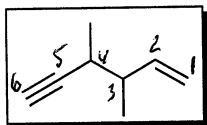


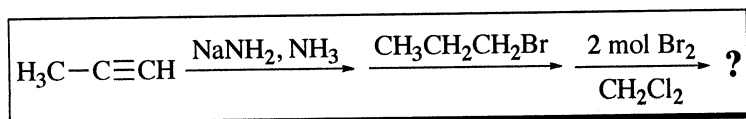
Quiz 6 Key

1. (2) Circle the correct IUPAC name for the compound in the box:



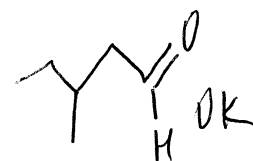
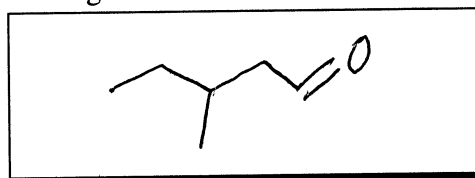
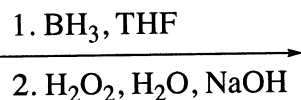
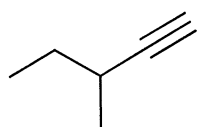
- 4-ethynyl-3-methyl-1-pentyne 3-methyl-4-vinyl-1-pentyne 3,4-dimethyl-5-hexyn-1-ene
 3,4-dimethyl-5-hexen-1-yne 3,4-dimethyl-1-hexyn-5-ene **3,4-dimethyl-1-hexen-5-yne**

2. (3) Circle the name of the major organic product obtained from the following sequence of reactions:

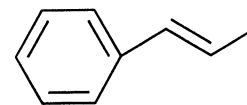
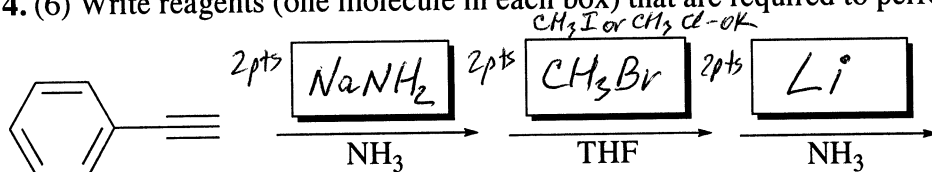


- 2,2,3,3-tetrabromohexane** 2,3-dibromohexane
 3,3-dibromohexane 1,1,2,2-tetrabromohexane
 (E)-2,3-dibromohexene (Z)-2,3-dibromohexene

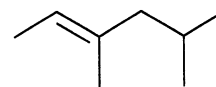
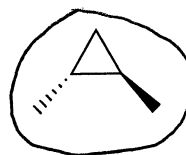
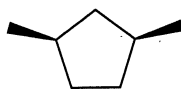
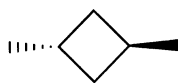
3. (4) Draw the structure of the main product for the following reaction:



4. (6) Write reagents (one molecule in each box) that are required to perform the following synthesis:



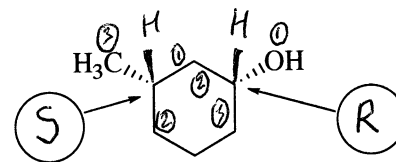
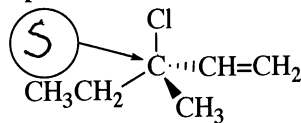
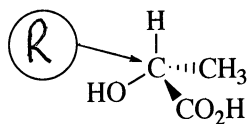
5. (3) Which one of the following molecules is **chiral**?



6. (3) Which one of the following molecules is **meso** compound?

- (2R,3R)-3-bromo-2-butanol cis-1-bromo-2-chlorocyclohexane (2R,3R)-dibromobutane
(2R,3S)-dibromobutane (2R,3S)-3-bromo-2-butanol trans-1-bromo-2-chlorocyclohexane

7. (4) Assign *R* or *S* configuration to each **chirality center** in the following compounds (use the provided circles for your answers; 1 pt each):



Overall Score: 25