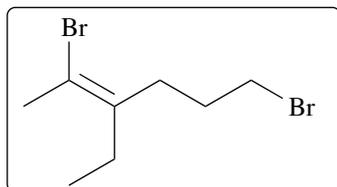# Chemistry 2541, Fall 2017
Quiz 5

(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.

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Questions 1-10: Please mark the appropriate box on the front of the Scantron form (3 pts each).
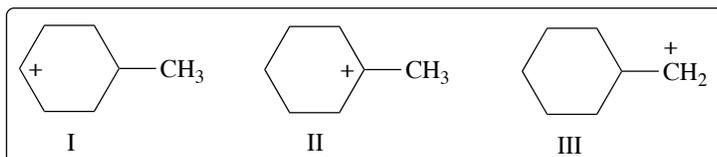
1. What is the **IUPAC name** for the compound shown in the box?

A) (*E*)-1,5-dibromo-4-ethyl-5-hexene   **B)** (*Z*)-1,5-dibromo-4-ethyl-5-hexene

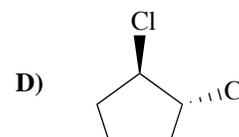**C)** (*E*)-2,6-dibromo-3-ethyl-2-hexene   **D)** (*Z*)-2,6-dibromo-3-ethyl-2-hexene

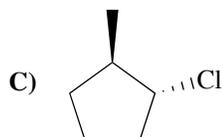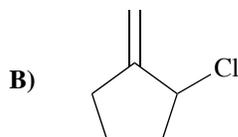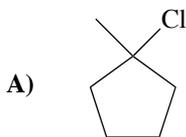**2.** Arrange the **carbocations** shown in the box in order of increasing stability.

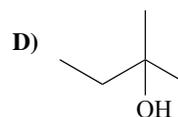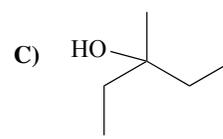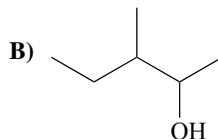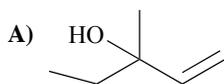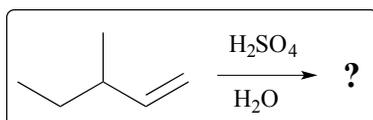**A)** I < III < II (most stable)   **B)** II < I < III (most stable)

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**?
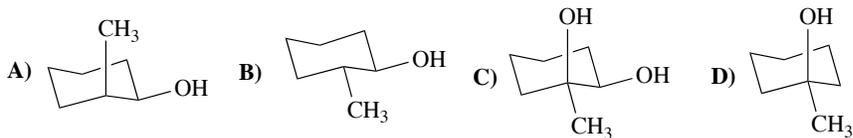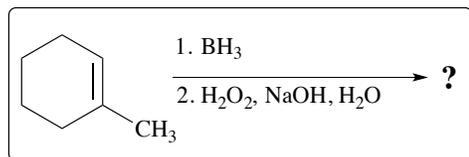

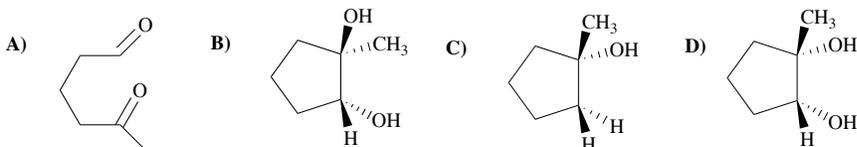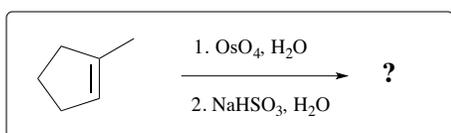**4.** What is the product of **1,2-hydride shift** for the reaction in the box?

5. Which one of the following molecules is **not** an **electrophile**?
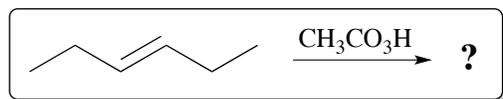
A) H_3O^+ **B)** Cl_2 **C)** HBr   **D)** CH_3OH

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

1. BH_3

2. H_2O_2, NaOH, H_2O

?   A)   B)   C)   D)

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

1. OsO_4, H_2O

2. $NaHSO_3$, H_2O
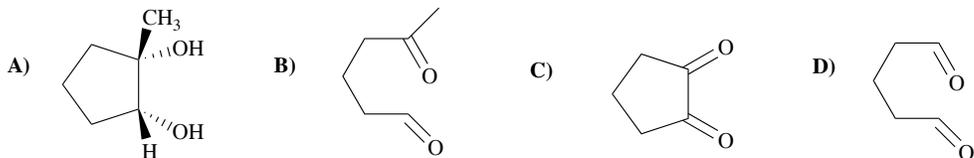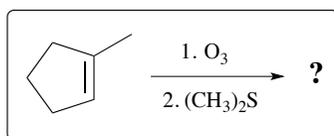
?   A)   B)   C)   D)

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

CH_3CO_3H ?

A) *cis*-2,3-diethyloxirane   B) *trans*-2,3-diethyloxirane

C) *trans*-3,4-diethyloxirane D) *cis*-3,4-diethyloxirane

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

1. O_3

2. $(CH_3)_2S$

?   A)   B)   C)   D)

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

H_2, Pd (cat.)

?   A)   B)   C)   D)