

**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) $\text{CH}_3 \overset{\text{Br}}{\underset{|}{\text{CH}}} \text{CH}_3$
 - b) $\text{CH} \overset{\text{Br}}{\underset{|}{\text{CH}_2}} \text{CH}_3$
 - c) $\text{CH}_3 \text{CH}_2 \text{CH}_2 \text{CH}_2 \overset{\text{OH}}{\underset{|}{\text{CH}}}$
 - d) $\text{CH}_3 \text{CH}_2 \overset{\text{OH}}{\underset{|}{\text{CH}}} \text{CH}_2 \text{CH}_3$
 - e) $\text{CH}_3 \text{CH}_2 \text{CH}_2 \text{OCH}_2 \text{CH}_3$
 - f) $\text{CH}_3 \text{CH}_2 \text{CH}_2 \text{CH}_2 \text{OCH}_3$
 - g) $\text{CH}_3 \text{CH}_2 \text{CH}_2 \overset{\text{O}}{\parallel} \text{C-OH}$
 - h) $\text{CH}_2 \text{CH}_2 \text{CH}_2 \text{CH}_2 \text{CH}_2 \overset{\text{O}}{\parallel} \text{C-OH}$
- 14) List and describe the nine different type of organic reactions.
- 15) Review Book (Demmin)
pg. 118: 1 – 27, pg. 122: 28 – 41.