

Unit 2 - Week 1

Course outline

How to access the portal?

Week 1

- Lecture 1 : Introduction to Reaction Mechanisms
- Lecture 2 : Writing Reaction Mechanisms: Arrow pushing
- Lecture 3 : Types of Polar Reactions
- Lecture 4 : The Radical Reactions
- Quiz : Assignment 1**
- Assignment 1 Solution
- Weekly Feedback

Week 2

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Assignment 1

The due date for submitting this assignment has passed. **Due on 2019-08-14, 23:59 IST.**
As per our records you have not submitted this assignment.

1) Arrange the following groups in order of increasing electronegativity on the Pauling Scale **1 point**

- a) $-\text{C}\equiv\text{C}\text{H}$ b) $-\text{OH}$ c) $-\text{CH}_3$ d) $-\text{Ph}$

- $b < c < d < a$
 $b < d < c < a$
 $c < d < a < b$
 $c < b < d < a$

No, the answer is incorrect.
Score: 0
Accepted Answers:
 $c < d < a < b$

2) Select the pair of compounds that are related to each other as resonance structures **1 point**

CC(=O)C CC(O)=C

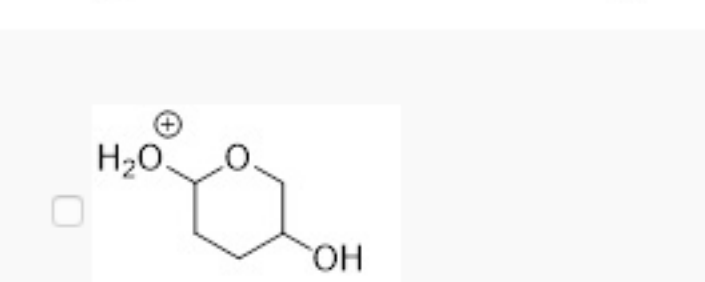
CC(=O)C CC(=O)C

Oc1ccncc1 Oc1ccc[nH]1

Oc1ccc(O)cc1 [O-]c1ccc(O)cc1

No, the answer is incorrect.
Score: 0
Accepted Answers:
CC(=O)C CC(=O)C
Oc1ccc(O)cc1 [O-]c1ccc(O)cc1

3) Which of the following is/are intermediate(s) leading to the product B in the reaction given? **0 points**



- [O-]c1ccc(O)cc1
- Oc1ccc(O)cc1
- Oc1ccoc1
- Oc1ccc(O)cc1

No, the answer is incorrect.
Score: 0
Accepted Answers:
Oc1ccc(O)cc1
[O-]c1ccc(O)cc1

4) Which is the most stable among the following taking into account hyperconjugation? **1 point**

- CC=C
- CC=C
- CC(C)=C

No, the answer is incorrect.
Score: 0
Accepted Answers:
CC=C

5) Which of the following can be classified as electron sources? **1 point**

- Carbocations
- Enolate ion
- Carbon centre in a carbonyl group
- Oxygen non bonding electrons in a carbonyl group
- Lewis acids

No, the answer is incorrect.
Score: 0
Accepted Answers:
Enolate ion
Oxygen non bonding electrons in a carbonyl group

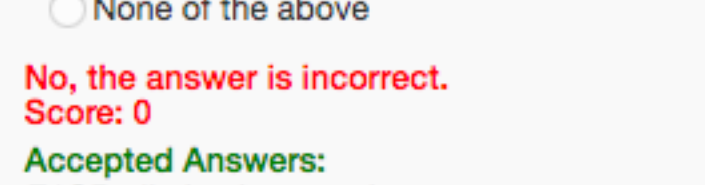
6) What is the major product of the following reaction? **1 point**



- O=C1C=CC=C1
- O=C1C=CC=C1
- O=C1C=CC=C1
- O=C1C=CC=C1

No, the answer is incorrect.
Score: 0
Accepted Answers:
O=C1C=CC=C1

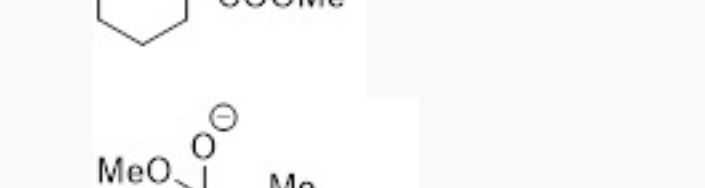
7) The reaction below for conversion of compound C to compound D can be classified as **1 point**



- E1 elimination reaction
- E2 elimination reaction
- E1CB elimination reaction
- None of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
E1CB elimination reaction

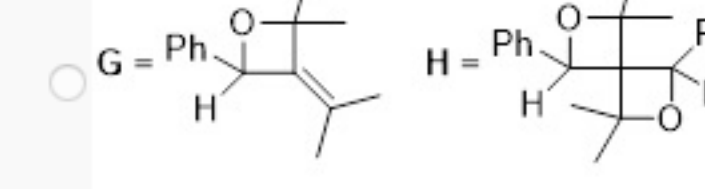
8) Which of the following intermediates leads to the product F in the given transformation? **1 point**



- [O-]C1CCCC1C(=O)OC
- CC(=O)C1CCCC1C(=O)OC
- CC(=O)C1CCCC1C(=O)OC
- CC(=O)C1CCCC1C(=O)OC
- CC(=O)C1CCCC1C(=O)OC

No, the answer is incorrect.
Score: 0
Accepted Answers:
CC(=O)C1CCCC1C(=O)OC

9) What are the major products G and H for the reaction below involving radicals? **1 point**



- G = CC(C)(O)c1ccccc1 H = CC(C)(O)c1ccccc1
- G = CC(C)(O)c1ccccc1 H = CC(C)(O)c1ccccc1
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- G = CC(C)(O)c1ccccc1 H = CC(C)(O)c1ccccc1

No, the answer is incorrect.
Score: 0
Accepted Answers:
G = CC(C)(O)c1ccccc1 H = CC(C)(O)c1ccccc1

10) Which of the following is an example of a proper arrow-pushing representation? **1 point**

- CC(=O)OCC $\xrightarrow{\text{H}^+}$ CC(=O)OCC + OH
- CC(=O)OCC $\xrightarrow{\text{H}^+}$ CC(=O)OCC
- CC(=O)OCC $\xrightarrow{\text{H}^+}$ CC(=O)OCC
- CC(=O)OCC $\xrightarrow{\text{H}^+}$ CC(=O)OCC

No, the answer is incorrect.
Score: 0
Accepted Answers:
CC(=O)OCC $\xrightarrow{\text{H}^+}$ CC(=O)OCC

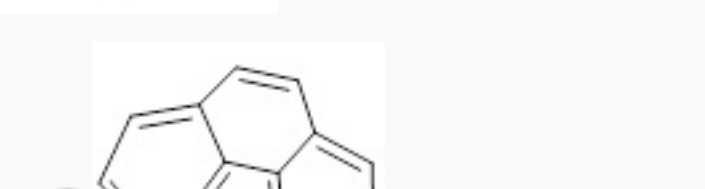
11) How many total resonance structures can be drawn for the anion J? **1 point**



- 2
- 3
- 4
- 5

No, the answer is incorrect.
Score: 0
Accepted Answers:
4

12) Which of the following is a stable polarized resonance structure for the molecule K? **1 point**



- [O-]c1ccc2c(c1)ccc3c2ccc4c3ccc5c4ccc6c5ccc7c6ccc8c7ccc9c8ccc19
- [O-]c1ccc2c(c1)ccc3c2ccc4c3ccc5c4ccc6c5ccc7c6ccc8c7ccc9c8ccc19
- [O-]c1ccc2c(c1)ccc3c2ccc4c3ccc5c4ccc6c5ccc7c6ccc8c7ccc9c8ccc19

No, the answer is incorrect.
Score: 0
Accepted Answers:
[O-]c1ccc2c(c1)ccc3c2ccc4c3ccc5c4ccc6c5ccc7c6ccc8c7ccc9c8ccc19