

Chemistry 2542

Fall 2012

Quiz 2

(25 points)

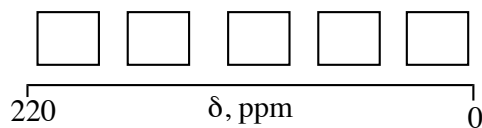
Printed Name (*Last*, First) _____

Good Luck!

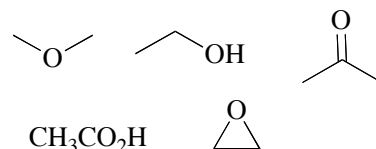
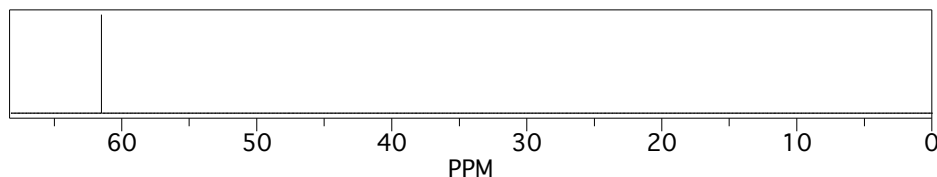
1. (5) List compounds **a-e** in the order as they would appear in ^{13}C NMR

(place letters **a, b, c, d, e** in appropriate boxes, 1 pt each):

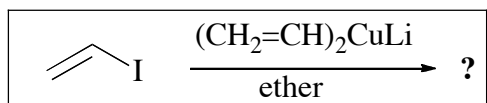
(a) CH_4 ; (b) $(\text{CH}_3)_4\text{Si}$; (c) $\text{H}_2\text{C}=\text{O}$; (d) CH_3Cl ; (e) CH_3I



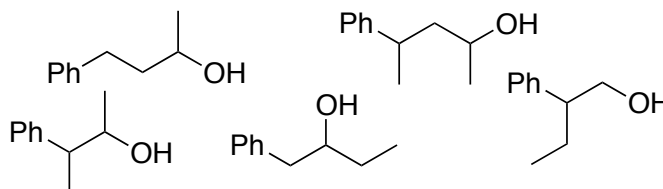
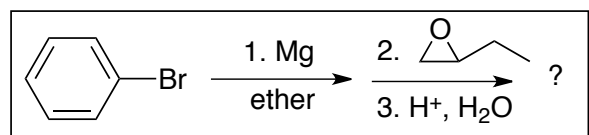
2. (3) Which one of the following compounds has the molecular peak $M^+ m/z = 46$ in the mass spectrum (atomic weight of C is 12, O 16, H 1) **and** the following ^{13}C NMR spectrum:



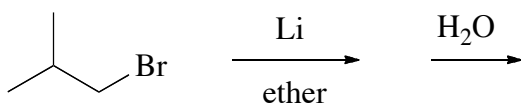
3. (6) Circle the name or the structure of the main product in each of the following reactions (3 pts each):



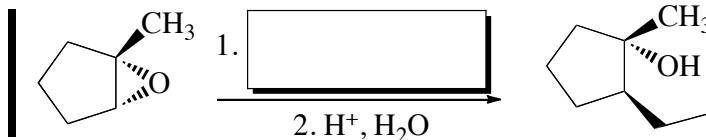
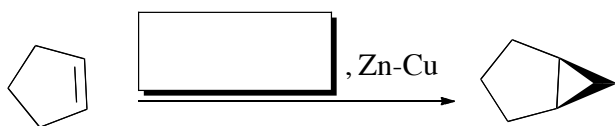
1,4-pentadiene 1,3-butadiene 1,3-pentadiene
 1-butene 1-pentene 3-iodopropene



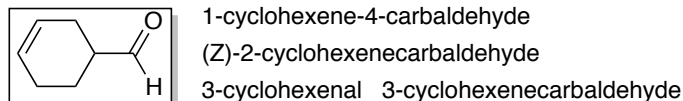
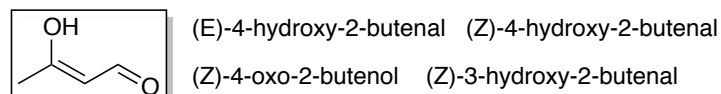
4. (3) Draw *line-angle* formula of the **product** in the following reaction (no partial credit):



5. (4) Write reagents (in the boxes) that can be used to convert the reactant to the indicated product (2 pts each):



6. (4) Circle the correct **IUPAC name** of the compounds in the boxes (2 pts each):



Overall Score: _____