

CHM 234, Spring 2017

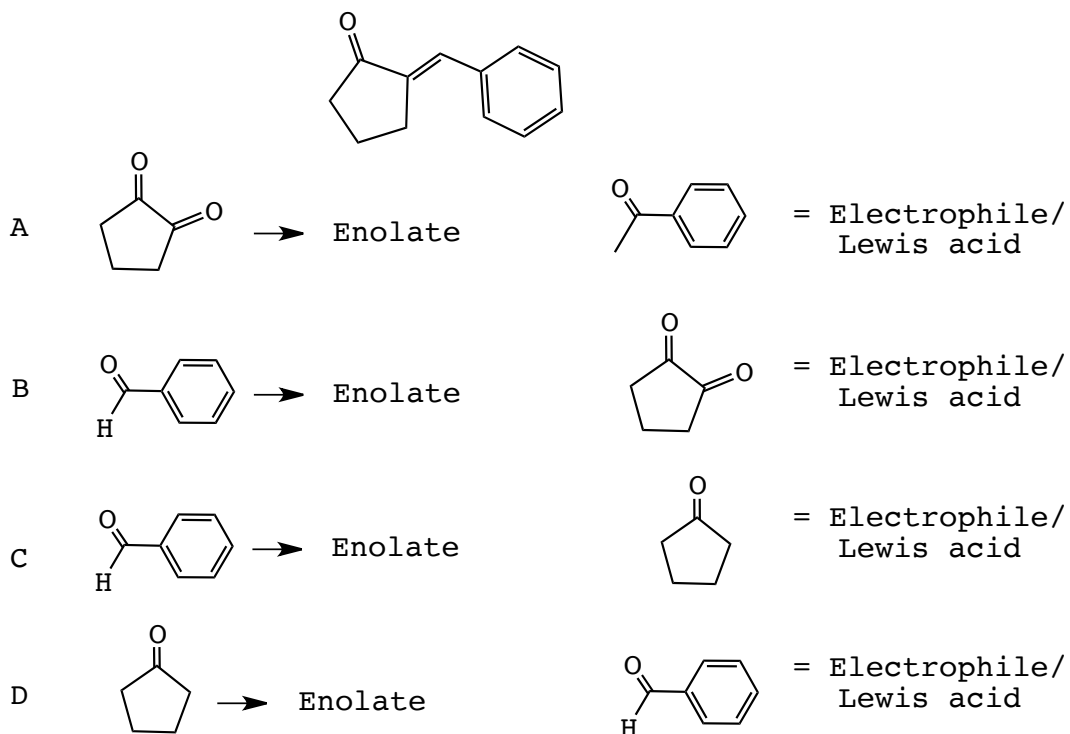
QUIZ #12

(hit the RETURN Button to return to the Main Quiz Page)

QUESTION 1

MC34r

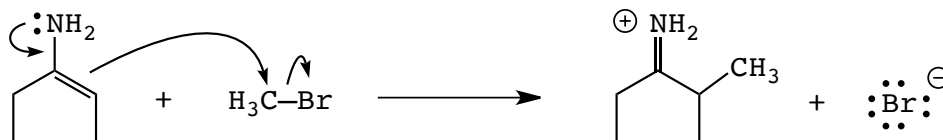
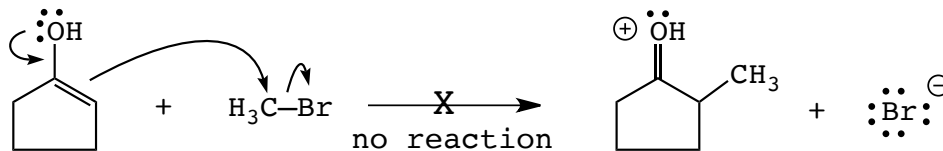
The following Aldol condensation product was formed by reaction of an enolate anion and a carbonyl compound in the presence of heat. Identify the structure that provided the enolate anion and the structure that was the Lewis acid (electrophile) in the enolate addition step.



QUESTION 2

MC34n

Which is the most correct statement?

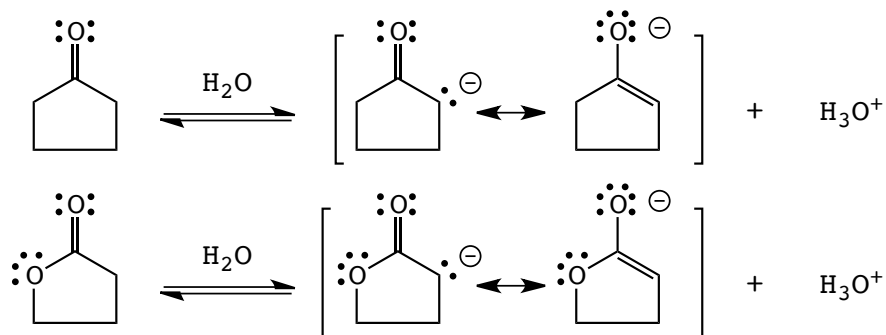


- A** an enol is a stronger nucleophile than an enamine because oxygen is more electronegative than nitrogen
- B** an enol is a weaker nucleophile than an enamine because oxygen is more electronegative than nitrogen
- C** an enol is a stronger nucleophile than an enamine because oxygen is less electronegative than nitrogen
- D** an enol is a weaker nucleophile than an enamine because oxygen is less electronegative than nitrogen
-

QUESTION 3

MC34m

Which is the most correct statement?



A an ester is a stronger Bronsted acid than a ketone because the oxygen in the α -position to the C=O bond is electron donating

B an ester is a stronger Bronsted acid than a ketone because the oxygen in the α -position to the C=O bond is electron withdrawing

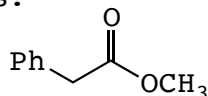
C an ester is a weaker Bronsted acid than a ketone because the oxygen in the α -position to the C=O bond is electron donating

D an ester is a weaker Bronsted acid than a ketone because the oxygen in the α -position to the C=O bond is electron withdrawing

QUESTION 4

MC34k

How many enolizable hydrogens does the following structure possess?



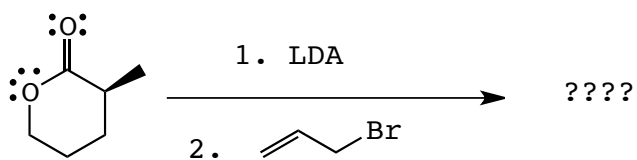
A 0 C 2

B 1 D 3

QUESTION 5

MC34g

Which best characterizes the product of the following reaction sequence?

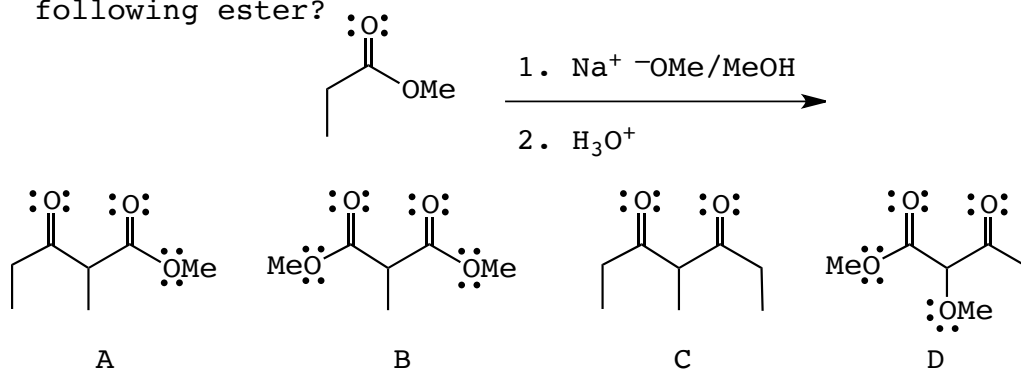


- | | | | |
|---|---------|---|-----------------|
| A | Chiral | C | Meso Compound |
| B | Achiral | D | Racemic Mixture |
-

QUESTION 6

MC34p

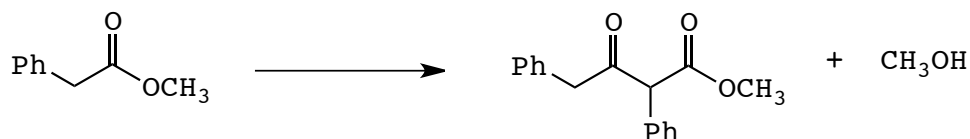
Which is the product of the Calisen reaction of the following ester?



QUESTION 7

MC34j

Using the provided bond dissociation energies, which is the enthalpy of the following reaction? (hint, calculate the energy cost of breaking the relevant bonds and calculate the energy gain from making the relevant bonds. I am not going to tell you if a positive enthalpy of reaction is endothermic or exothermic, you are supposed to know that by now!)

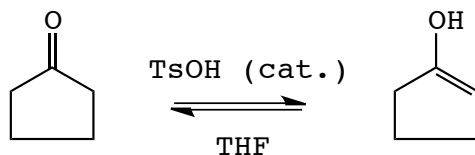


Bond	BDE (kcal/mol)		
C-C	85	A	9 kcal/mol
C-O	91	C	-9 kcal/mol
RO-H	102	B	3 kcal/mol
C-H	99	D	-3 kcal/mol

QUESTION 8

MC341

Which best describes the following equilibrium?



- A** equilibrium lies of the left because the C=O bond is stronger than the C=C bond
- B** equilibrium lies on the right because the C=O bond is stronger than the C=C bond
- C** equilibrium lies of the left because the C=C bond is stronger than the C=O bond
- D** equilibrium lies on the right because the C=C bond is stronger than the C=O bond
-

QUESTION 9

There are **NO INCORRECT** answers to this question, **ALL** answers to this question will be considered correct for grading purposes

I believe I can earn an A grade in organic chemistry

- A** Never
- B** Rarely
- C** Sometimes
- D** Often
- E** Always

QUESTION 10

There are **NO INCORRECT** answers to this question, **ALL** answers to this question will be considered correct for grading purposes

I am confident that I will do well on organic chemistry tests

- A** Never
- B** Rarely
- C** Sometimes
- D** Often
- E** Always

QUESTION 11

There are NO INCORRECT answers to this question, ALL answers to this question will be considered correct for grading purposes
I believe that I can master organic chemistry knowledge and skills

- A Never
- B Rarely
- C Sometimes
- D Often
- E Always

QUESTION 12

There are NO INCORRECT answers to this question, ALL answers to this question will be considered correct for grading purposes
I'm sure I can understand organic chemistry

- A Never
- B Rarely
- C Sometimes
- D Often
- E Always