

Organic Chemistry Spring Break Worksheet

You are to answer ALL of the following questions on your own paper. Use your textbook and Chapter 10 (Organic Chemistry) in your Review Book as a guide. Some questions may require the use of the Reference Tables for Physical Setting/Chemistry.

Due Date for this Assignment is the Beginning of your class on **Monday April 12st**. NO Exceptions.

- 1) What is Organic Chemistry?
- 2) What element is always present in all organic compounds?
- 3) List some of the characteristics of organic compounds. (Give at least 5)
- 4) How many bonds does a carbon atom have? Explain.
- 5) Compare and contrast the terms saturated and unsaturated. (In terms of Organic Compounds)
- 6) Compare and contrast the terms structural formula and molecular formula.
- 7) Compare and contrast the terms alkane, alkene and alkyne.
- 8) What is an isomer?
- 9) The molecule 3-methyloctane is a structural isomer of which straight chain alkane?
- 10) The molecule 3-methylpentane is a structural isomer of which straight chain alkane?
- 11) Draw the structural formula for the one structural isomer of butane and name it.
- 12) What is a Functional Group? List the functional groups.
- 13) Classify each of the following compounds as either a halide, alcohol, acid or ether, and then name the compound. (Use Reference Table R, P and Q)
 - a) $\text{CH}_3 \overset{\text{Br}}{\text{CH}} \text{CH}_3$
 - b) $\text{CH} \overset{\text{Br}}{\text{CH}_2} \text{CH}_3$
 - c) $\text{CH}_3 \text{CH}_2 \text{CH}_2 \overset{\text{OH}}{\text{CH}_2} \text{CH}$
 - d) $\text{CH}_3 \text{CH}_2 \overset{\text{OH}}{\text{CH}} \text{CH}_2 \text{CH}_3$
 - e) $\text{CH}_3 \text{CH}_2 \text{CH}_2 \text{O} \text{CH}_2 \text{CH}_3$
 - f) $\text{CH}_3 \text{CH}_2 \text{CH}_2 \text{CH}_2 \text{O} \text{CH}_3$
 - g) $\text{CH}_3 \text{CH}_2 \text{CH}_2 \overset{\text{O}}{\parallel} \text{C} \text{OH}$
 - h) $\text{CH}_2 \text{CH}_2 \text{CH}_2 \text{CH}_2 \overset{\text{O}}{\parallel} \text{C} \text{OH}$
- 14) List and describe the nine different type of organic reactions.
- 15) Review Book (Demmin)
pg. 118: 1 – 27, pg. 122: 28 – 41.