

## Unit 4 - Week 3

### Course outline

#### How to access the portal?

#### Week 1

#### Week 2

#### Week 3

● Lecture 11 : Hemerythrin and azidomethemerythrin

● Lecture 12 : Dioxygen reactivity in copper

● Lecture 13 : Cu-O2 intermediates

● Lecture 14 : Copper-Oxygen chemistry- Part I-Mononuclear copper-oxygen

● Lecture 15 : Copper-Oxygen chemistry- Part II-Cu-O2 complexes

#### ○ Quiz : Week 3 Assignment 3

○ Assignment 3 solution

○ Weekly Feedback

#### Week 4

#### Week 5

#### Week 6

#### Week 7

#### Week 8

#### Weekly Feedback

#### Text Transcription

#### Download Videos

## Week 3 Assignment 3

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

**Due on 2019-08-21, 23:59 IST.**

### Week 3 Assignment 3

1) What is oxidation states of diiron in Oxyhemerythrin after forming diironhydroperoxo species? 1 point

- 1,1  
 1,2  
 2,3  
 3,3

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
3,3

2) What would be oxygen-oxygen stretch (in wave number) and bond distance (in Angstrom) for oxidized oxygen? 1 point

- 1580, 1.21  
 1905, 1.12  
 1097, 1.12  
 1200, 1.33

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
1905, 1.12

3) Oxyhemocyanine gives specific UV-Visible spectra at following wavelength. 1 point

- 395  
 295  
 330  
 345

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
345

4) What will be nature of this u-1,2-peroxo copper species? 1 point

- Nucleophilic  
 Electrophilic  
 Neutral  
 None

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
Nucleophilic

5) What is Fe-O-Fe stretch in deoxyhemerythrin? 1 point

- 590  
 386  
 486  
 664

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
486

6) In case of peptidylglycine alpha hydroxylating monooxygenase PHM it is not the C terminus backbone of the protein residue which is getting hydroxylated selectively by using the active copper oxygen species. 1 point

- True  
 False

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
False

7) Choose two correct statement. 1 point

- According to Klinman's model, superoxo is active species in substrate hydroxylation  
 According to Klinman's model hydroperoxo is active species in substrate hydroxylation  
 According to Klinman's model copper superoxo species is abstracting the hydrogen atom which is key step in substrate hydroxylation  
 According to Klinman's model copper hydroperoxo species is abstracting the hydrogen atom which is key step in substrate hydroxylation

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
According to Klinman's model, superoxo is active species in substrate hydroxylation  
According to Klinman's model copper superoxo species is abstracting the hydrogen atom which is key step in substrate hydroxylation

8) What would be distance (in Angstrom) between O-O bond in  $O_2^+$  ? 1 point

- 1.12  
 1.13  
 1.51  
 1.21

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
1.12

9) Azidohemerythrin is active form of protein? True or False. 1 point

- True  
 False

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
False

10) Hr (Hemerythrin, Fe) is an  $O_2$ transport protein. True or False 1 point

- True  
 False

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
True