Grossmont College Name: \_\_\_\_\_\_KEY\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Chemistry 102, Spring 2017

Quiz 3a (27 points) Date: \_\_\_\_\_\_\_\_\_\_\_\_

1. (5 points) Identify the circled functional groups found in the compound below.

Alkene Alkyne Ether Alcohol Thiol Aldehyde

Amine Carboxylic acid Ester Aromatic Amide Ketone

1. Alcohol 2. Aldehyde 3. Amine 4. Ketone 5. Carboxylic acid



2. (6 points) Draw the **line angle structures** for 3 structural isomers with molecular formula C4H9Br



3. (6 points) Name or draw each of the following.

 *trans*-1-butyl-2-ethylcyclohexane





Name\_\_4-isopropyl-3,5-dimethyloctane .

1. (10 points) In the structure a) determine how many primary, secondary, tertiary and quaternary carbons are present b) Draw in condensed notation c) place an asterisks by each asymmetric carbon (stereocenters) in the structure below d) give the molecular formula



Primary \_\_8\_\_\_\_\_ secondary\_\_4\_\_\_\_\_ tertiary\_\_\_2\_\_\_\_ quaternary\_\_2\_\_\_\_\_

 Condensed notation



Molecular Formula\_\_C16H34\_\_\_\_\_\_\_\_\_