Chemistry 2542, Fall 2016
Quiz 2
(30 points)

Important notes:
- Please use the provided Scantron form for your answers; you can keep the sheet with the questions and can use it as scratch paper
- Do not forget to write your name on the Scantron form
- You will not receive credit for unmarked answers or for more than one mark on answer line
- Your scores will be posted on eGradebook; graded Scantron forms will not be returned to students.

Questions 1-10: Please mark the appropriate box on the front of the Scantron form (3 pts each).

1. What is the correct name for the compound shown in the box?
   ![Chemical structure]
   - A) 1-cyclohexenecarbaldehyde
   - B) 2-cyclohexenecarbaldehyde
   - C) 1-cyclohexenal
   - D) benzaldehyde

2. What is the IUPAC name for the compound shown in the box?
   ![Chemical structure]
   - A) (E)-4-hydroxy-2-butenal
   - B) (Z)-4-hydroxy-2-butenal
   - C) (E)-4-oxo-2-butenol
   - D) (Z)-4-oxo-2-butenol

3. What is the main product of the reaction shown in the box?
   ![Chemical structure]
   - A) 1,4-pentadiene
   - B) 1,3-butadiene
   - C) 1,3-pentadiene
   - D) 1-butenne

4. What is the main product of the sequence of reactions shown in the box?
   ![Chemical structure]
5. What is the main product of the sequence of reactions shown in the box?

\[
\text{Br} \xrightarrow{2\text{Li}} \text{pentane} \xrightarrow{\text{CH}_3\text{OH}} ?
\]
A) 1-butene  
B) 3-methoxy-1-propene  
C) 1-propen-3-ol  
D) 1-propene

6. What is the main product of the sequence of reactions shown in the box?

\[
\text{Br} \xrightarrow{1) \text{Mg}} \text{ether} \xrightarrow{2) \text{H}_2\text{CO}} \xrightarrow{3) \text{H}^+, \text{H}_2\text{O}} ?
\]
A) (Z)-3-hexen-2-ol  
B) (E)-3-hexen-2-ol  
C) (Z)-3-penten-1-ol  
D) (E)-3-penten-1-ol

7. Which of the following drawings correctly describes the movement of electrons during the protonation of acetone?

A)  
B)  
C)  
D)  

8. Which reagent can be used for the reaction shown in the box?

\[
\text{pentane} \xrightarrow{\text{reagent}} \text{Cl} \xrightarrow{\text{Cl}}
\]
A) CH₂I₂  
B) CHCl₃  
C) Zn(Cu)  
D) CH₂Cl₂

9. Which reagent can be used for the reaction shown in the box?

\[
\text{PhCHO} \xrightarrow{\text{reagent}} \text{Ph-Ph}
\]
A)  
B) Ph₃P  
C) Zn(Cu)  
D) Ph₃P⁻CPPH₂

10. Which of the following correctly describes the direction of polarity of the carbon-lithium bond?

A)  
B)  
C)  
D)  