Draw the following alkenes Condensed Structure.

2 - Butene

Pentene

3,3 Diethyl 2 - Propene

3 Ethyl - 4 Methyl - 2 - Hexene

Name the following Full and Condensed alkanes.

$$CH_2 = CH - CH_2 - CH_3$$

$$CH_3 - CH_2 = CH_2 - CH_2 - CH_3$$

$$CH_3$$
 $|$
 CH_3 $CH-CH_3$ $|$
 $CH-CH_3$

$$CH_3$$
 H $C = C$ CH_3 CH_3

$$CH - CH_3$$

$$CH_2 - CH_2$$

$$CH_3 \qquad CH_2 - CH_3$$

$$C = C$$

$$H$$

$$CH_{3}$$
 CH_{3} $|$ $|$ CH_{3} $CH_{2} - CH_{2} - CH_{2} - CH_{3}$ $|$ $C = C$ $|$ H $|$ $|$ $|$

C11 - 5.3 - Alkyne \equiv Bonds WS

Draw the following alkynes Condensed Structure.

$$CH_3 - C \equiv C - CH_3$$

$$CH_3 - C \equiv C - CH - CH_2$$

$$CH_{3}$$

$$|$$

$$CH_{3} - C \equiv C - CH - CH_{2} - CH_{2} - CH_{3}$$

$$|$$

$$CH_{3}$$

Name the following alkynes.

$$3,3 - Diethyl - 4 - methyl - 2 - Propene$$

$$3,4 - diethyl - 2 - Cyclopentene$$

$$3 - Ethyl - 2 - Methyl - 1 - Hexene$$