

Chemistry 2541

Fall Semester 2013

Quiz 3

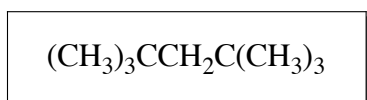
(25 points)

February 20, 2013

Printed Name (*Last*, First) _____

Good Luck!

1. (3) Circle the correct **IUPAC names** of compounds shown in the box (3 pts each):



1,2-diisopropylbutane

1-*tert*-butyl-2,2-dimethylpropane

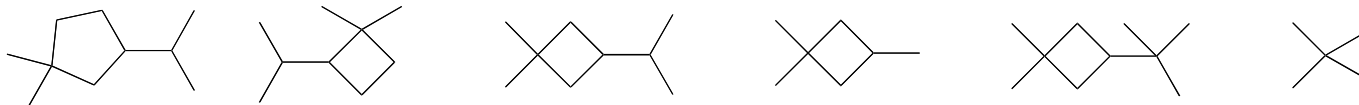
1,2-di-*tert*-butylethane

2,2,4,4-tetramethylpentane

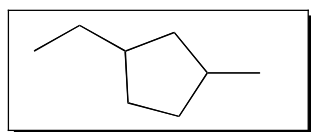
2,2,5,5-tetramethylhexane

1,1,1,4,4,4-hexamethylbutane

2. (3) Circle the structure of **2-isopropyl-1,1-dimethylcyclobutane**:



3. (3) How many 1°, 2° and 3° hydrogen atoms are present in the molecule shown in the box below (write numbers after each question; 1 pt each answer):



• Number of 1° hydrogen atoms present in this molecule: _____

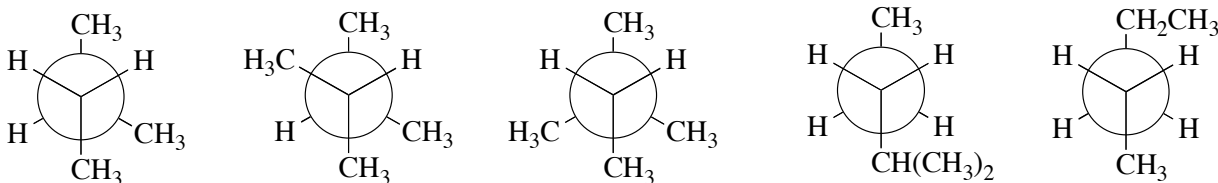
• Number of 2° hydrogen atoms in this molecule: _____

• Number of 3° hydrogen atoms in this molecule: _____

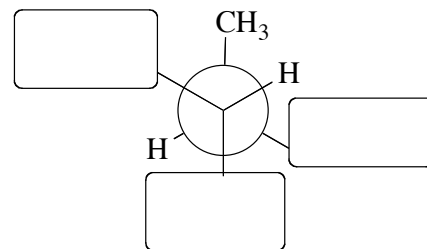
4. (3) Circle the compound that has a **ketone functional group** and a **triple bond** in the parent chain:

2-butylnal butynone butenone 2-butenol 1,2-cyclobutendiol cyclobutantrione

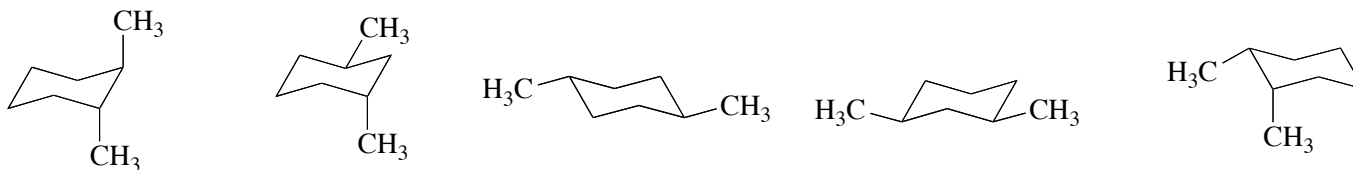
5. (4) Which of the following Newman projections represents **2,2-dimethylbutane**?



6. (6) Finish the drawing of the **Newman projection** of the **gauche conformation** of normal **pentane** by placing appropriate substituents (H or alkyl group) in the boxes (2 pts each box):



7. (3) Circle the structure showing the **most stable conformation** of *cis*-1,3-dimethylcyclohexane:



Overall Score: _____