

Answer key; sample quiz appears on the Chemistry 222 website. Answers appear in **bold**.

Fill in the name or formula for the following open-chain hydrocarbons (no cycloalkanes):

1.  $C_3H_8$                       **propane**

2.  $C_5H_8$                       **pentyne**

3.  $C_2H_4$                       **ethene**

4.  $C_7H_{16}$                      **heptane**

5.  $C_4H_{10}$                      **butane**

6.  $C_8H_{16}$                      **octene**

7.  $C_9H_{16}$                      **nonyne**

8.  $C_{10}H_{22}$                     **decane**

9.  **$C_4H_8$**                     butene

10.  **$C_8H_{14}$**                    octyne

11.  **$C_3H_6$**                    propene

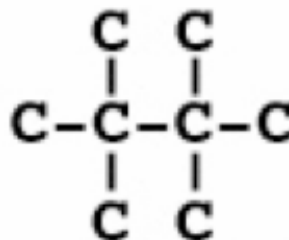
12.  **$C_5H_{12}$**                    pentane

13.  **$C_9H_{18}$**                    nonene

14.  **$C_2H_2$**                    ethyne

15.  **$C_6H_{10}$**                    hexyne

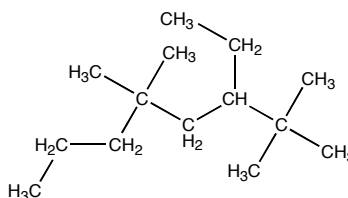
22. Name the following molecule:



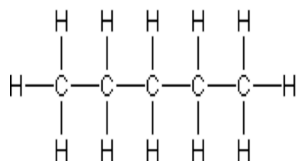
**2,2,3,3-tetramethylbutane**

23. Draw the molecule:

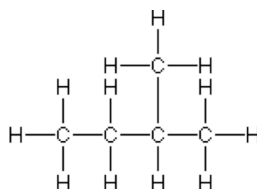
3-ethyl-2,2,5,5-tetramethyloctane



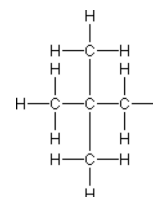
16. - 21. Draw and name the three isomers of pentane:



***n*-pentane**



**2-methylbutane**



**2,2-dimethylpropane**