

**Course Name:** Organic Reaction Mechanism  
First Semester: 1443 H (2021-2022 G) (431)

**Course Code:** CHEM 344

**Student Name:**

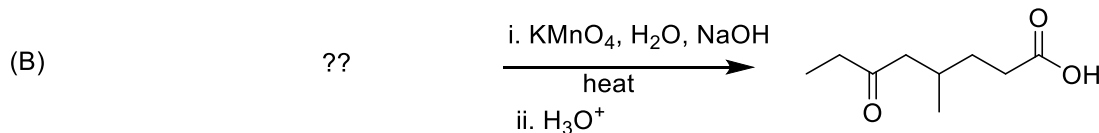
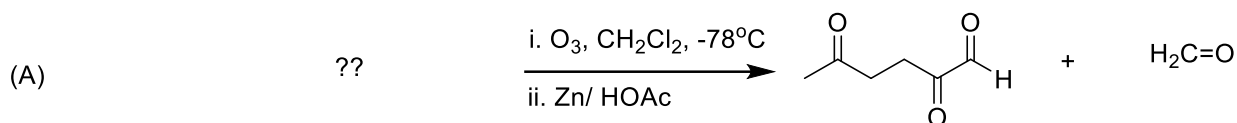
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### Homework 4

#### Answer the following questions:

1) Propose a mechanism for the hydration of 3-methyl-1-butene to give 2-methyl-2-butanol.

2) According to the following equations, identify the reactants.



3) The reaction of **2-methyl-2-pentene** with each reagent is regioselective. Draw a structural formula for the product of each reaction, and account for the observed regioselectivity.

A) HI

B)  $\text{H}_2\text{O}$  in the presence of  $\text{H}_2\text{SO}_4$

C)  $\text{BH}_3$  followed by  $\text{H}_2\text{O}_2, \text{NaOH}$