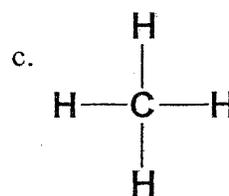
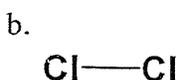
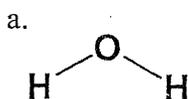


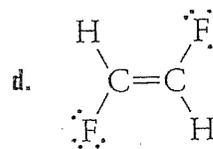
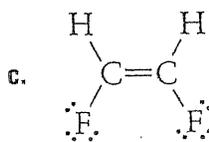
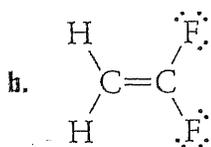
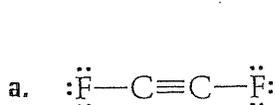
Due Dec. 15, 2016, 1:45 pm (13:45)

Special Instructions: For this quiz, allowed resources to use for completing this quiz can be the book (or other books found in a library or bookstore), any of the PowerPoints or other materials posted on the class cougar courses site, or from publicly available electronic resources such as google. All work must be the student's own work. Students may NOT discuss, help, or compare answers among themselves or with anyone else (except Dr G) by any means (written, verbal, electronic, or other).

- Which element is the most electronegative? O Si Al Pb
- Which of the following would you expect to have the highest boiling point?
Electronegativities: C = 2.5, H = 2.1, N = 3.0, O = 3.5
 $\text{CH}_3\text{CH}_2\text{CH}_3$ $\text{CH}_3\text{CH}_2\text{OH}$ $\text{CH}_3\text{CH}_2\text{OCH}_3$ $\text{CH}_3\text{CH}_2\text{NH}_2$
- The reason you chose your answer to question 2 above is that this molecule:
 - would have the lowest intermolecular forces.
 - would have no hydrogen-bonding to hinder its entry into the gas phase.
 - would have the least ionic character.
 - would have the greatest intermolecular forces.
 - would be held in the liquid phase more loosely than the others.
- Which is more soluble in water? a. sugar b. butter c. triglycerides
- Cocoa butter would be most soluble in which of the following:
 - water
 - ethanol
 - hexane
 - salt water
- Which of the following makes up proteins?
 - amino acids
 - fatty acids
 - nucleotides
 - monosaccharides
- Fats differ from sugars in which of the following ways? (Circle all that apply.)
 - Sugars are more water soluble than fats.
 - Fats have ester bonds on a glycerol backbone while sugars contain alcohol groups.
 - Fats are more polar than sugars.
 - Fats have amide bonds on a glycerol backbone while sugars contain ester groups.
- Circle the correct end to this statement. If no intermolecular forces existed, all substances would:
 - boil at a higher temperature.
 - be bound together.
 - be in a solid state.
 - be in the gas state.
- Which molecule below is the most polar?



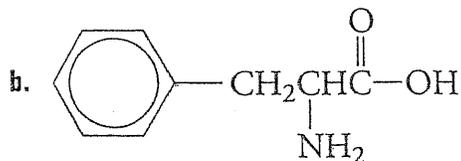
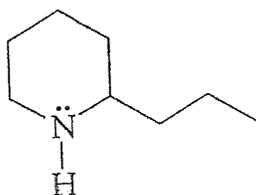
10. Which of the following molecules are polar? Each is drawn showing its actual three dimensional shape.



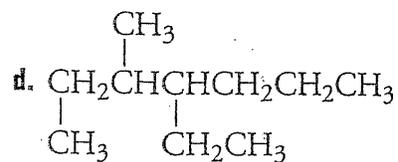
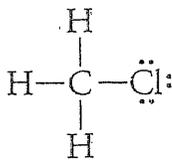
11. For the molecules shown below:

1. Indicate all polar bonds, and
2. List all the intermolecular forces each molecule experiences.

a.



c.



Academic Integrity Statement: I confirm that the work shown here is my own work, and that I completed this quiz according to the Special Instructions listed above.

Student's signature here: