

# Unit 5 - Week 4

## Course outline

### How to access the portal?

### Week 1

### Week 2

### Week 3

### Week 4

Lecture 16 : Copper-Oxygen chemistry- Part III - Reactivity summary

Lecture 17 : Iron Catalyzed oxidation of unactivated sp<sup>3</sup> C-H bonds-Part I

Lecture 18 : Iron catalyzed oxidation of unactivated sp<sup>3</sup> C-H bonds-Part II

Lecture 19 : Iron catalyzed oxidation of unactivated sp<sup>3</sup> C-H bonds-Part III

Lecture 20 : Nitrous oxide reductase and its model complex

Quiz : Week 4 Assignment 4

Week 4 Assignment 4 solution

Weekly Feedback

### Week 5

### Week 6

### Week 7

### Week 8

Weekly Feedback

Text Transcription

Download Videos

## Week 4 Assignment 4

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment.

Due on 2019-08-28, 23:59 IST.

### Week 4 Assignment 4

1) In Iron mediated hydroxylation of organic substrate Fe(V)Oxo intermediate abstract hydrogen atom from the organic substrate. **True or False.** 1 point

- True  
 False

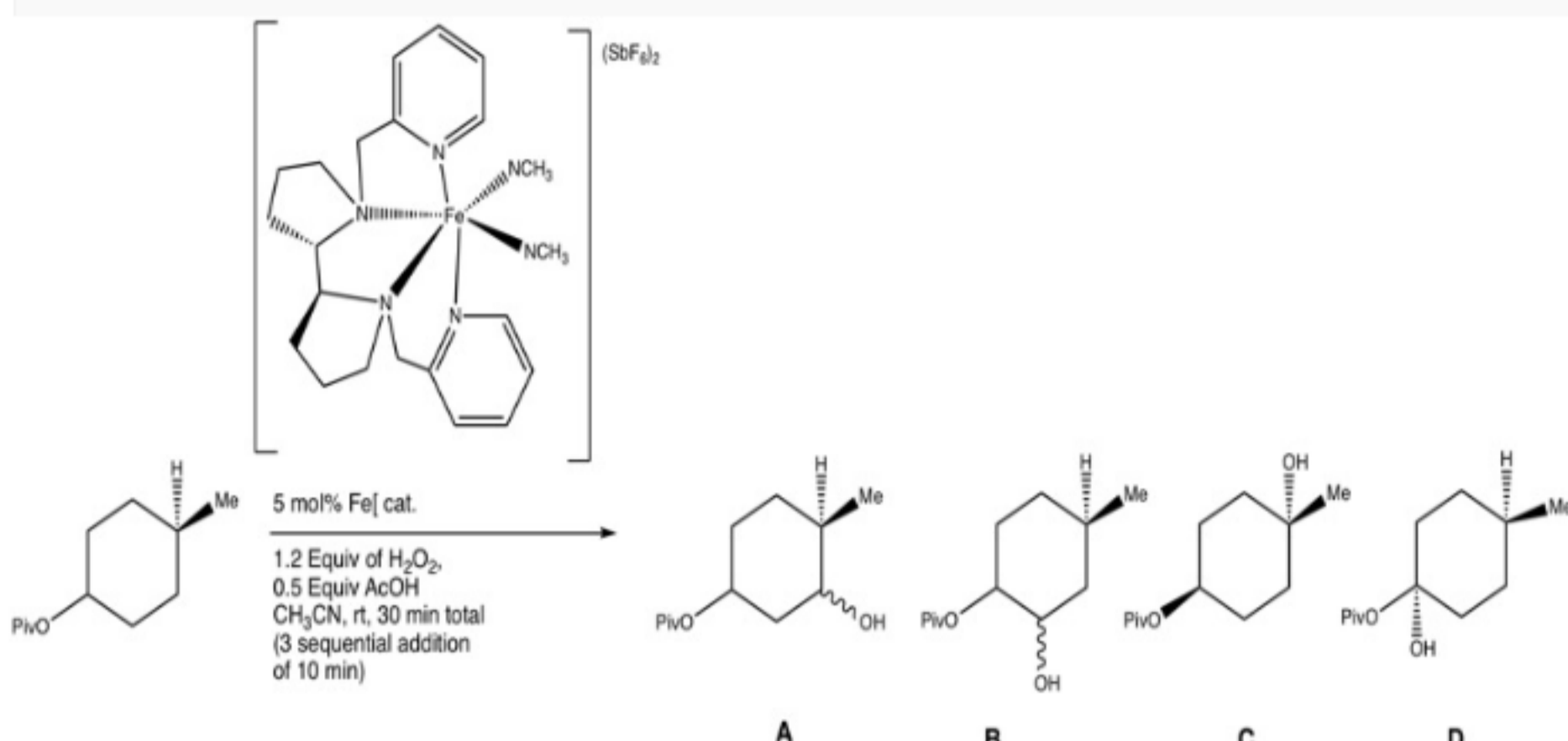
No, the answer is incorrect. Score: 0  
Accepted Answers: True

2) In the organic substrate shown in question 3 (please refer to question 3 below) which type of C-H bond hydroxylated selectively by Fe catalyst? 1 point

- Primart  
 Secondary  
 Tertiary  
 Quarternary

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

3) Predict the product for following reaction. 1 point



- A  
 B  
 C  
 D

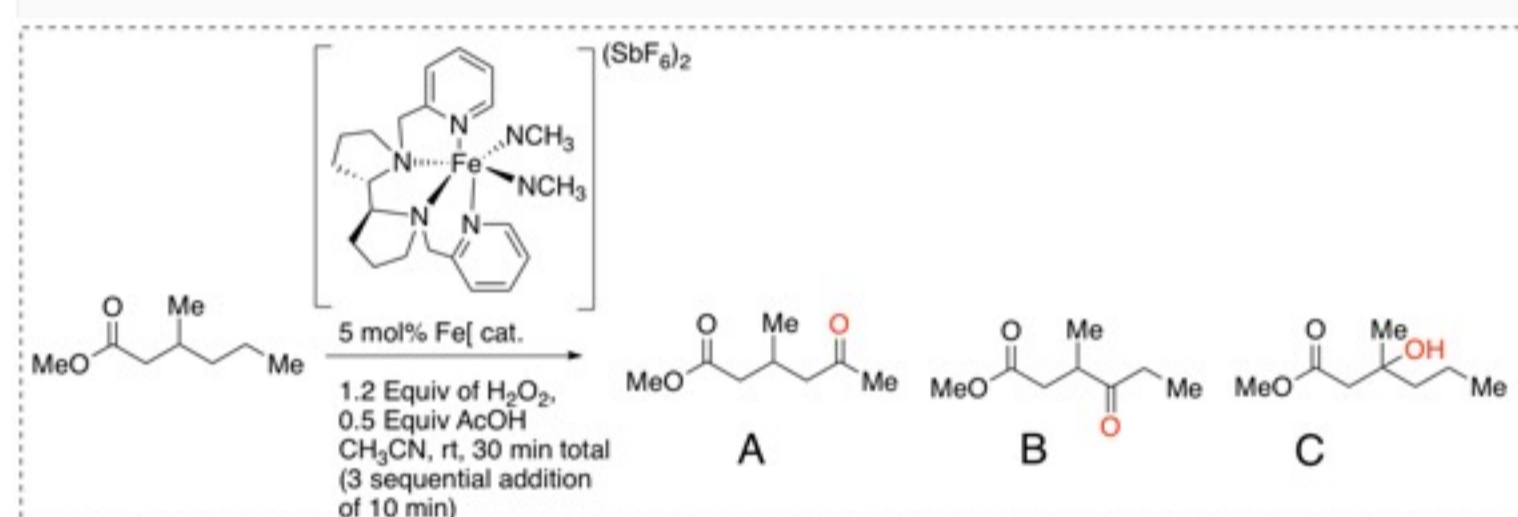
No, the answer is incorrect. Score: 0  
Accepted Answers: C

4) What would be the reactivity preference in sp<sup>3</sup> aliphatic substrate containing primary, secondary and tertiary C-H bonds? 1 point

- 1° > 2° > 3°  
 3° > 2° > 1°  
 2° > 1° > 3°  
 3° > 1° > 2°

No, the answer is incorrect. Score: 0  
Accepted Answers: 3° > 2° > 1°

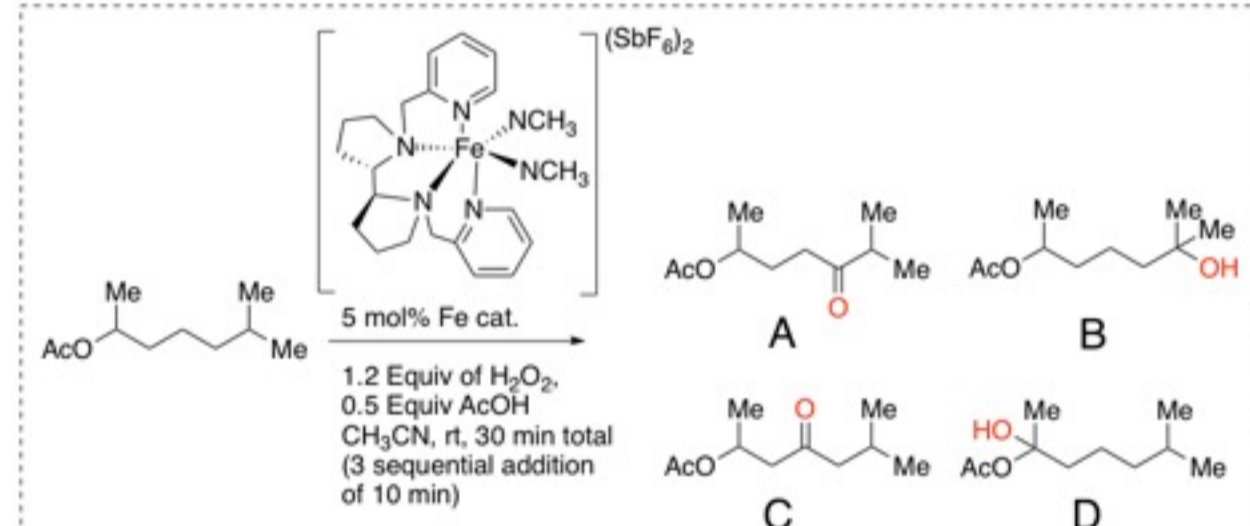
5) What would be the major product in following reaction? 1 point



- C  
 B  
 A  
 None

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

6) Following organic substrate when reacted with Fe catalyst gives selectively one product. Which one it would be? 1 point



- A  
 B  
 C  
 D

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

7) How many copper centers are bridged with the sulfide in the nitrous oxide reductase enzyme? 1 point

- 3  
 4  
 2  
 6

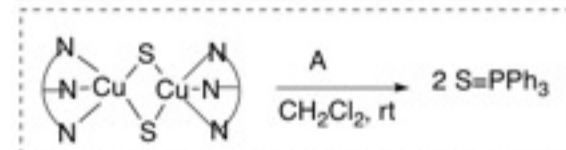
No, the answer is incorrect. Score: 0  
Accepted Answers: 4

8) How many electron and protons are required to convert nitrous oxide to Nitrogen? 1 point

- 1H & 1e  
 4H & 2e  
 2H & 4e  
 2H & 2e

No, the answer is incorrect. Score: 0  
Accepted Answers: 2H & 2e

9) Predict the reagent A in this reaction. 1 point



- 3 PPh<sub>3</sub>  
 2 PPh<sub>3</sub>  
 4 PPh<sub>3</sub>  
 PPh<sub>3</sub>

No, the answer is incorrect. Score: 0  
Accepted Answers: 2 PPh<sub>3</sub>

10) Side-on disulfides are electrophilic in nature. True or False. 1 point

- True  
 False

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