## Power Point Study-02-1 Functional Groups-Organic Structures/ Name:

1) What is the empirical formula for a compound of molecular formula is  $C_6H_{12}$ ?

2) Give the line structure of the following compounds.

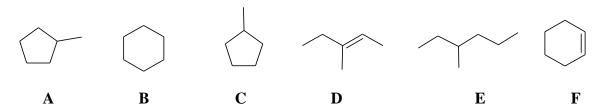
CH<sub>3</sub>CHOHCHCH<sub>3</sub>CH<sub>3</sub>

(CH<sub>3</sub>)<sub>2</sub>CClCH<sub>2</sub>CHCH<sub>2</sub>

3) Give the condensed structure of the following compounds.

4) Write the condensed and the line structure of the following expanded structures.

5) Answer the following questions using the following structures.



- a) Which of the following compounds are exactly the same?
- b) Which compounds have the same molecular formula? \_\_\_\_\_
- c) Which compound has the lowest number of hydrogens? \_\_\_\_\_
- d) Which compound has the highest number of hydrogens?
- 6) Circle and identify the functional groups in the following compounds.
  - a)  $H_3C$ NH
    COOH
    O
    OH
    OOH
- 7) The compound shown below is a synthetic estrogen. It is marketed as an oral contraceptive under the name Enovid. The functional groups present in it are:
  - A) Ether, alcohol, alkyne.
  - B) Aldehyde, alkene, alkyne, alcohol.
  - C) Alcohol, carboxylic acid, alkene, alkyne.
  - D) Ketone, alkene, alcohol, alkyne.
  - E) Amine, alkene, ether, alkyne.

$$0H$$

$$C = CH$$