

Chemistry 2541, Fall 2015

Quiz 4

(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).

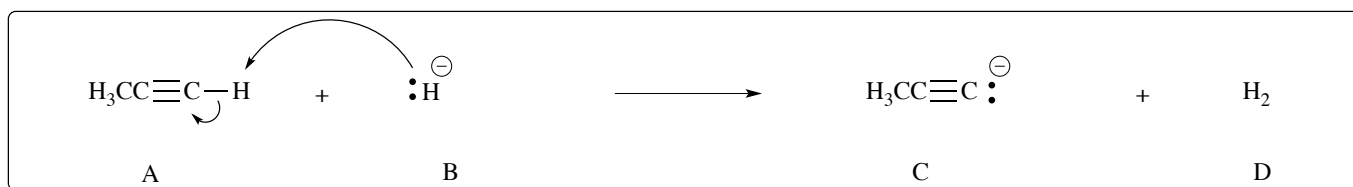
1. Which one of the following compounds is the **strongest base**?

- A) C_2H_6 B) NaF C) NaBr D) CH_3NHNa

2. Which of the following is the **weakest acid**?

- A) $\text{ICH}_2\text{CO}_2\text{H}$ B) $\text{ClCH}_2\text{CO}_2\text{H}$ C) HBr D) $\text{FCH}_2\text{CO}_2\text{H}$

3. The acid/base reaction shown in the box proceeds in the direction as shown below. Which molecule in this reaction is the **strongest acid**?



4. Which of the following represents the order of increasing **acidity** for compounds the box?

(1) $\text{CH}_3\text{CH}_2\text{I}$ (2) HCl (3) $\text{CH}_3\text{CH}_2\text{OH}$ (4) $\text{CH}_3\text{CH}_2\text{CO}_2\text{H}$

A) **1** (strongest) > **2** > **4** > **3** (weakest)

B) **2** (strongest) > **1** > **4** > **3** (weakest)

C) **2** (strongest) > **4** > **3** > **1** (weakest)

D) **4** (strongest) > **3** > **2** > **1** (weakest)

5. Which one of the following compounds has the most **acidic C–H bond**?



6. Which one of the following compounds is likely to react as **Lewis acid**?

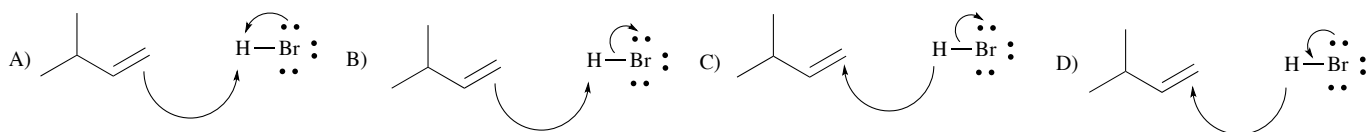


7. Which pair represents an **acid** and a **conjugate acid** for the reaction in the box?

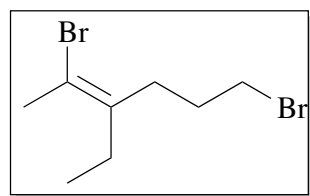


- A) **1** and **4** B) **2** and **4** C) **1** and **3** D) **2** and **3**

8. Which of the following drawings correctly depicts the **flow of electrons**?



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



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

10. Which of the following compounds has **index of hydrogen deficiency = 4** ?

