HOMEWORK ASSIGNMENT #2 ORGANIC CHEMISTRY I (30 pts)

the Pauling Model (Hybridization), HONC Rules, Abbreviated Bond Line/ Condensed Structures & Resonance **(due Wednesday 13 September 2017)**

**Your name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Practice problem 2.36 (3 pts)
2. Practice problem 2.43 (1 pt)
3. Practice Problem 2.44 (2 pts)



*Use arrows to ID all sp3 carbons*

1. Practice Problem 2.48 (3 pts)

a)

b)

c)

1. There is one lone pair in each compound shown below. Circle where it is and determine the hybridization of the orbital they reside in ?



A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

B\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

C\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1 pt each

A B C

5 . Determine the hybridization on the **bolded** atoms below : (1 pt ea/5 pt total)

H2 C=**O** H2**C=**O H2C=**C**=O **C**FBr3 C**F**Br3

\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_

6a. Determine the number of of H assumed to be present on the Carbons in the skeletal

organic structure below.

6b. Determine the hybridization on the indicated **C** and on **N**

\* \* \* \* \*

C-C≡C-C=C=NH

#H \_ \_ \_ \_ \_

hybridization **\_\_ \_\_ \_\_ \_\_ \_\_** (1/2 pt ea, 5 pts total)

on \*

1. Practice Problem 2.52 c, f, i (3 pts)
2. Problem 2.81a Identify and indicate where each functional group in the structure resides. (5 pts)



H3C(H2C)11

O

Extra credit (2 pts): Problem 2.81b