HOMEWORK ASSIGNMENT #4 ORGANIC CHEMISTRY I (20 pts)

naming alkanes and some rotational/ring conformation language

**(due Wednesday 24 September 2014)**

**Your name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 1 pt**

**4.1. Provide both Common and IUPAC names for the structures below**



Common\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

IUPAC \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Common\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

IUPAC \_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**4.2. Draw/sketch the least stable and most stable rotational conformers for 2,2,5,5-tetramethyl hexane below: (2 pts)**

**Least stable**  **Most stable**

4.3 **which is more stable ? (circle your choice. 4 points)**

equatorial methyls or axial methyls

methyl cyclohexane or t-butylcyclohexane

cis (1,2) ax, eq cyclohexane or trans (1,2) eq,eq cyclohexane

cis (1,2) cyclohexane or cis (1,4) cyclohexane

4.4a What is the correct, complete name for the compound below ? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Br

**1** Br

4.4b If a third Br must be placed axially at locant position 2, will it be cis or trans to the Br at locant position 3 ?

(circle choice)

Cis Trans