LeAP: E2 Mechanism

- Due Oct 10, 2024 at 11:59pm
- Points 5
- Questions 12
- Available Sep 1, 2024 at 12am - Oct 14, 2024 at 11:59pm
- Time Limit None
- Allowed Attempts 2

Instructions

Lecture Application Practices (LeAPs) serve as initial opportunities for students to apply the information they've gathered from the pre-lecture videos and in-person lectures/lecture videos.

Students are strongly encouraged to complete LeAPs on the same day that the corresponding topic is completed in class. However, to provide consistent due dates, sets of LeAPs will be due on Thursdays at 11:59 PM - Chicago time. See the Weekly Schedules or Course Calendar for specific due dates for each activity.

Each LeAP is worth 5 points. Credit will be awarded based on accuracy. There is no time limit. Students will receive two attempts for each assignment and the highest score will be recorded in the gradebook. LeAPs may consist of multiple-choice, calculation, ranking, choose all that apply, and fill in the blank type questions.

This quiz was locked Oct 14, 2024 at 11:59pm.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	51 minutes	5 out of 5

ⓘ Correct answers are hidden.

Score for this attempt: 5 out of 5
Submitted Oct 8, 2024 at 10:04am
This attempt took 51 minutes.

Question 1
0.5 / 0.5 pts

Which characteristics describe an E2 reaction? **Choose all that apply.**

- [x] rate = k[base][E-LG]
- [ ] rate = k[E-LG]
- [x] Concerted

- [x] Stereospecific
- [ ] Always forms the most substituted alkene (Zaitzev's rule).
- [ ] Unimolecular
- [ ] Always forms the least substituted alkene (Hofmann's rule).
- [x] Can form either the most substituted or least substituted alkene. It depends on the reagents used.

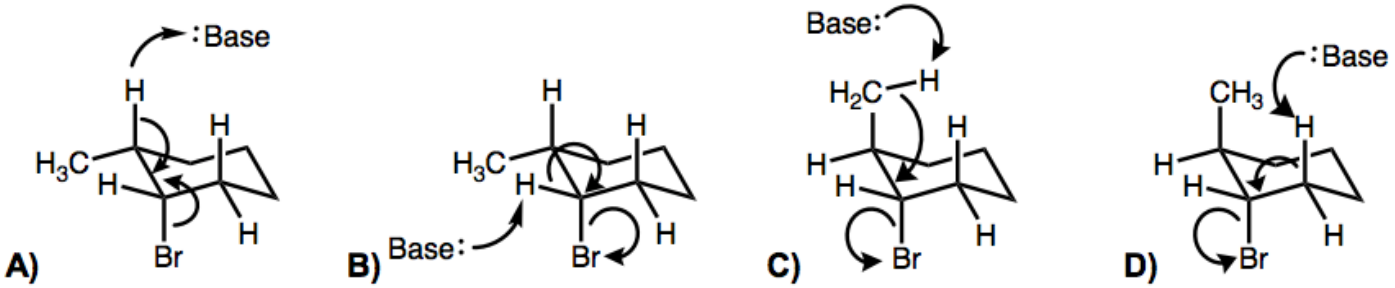
Question 2
0.5 / 0.5 pts

Which bases can be used for an E2 reaction that follows Hofmann's rule? **Choose all that apply.**

- [x] $KOC(CH_3)_3$
- [x] $LiN[CH(CH_3)_2]_2$
- [ ] $HOCH_3$
- [ ] $NaSCH_3$

Question 3
0.5 / 0.5 pts

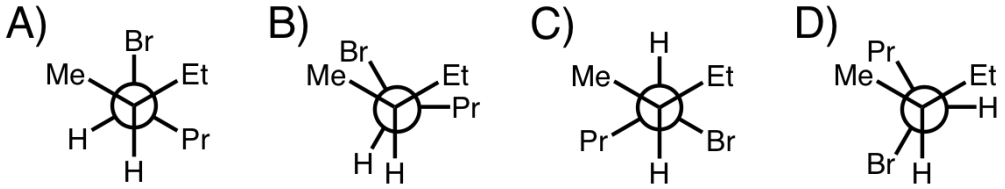
Which image correctly depicts the arrow-pushing mechanism of an E2 reaction?



- ( ) A
- ( ) B
- ( ) C
- (•) D

Question 4
0.5 / 0.5 pts

Which Newman projection displays the **antiperiplanar** conformation that is required for an E2 reaction to take place?

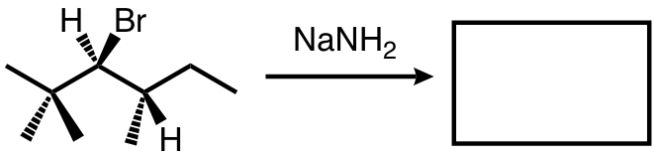


- (•) A
- ( ) B
- ( ) C
- ( ) D

Question 5
0.5 / 0.5 pts

Watch the "Predicting the Dominant Mechanism" pre-lecture video found in the E2 module before attempting the remaining questions.

Use the reaction shown below to answer questions 5-6.



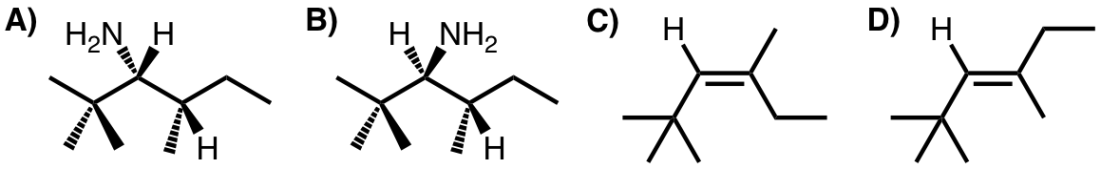
Based on the reagents, which mechanism will occur in this reaction?

- ( ) S_N2
- ( ) S_N1
- ( ) E1
- (•) E2

If you are struggling with this type of problem, it may be helpful to view the example problems given in the "Mechanism Card Game" videos found in the E2 module.

Question 6
0.25 / 0.25 pts

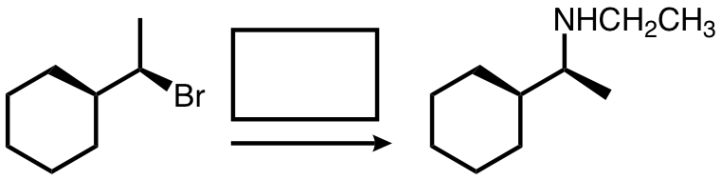
What is the major organic product formed from this reaction?



- ( ) A
- ( ) B
- (•) C
- ( ) D
- ( ) Both A and B

Question 7
0.5 / 0.5 pts

Use the reaction shown below to answer questions 7-8.



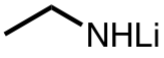
Consider how the structure of the molecule changes. Which mechanism occurs in this reaction?

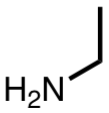
- S_N2
- S_N1
- E1
- E2

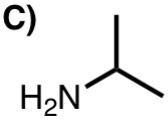
Question 8

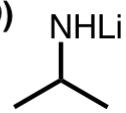
0.25 / 0.25 pts

Which reagent should be placed into the box in order to produce the product shown?

A) 

B) 

C) 

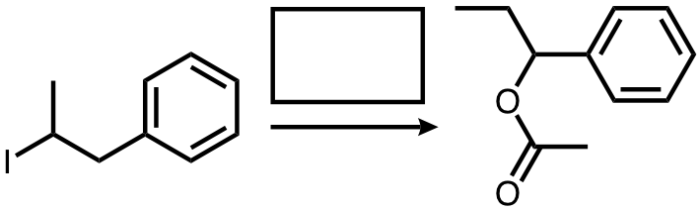
D) 

- A
- B
- C
- D

Question 9

0.5 / 0.5 pts

Use the reaction shown below to answer questions 9-10.

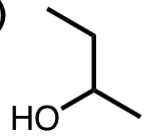


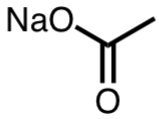
Consider how the structure of the molecule changes. Which mechanism occurs in this reaction?

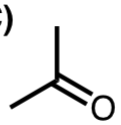
- S_N2
- S_N1
- E1
- E2

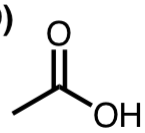
Question 10
0.25 / 0.25 pts

Which reagent should be placed into the box in order to produce the product shown?

A) 

B) 

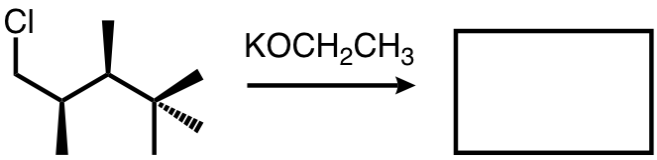
C) 

D) 

- A
- B
- C
- D

Question 11
0.5 / 0.5 pts

Use the reaction shown below to answer questions 11-12.



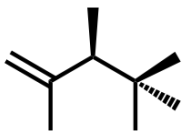
Based on the reagents, which mechanism will occur in this reaction?

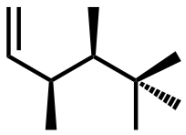
- S_N2
- S_N1
- E1
- E2

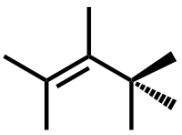
If you are struggling with this type of problem, it may be helpful to view the example problems given in the "Mechanism Card Game" videos found in the E2 module.

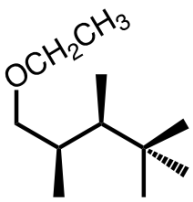
Question 12
0.25 / 0.25 pts

What is the major organic product formed from this reaction?

A) 

B) 

C) 

D) 

- A
- B

- C
- D
- Both C and D

Quiz Score: 5 out of 5