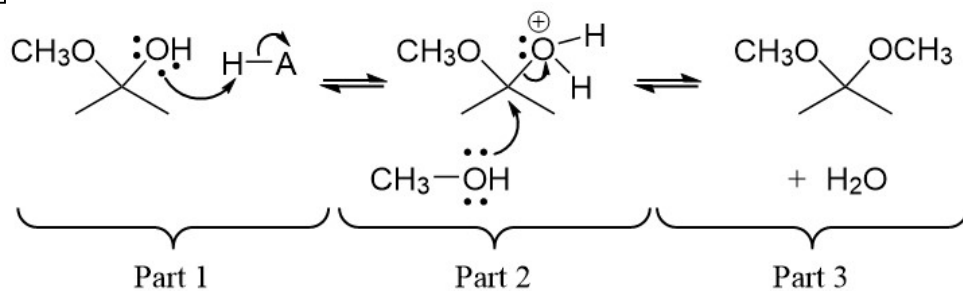


CHM 3150 Organic Chemistry II
Dr. Laurie S. Starkey, Cal Poly Pomona
Chapter 19 Aldehydes & Ketones Part 3 – Practice Problems

For clicker question voting, go to:
<https://pollev.com/lauriestarke263>



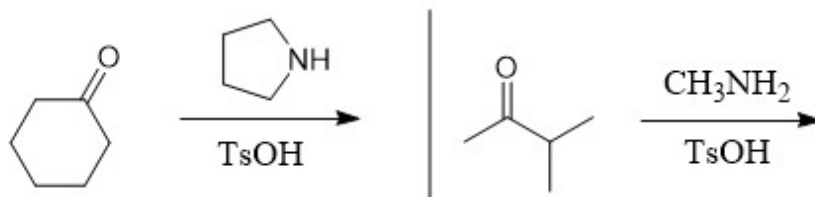
1



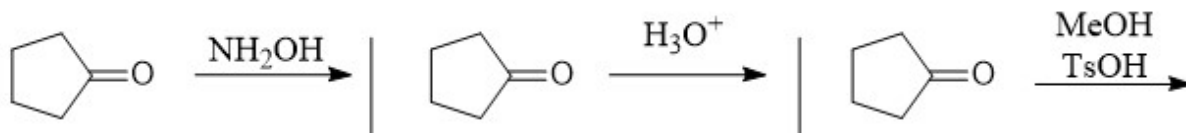
Which mechanism part(s) has an error in it?

2

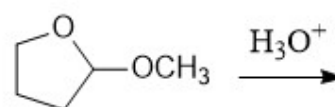
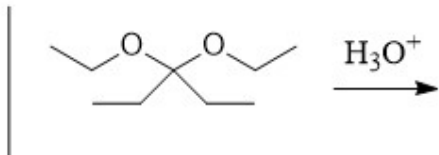
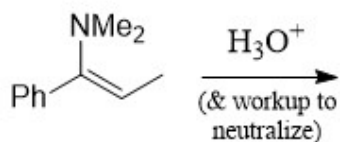
Predict the major products for the following reactions.



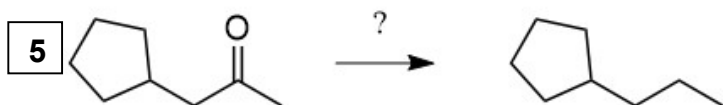
3



4 Draw ALL products for the following reactions.



Which of the following sets of reagents would accomplish the given transformation?



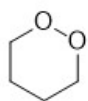
I. 1) LiAlH_4 ; 2) H_3O^+

II. 1) $\text{HS-CH}_2\text{-CH}_2\text{-SH}$ TsOH; 2) Raney Ni

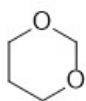
III. 1) NH_2NH_2 , TsOH; 2) NaOH, H_2O , heat

6

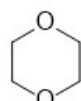
One of the following compounds acts like an ether (good solvent, unreactive), another is potentially explosive when heated, and another reacts quickly with aqueous acid. Match each structure to its description.



1,2-dioxane



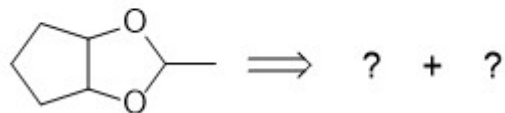
1,3-dioxane



1,4-dioxane

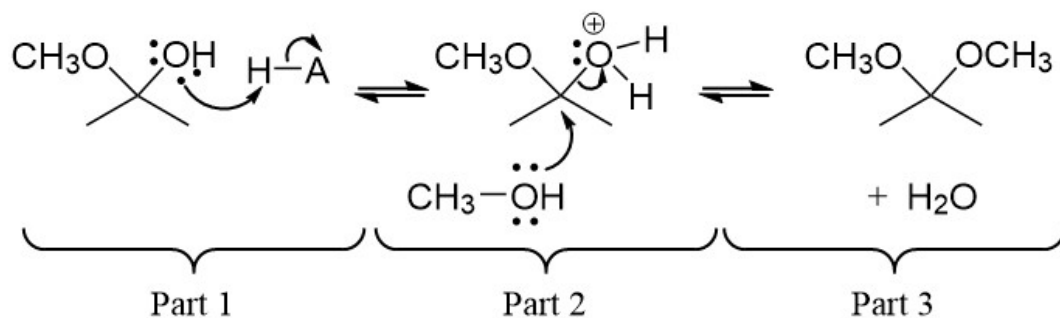
Which two compounds would combine to produce the following acetal?

8



1

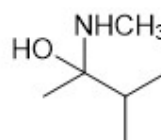
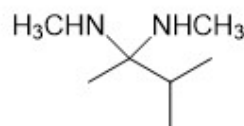
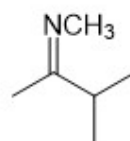
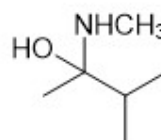
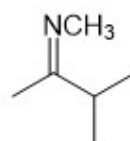
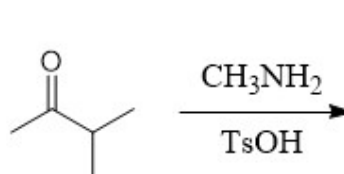
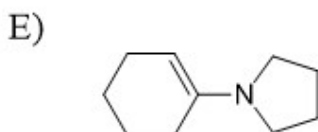
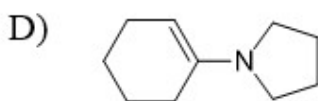
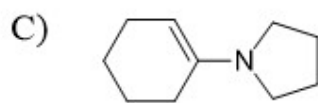
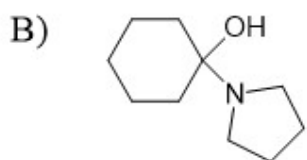
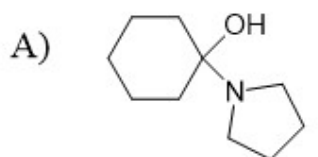
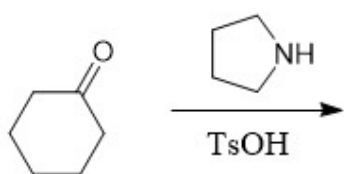
Which of the following mechanism part(s) has an error in it?



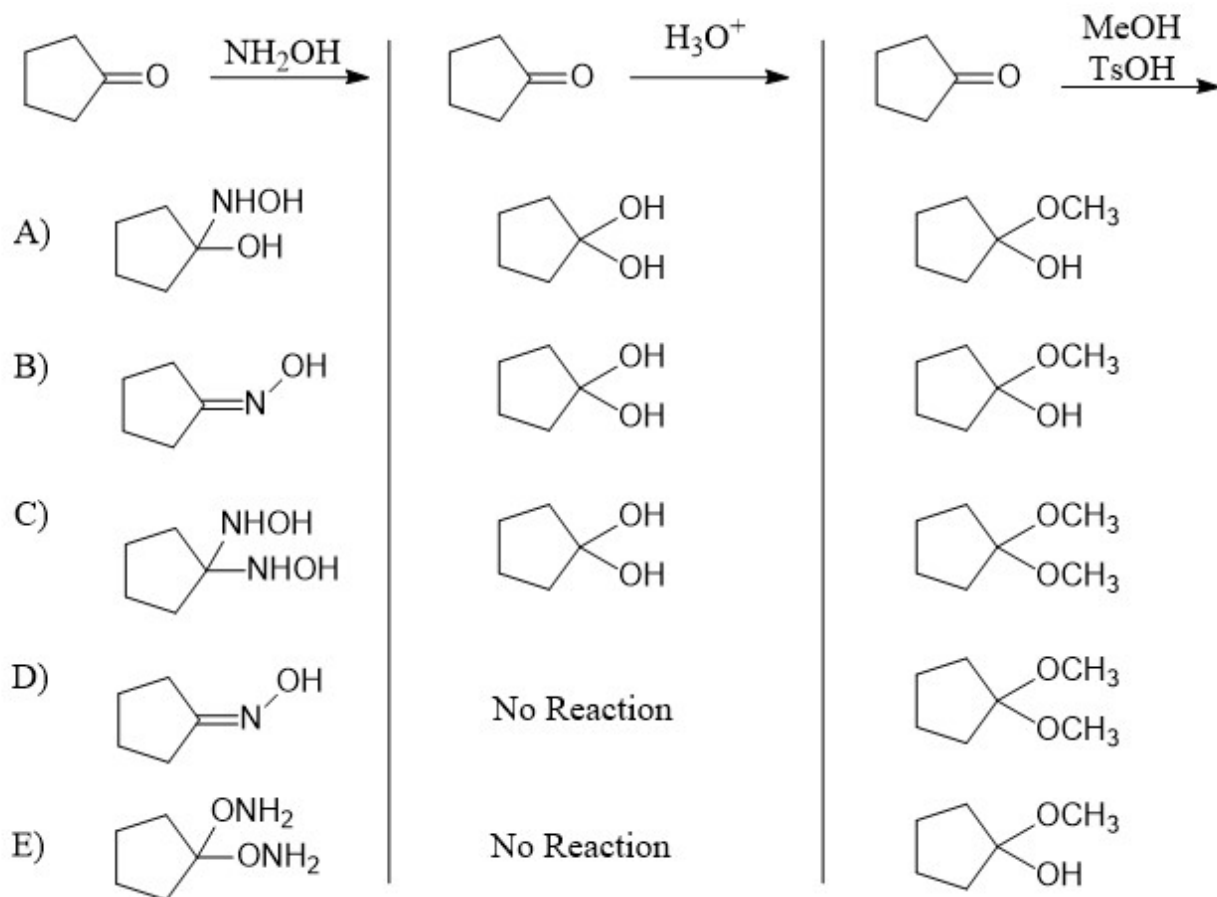
- A) Part 1
 B) Part 2
 C) Part 3
 D) Part 2 and Part 3
 E) None of the above
 (no errors are shown)

2

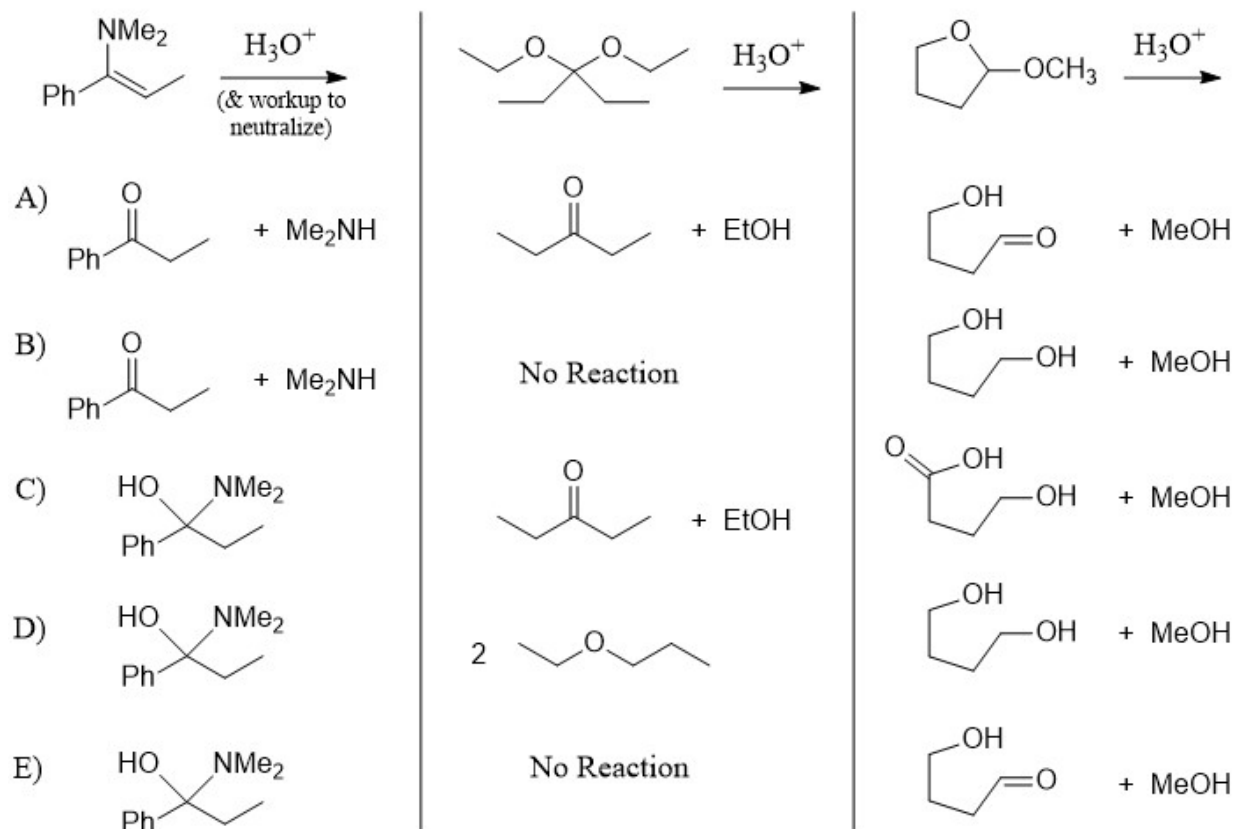
Predict the major products for the following reactions.



3 Predict the major products for the following reactions.

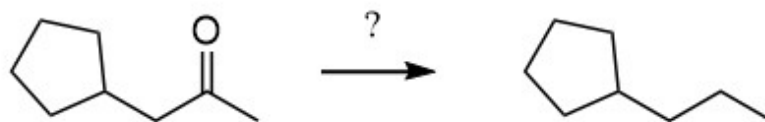


4 Draw ALL products for the following reactions.



5

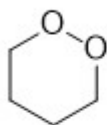
Which of the following sets of reagents would accomplish the given transformation?



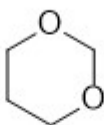
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- II. 1) $\text{HS-CH}_2\text{-CH}_2\text{-SH}$ TsOH; 2) Raney Ni
- III. 1) NH_2NH_2 , TsOH; 2) NaOH, H_2O , heat
- A) I only
- B) II only
- C) II and III only
- D) I and II only
- E) I, II and III

6

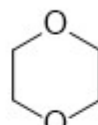
One of the following compounds acts like an ether (good solvent, unreactive), another is potentially explosive when heated, and another reacts quickly with aqueous acid. Match each structure to its description.



1,2-dioxane



1,3-dioxane



1,4-dioxane

- | | | |
|---------------------------------------|------------------------------------|------------------------------------|
| A) explosive | ordinary ether | reacts with H_3O^+ |
| B) explosive | reacts with H_3O^+ | ordinary ether |
| C) reacts with H_3O^+ | explosive | ordinary ether |
| D) reacts with H_3O^+ | explosive | explosive |
| E) ordinary ether | reacts with H_3O^+ | explosive |

7

Which two compounds would combine to produce the following acetal?

