

# Chemistry 2541, Fall 2017

## Quiz 5

Key

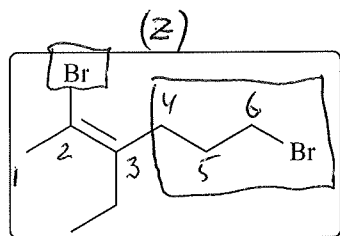
(30 points)

*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.

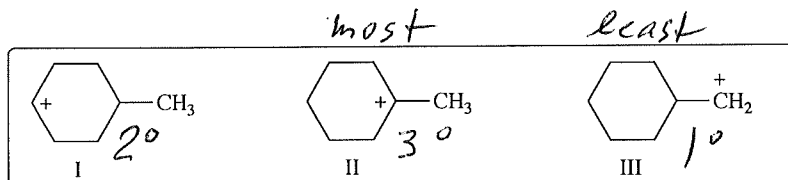
Questions 1-10: Please mark the appropriate box on the front of the Scantron form (3 pts each).

1. What is the IUPAC name for the compound shown in the box?



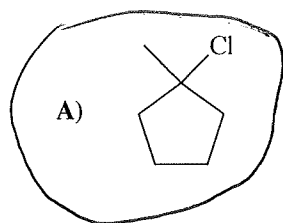
- A) (*E*)-1,5-dibromo-4-ethyl-5-hexene    B) (*Z*)-1,5-dibromo-4-ethyl-5-hexene  
 C) (*E*)-2,6-dibromo-3-ethyl-2-hexene    D) (*Z*)-2,6-dibromo-3-ethyl-2-hexene

2. Arrange the carbocations shown in the box in order of increasing stability.

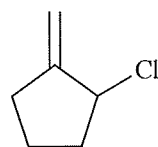


- A) I < III < II (most stable)    B) II < I < III (most stable)  
 C) III < II < I (most stable)    D) III < I < II (most stable)

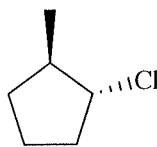
3. Which of the following is the major product of the reaction of methylenecyclopentane with HCl?



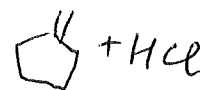
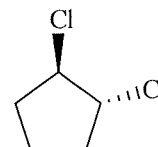
B)



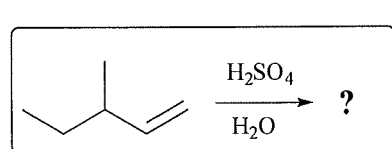
C)



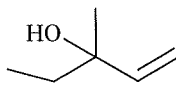
D)



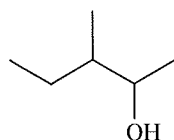
4. What is the product of 1,2-hydride shift for the reaction in the box?



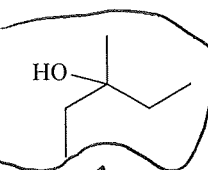
A)



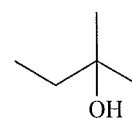
B)



C)

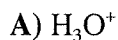


D)



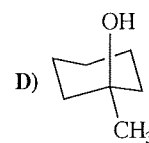
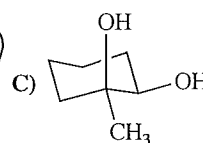
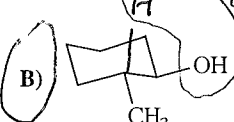
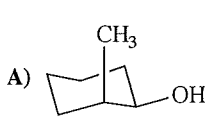
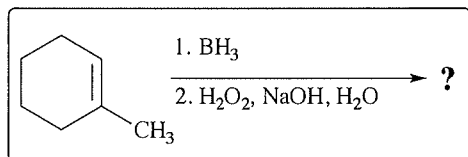
H<sub>2</sub>O

5. Which one of the following molecules is not an electrophile?



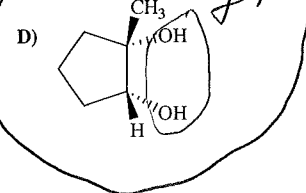
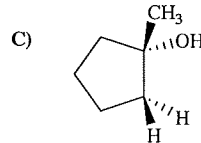
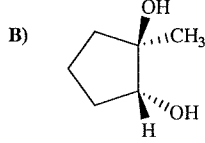
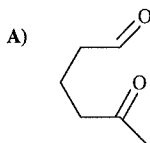
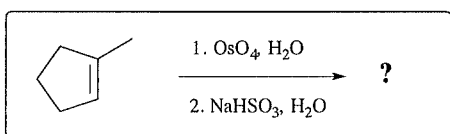
weak acid  
( $\text{pK}_a \approx 16$ )

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



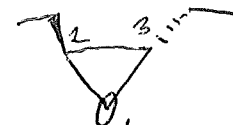
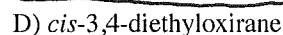
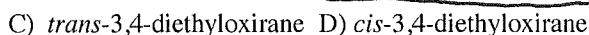
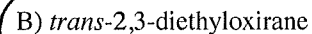
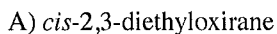
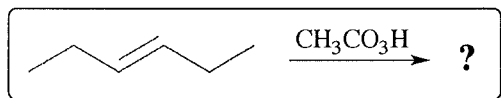
syn-addition

7. What is a main product of the reaction shown in the box?



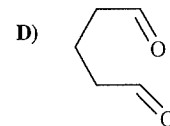
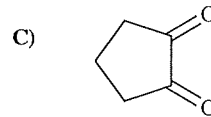
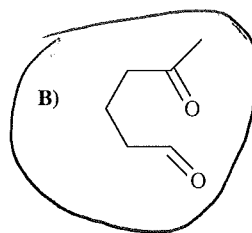
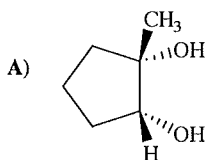
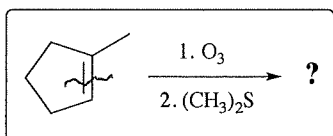
syn-

8. What is the IUPAC name of a main product of the reaction shown in the box?

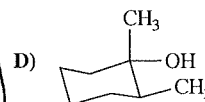
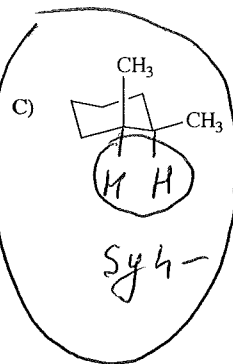
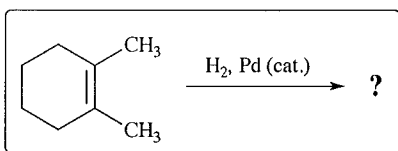


*trans*-2,3-

9. What is a main product of the reaction shown in the box?



10. What is a main product of the reaction shown in the box?



syn-