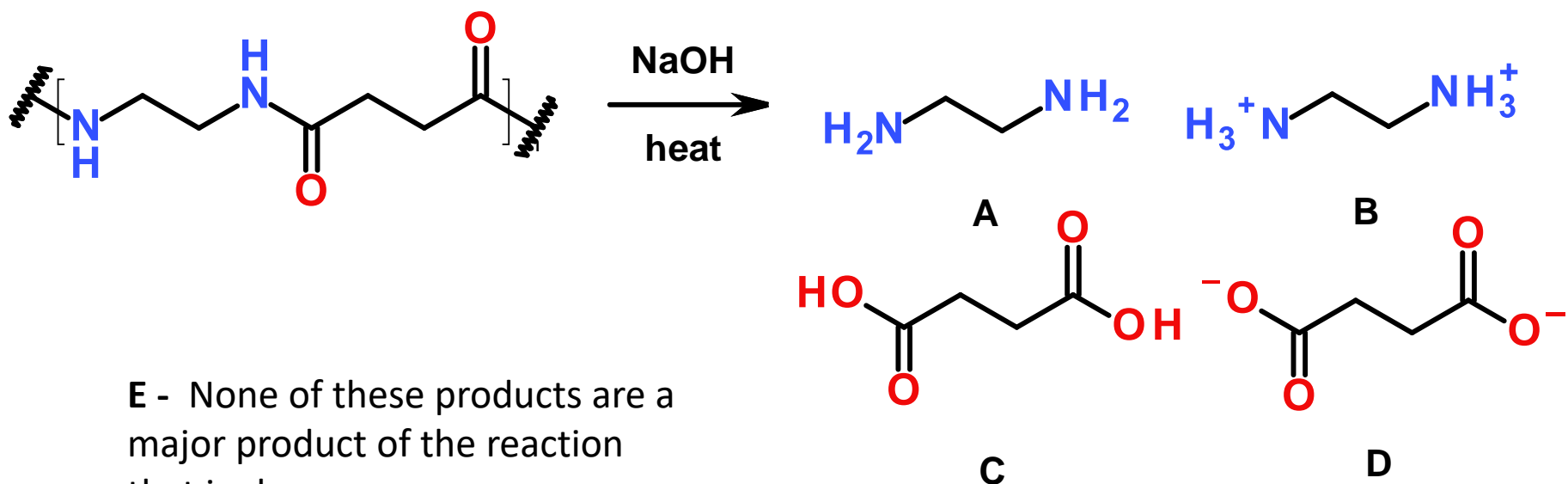


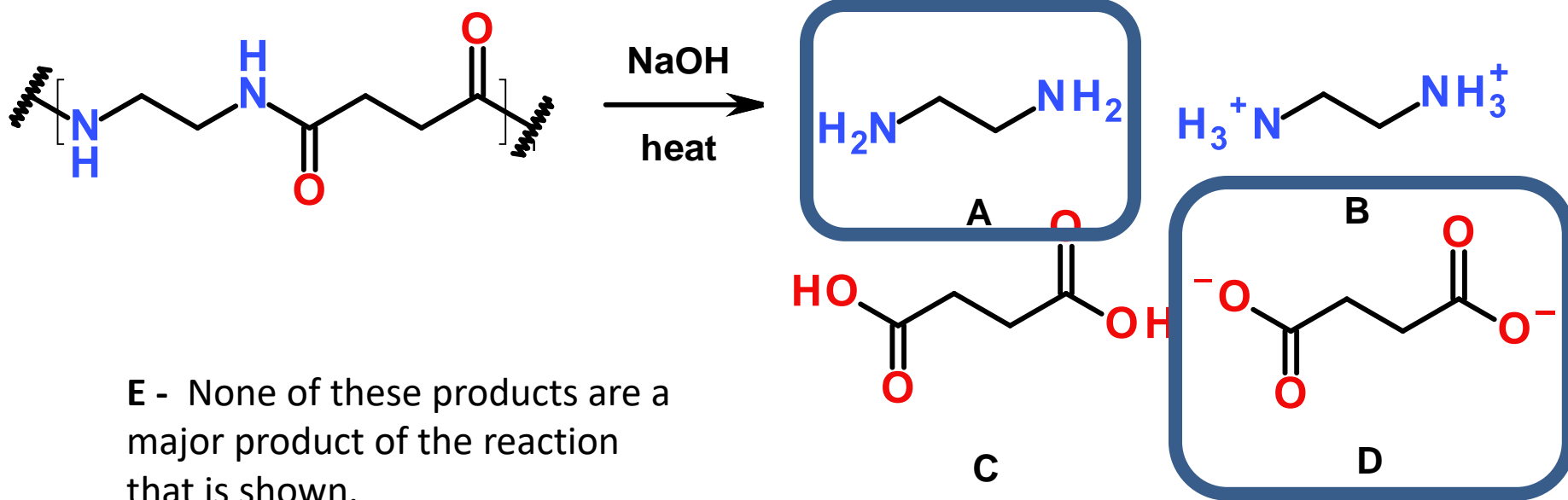
Give the major organic product(s) of the following reaction. Give your answer as a text answer, with the correct answers being listed in alphabetical order. (Example: xxxx a b)



E - None of these products are a major product of the reaction that is shown.

2016-10-17 Q1

Give the major organic product(s) of the following reaction. Give your answer as a text answer, with the correct answers being listed in alphabetical order. (Example: xxxx a b)



E - None of these products are a major product of the reaction that is shown.

2016-10-17 Q1

Exam 2

- **Time:**
 - Tuesday, October 18: 7:00 – 9:00PM OR
 - Wednesday, October 19: 7:00 – 9:00PM OR
 - Thursday, October 20: 7:00 – 10:00PM
- **Location – Soc/Anthro Testing Center**
 - Chapters will be covered in this order: Chapter 19, 12
- **Practice Exams are Posted**
 - Ex2-14-98 Practice Exam 2A
 - Ex2-14-98 Practice Exam 2B
- **Deadline for alternate arrangements is Monday, 10/17/2016 at 4:30 PM (i.e., close of business)**
 - An oral make-up exam will be required for making up the exam for all students not taking the exam on the above dates or having already made prior arrangements

Order of Coverage (Exam 2)

	Homework Assignment	Due Date
13	Ex2-07-B7-12-03A Carbox Acid Rxns	Thursday, October 6, 2016
14	Ex2-07-B7-12-03B Carbox Acid Rxns	Friday, October 7, 2016
15	Ex2-08-B7-12-04A Naming Carbox Acid Derivatives	Saturday, October 8, 2016
16	Ex2-08-B7-12-04B Naming Carbox Acid Derivatives	Sunday, October 9, 2016
17	Ex2-09-B7-12-05A Rxns Acid Chlorides	Monday, October 10, 2016
18	Ex2-09-B7-12-05B Rxns Acid Chlorides	Tuesday, October 11, 2016
19	Ex2-10-B7-12-06A Rxns Esters	Wednesday, October 12, 2016
20	Ex2-10-B7-12-06B Rxns Esters	Thursday, October 13, 2016
21	Ex2-11-B7-12-07A Rxns Amides	Friday, October 14, 2016
22	Ex2-11-B7-12-07B Rxns Amides	Saturday, October 15, 2016
23	Ex2-12-B7-12-08A Step Growth Polymers	Sunday, October 16, 2016
	All Materials for the Exam have now been covered	Ex2-11-B7-12-08A Carb Acids Mechs has been added
	Exam 2	October 18, 19, 20

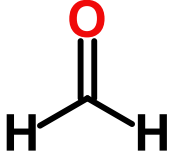
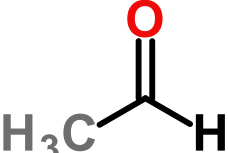
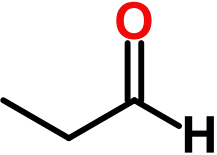
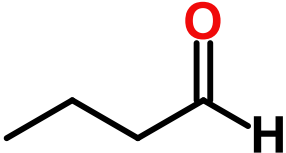
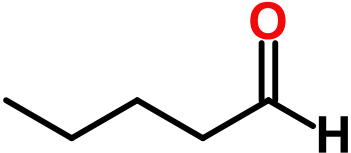
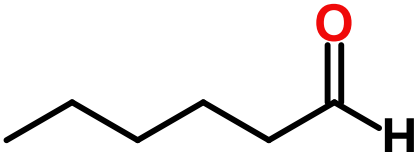
Ex3-01-B7-17-01A Ketone Aldehyde Naming	Friday, October 21
Ex3-01-B7-17-01B Aldehyde Ketone Naming	Saturday, October 22
Ex3-02-B7-17-02A Ald Ket Rxns O-Nucl	Saturday, October 22
Ex3-02-B7-17-02B Ald Ket O-Nucleophiles	Sunday, October 23
Ex3-02-B7-17-02C Ald Ket Rxns O-Nucl	Monday, October 24
Ex3-03-B7-17-03A Ald Ket with N-Nucl	Tuesday, October 25
Ex3-03-B7-17-03B Ald Ket with N-Nucl	Wednesday, October 26
Ex3-03-B7-17-03C Ald Ket with N-Nucl	Thursday, October 27
Ex3-04-B7-17-04A Ald Ket with C-Nucl	Friday, October 28
Ex3-04-B7-17-04B Ald Ket with C-Nucl	Saturday, October 29
Ex3-04-B7-17-04C Ald Ket with C-Nucl	Sunday, October 30
Ex3-05-B7-18-01 Tautomers	Sunday, October 30
Ex3-06-B7-18-02B Alpha-Bromination	Monday, October 31
Ex3-06-B7-18-02C Alpha-Bromination	Tuesday, November 1
Ex3-07-B7-18-03B Alkylation Alpha-C=O	Wednesday, November 2
Ex3-07-B7-18-03C Alkylation Alpha-C=O	Thursday, November 3
Ex3-08-B7-18-04B Malonic Ester Synthesis	Friday, November 4
Ex3-08-B7-18-04C Malonic Ester Synthesis	Saturday, November 5
Ex3-09-B7-18-05 Fatty Acids	Sunday, November 6
Exam 3	November 8, 9, 10

**Exam 3
Lecture
Planning**

Exam 3

- **Time:**
 - Tuesday, November 8: 7:00 – 9:00PM OR
 - Wednesday, November 9: 7:00 – 9:00PM OR
 - Thursday, November 10: 7:00 – 10:00PM
- **Location – Soc/Anthro Testing Center**
 - Chapters will be covered in this order: Chapter 17, 18
- **Practice Exams are Posted**
 - Ex3A Practice Exam 3A
 - Ex3B Practice Exam 3B
- **Deadline for alternate arrangements is Monday, 11/7/2016 at 4:30 PM (i.e., close of business)**
 - An oral make-up exam will be required for making up the exam for all students not taking the exam on the above dates or having already made prior arrangements

Nomenclature of Aldehydes

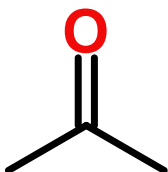
	IUPAC Name	Common Name
	Methanal	Formaldehyde
	Ethanal	Acetaldehyde
	Propanal	Propionaldehyde
	Butanal	Butyraldehyde
	Pentanal	Valeraldehyde
	Hexanal	Caproaldehyde

Ketone Nomenclature

Common

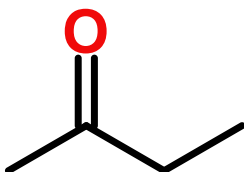
Names

IUPAC



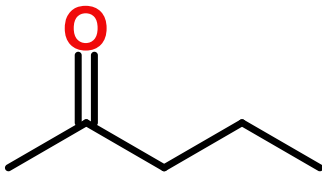
propanone

Acetone or
dimethyl ketone



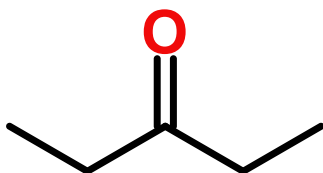
butanone

Methyl ethyl
ketone



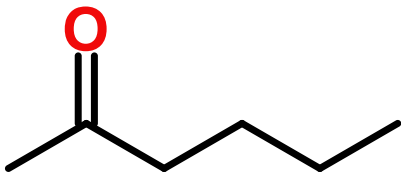
2-pentanone

Methyl propyl
ketone



3-pentanone

Diethyl ketone

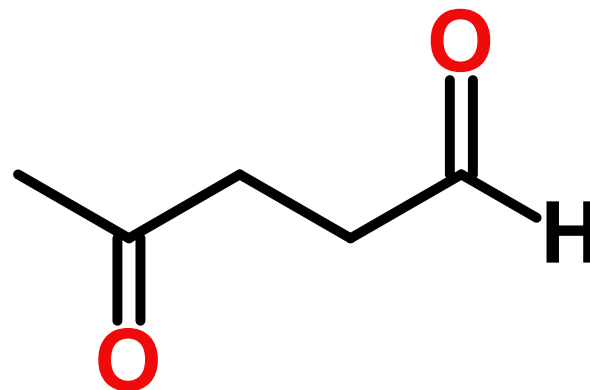


2-hexanone

Methyl Butyl Ketone

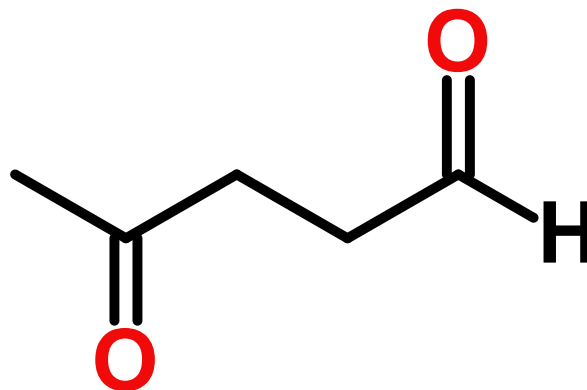
What is the IUPAC name of the following compound? 2016-10-17 Q2

- A. 4-oxohexanal
- B. 3-oxohexanal
- C. 4-oxopentanal
- D. 5-oxohexanal
- E. 3-oxopentanal
- F. 2-keto-5-carbaldehyde
- G. None of the above



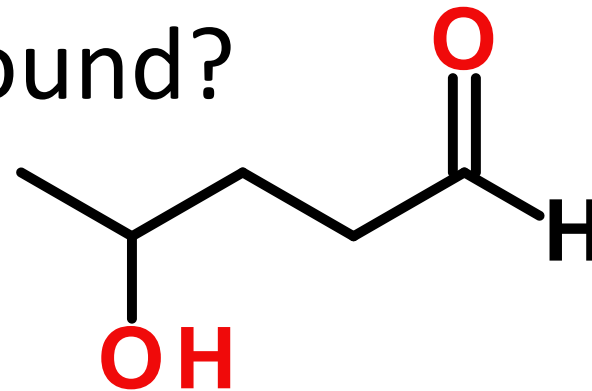
What is the IUPAC name of the following compound? 2016-10-17 Q2

- A. 4-oxohexanal
- B. 3-oxohexanal
- C. 4-oxopentanal
- D. 5-oxohexanal
- E. 3-oxopentanal
- F. 2-keto-5-carbaldehyde
- G. None of the above



What is the common name of the following compound?

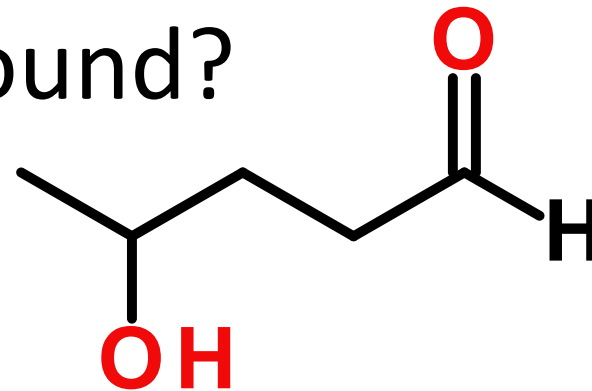
2016-10-17 Q3



- A. 2-hydroxybutanal
- B. 3-hydroxybutanal
- C. 4-hydroxybutanal
- D. 2-hydroxypentanal
- E. 3-hydroxypentanal
- F. 4-hydroxypentanal
- G. 5-hydroxypentanal
- H. 3-hydroxyhexanal
- I. 4-hydroxyhexanal
- J. 5-hydroxyhexanal
- K. α -hydroxyvaleraldehyde
- L. β -hydroxyvaleraldehyde
- M. γ -hydroxyvaleraldehyde
- N. δ -hydroxyvaleraldehyde
- O. α -hydroxycaproaldehyde
- P. β -hydroxycaproaldehyde
- Q. γ -hydroxycaproaldehyde
- R. δ -hydroxycaproaldehyde

What is the common name of the following compound?

2016-10-17 Q3

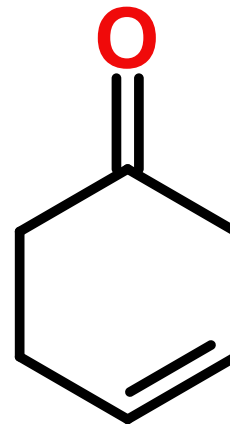


- A. 2-hydroxybutanal
- B. 3-hydroxybutanal
- C. 4-hydroxybutanal
- D. 2-hydroxypentanal
- E. 3-hydroxypentanal
- F. 4-hydroxypentanal
- G. 5-hydroxypentanal
- H. 3-hydroxyhexanal
- I. 4-hydroxyhexanal
- J. 5-hydroxyhexanal
- K. α -hydroxyvaleraldehyde
- L. β -hydroxyvaleraldehyde
- M. γ -hydroxyvaleraldehyde
- N. δ -hydroxyvaleraldehyde
- O. α -hydroxycaproaldehyde
- P. β -hydroxycaproaldehyde
- Q. γ -hydroxycaproaldehyde
- R. δ -hydroxycaproaldehyde

What is the IUPAC name of the following compound?

2016-10-17 Q4

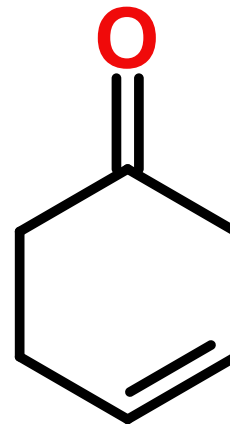
- A. 2-cyclohexenone
- B. 3-cyclohexenone
- C. 4-cyclohexenone
- D. 2-cyclohexanone
- E. 3-cyclohexanone
- F. 4-cyclohexanone
- G. None of the above



What is the IUPAC name of the following compound?

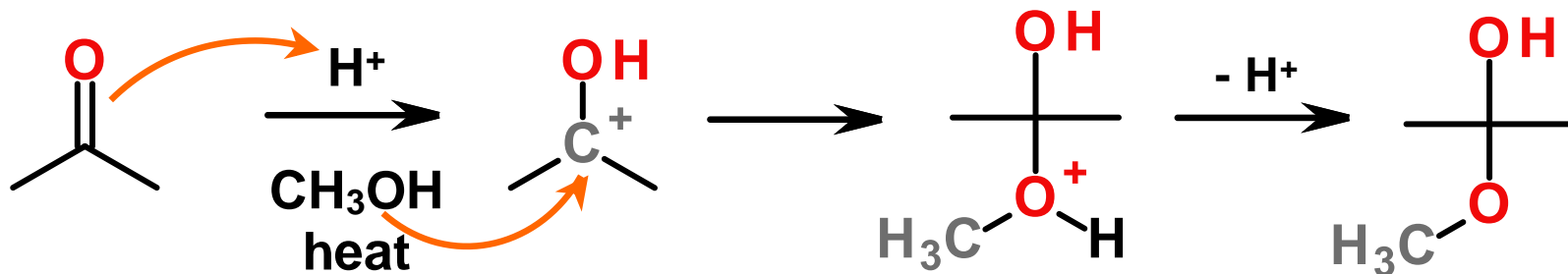
2016-10-17 Q4

- A. 2-cyclohexenone
- B. 3-cyclohexenone**
- C. 4-cyclohexenone
- D. 2-cyclohexanone
- E. 3-cyclohexanone
- F. 4-cyclohexanone
- G. None of the above

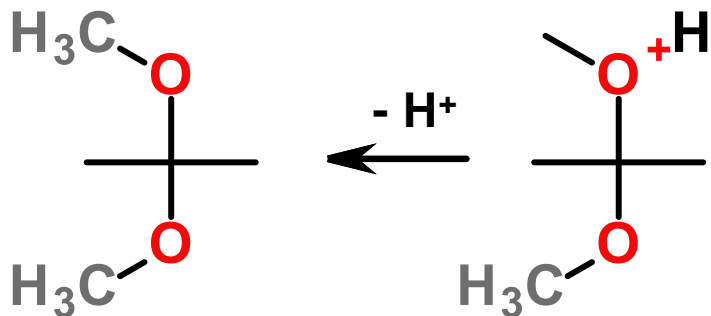


Acetal/Ketal Formation **COCOH**

Unstable under most conditions

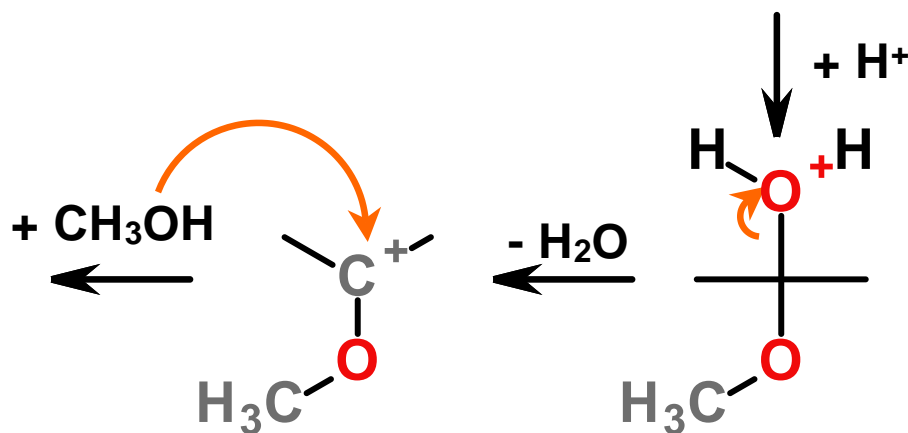


Stable under basic conditions

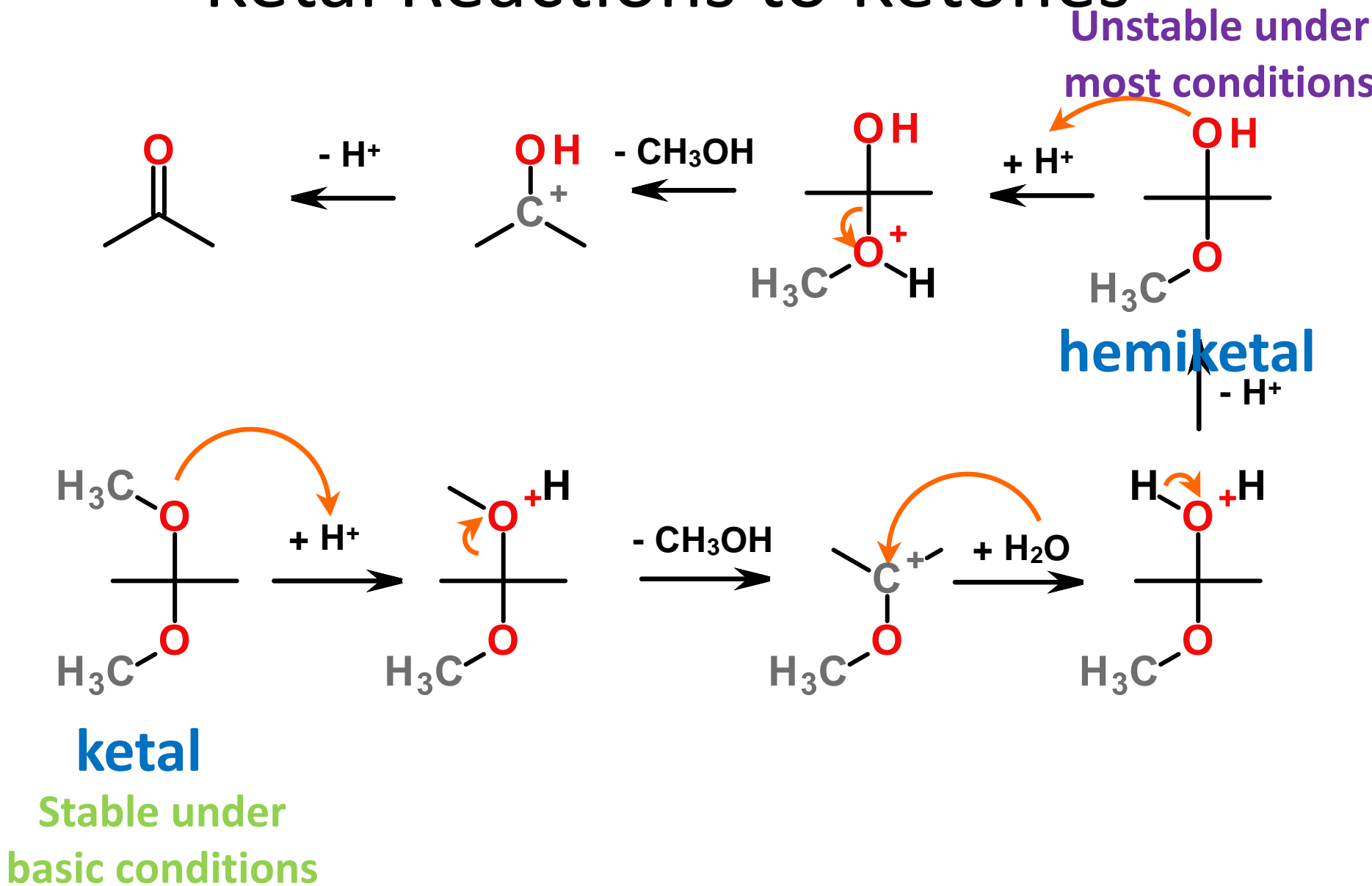


ketal
COCOC

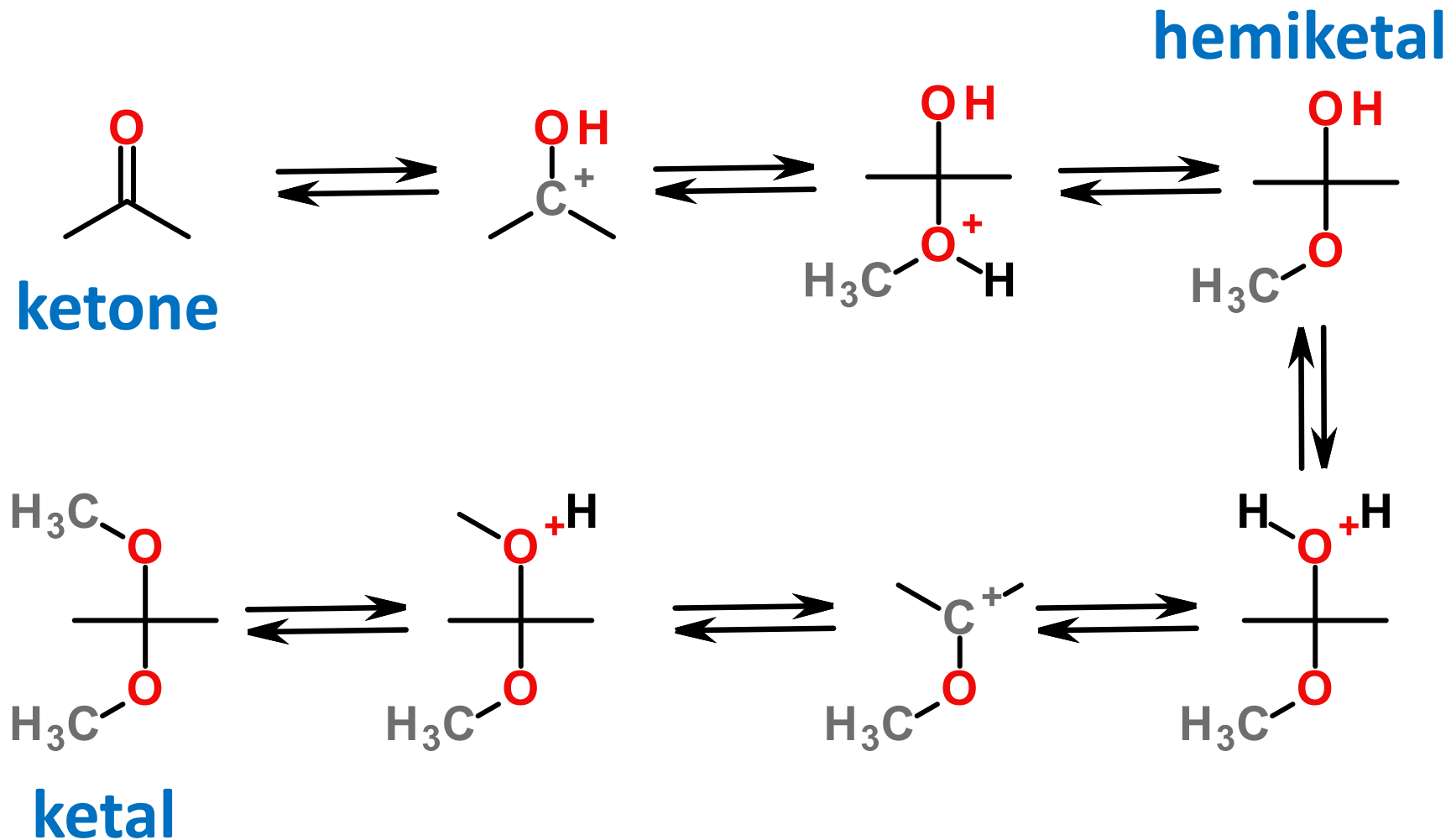
hemiketal



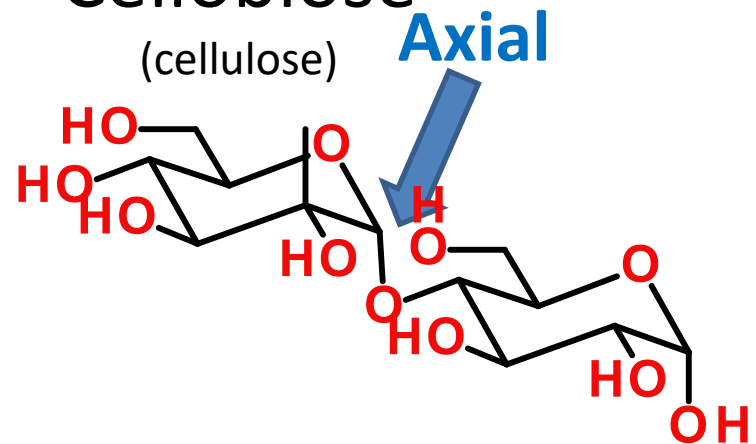
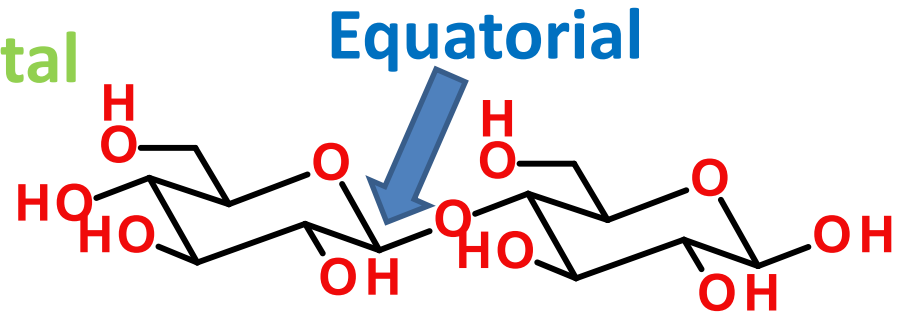
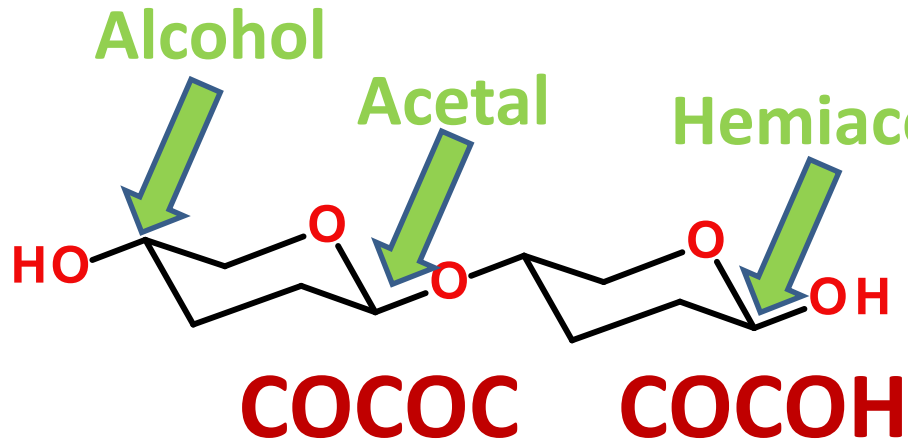
Ketal Reactions to Ketones



Ketal Reactions to Ketones

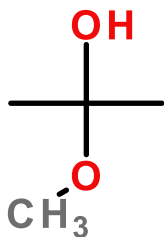
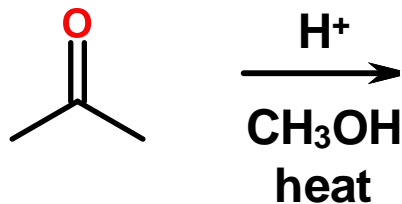


Importance of Acetals

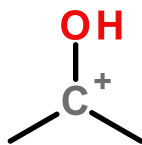


Think about this reaction in terms of mechanism. All of the intermediates of the reaction are provided. Give the intermediates in order of their appearance along the reaction coordinate. (Example: xxxx ab)

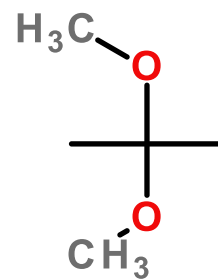
2016-10-17 Q5



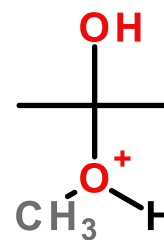
A



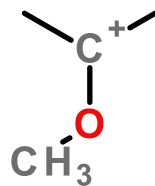
B



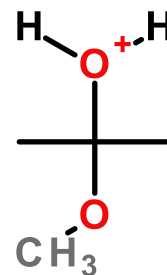
C



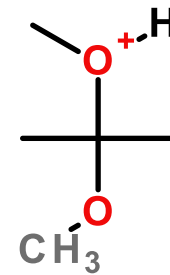
D



E



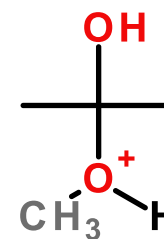
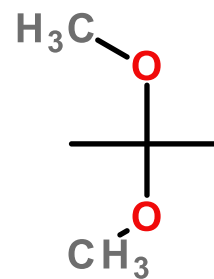
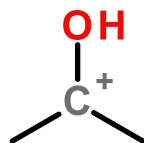
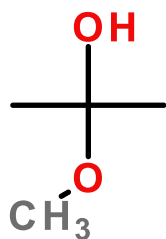
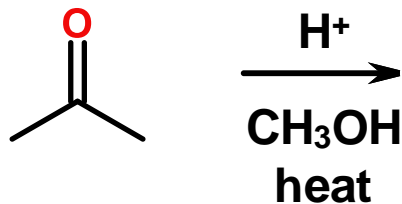
F



G

Think about this reaction in terms of mechanism. All of the intermediates of the reaction are provided. Give the intermediates in order of their appearance along the reaction coordinate. (Example: xxxx ab)

2016-10-17 Q5

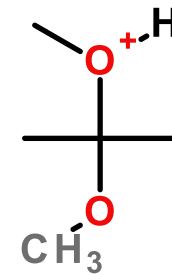
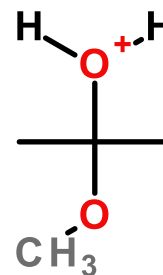
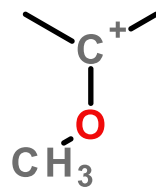


A

B

C

D



E

F

G

Correct answer = BDAFEGC