

## Unit 4 - Week 02

### Course outline

How does an NPTEL online course work?

### Assignment 0

### Week 01

### Week 02

Lecture 06: Biological order and energy - I

Lecture 07: Biological order and energy-II

Lecture 08: Biological order and energy-III

Lecture 09: Summary of thermodynamical parameters-I

Lecture 10: Summary of thermodynamical parameters-II

Quiz : Assignment 2

Feedback For Week 2

Assignment 2 - Solutions

### Week 03

### Week 04

Text Transcripts

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## Assignment 2

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

**Due on 2020-03-11, 23:59 IST.**

1) ATP, adenosine triphosphate, consists of three units: adenine, sugar, and triphosphate, Adenine here is a

1 point

- sulfurous base  
 carbonaceous acid  
 nitrogenous base  
 oxygenated acid

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
nitrogenous base

2) The sugar component of ATP has \_\_\_\_\_ number of carbons

1 point

- 1  
 3  
 5  
 7

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
5

3) The phosphate component of ATP has \_\_\_\_\_ structure

1 point

- pyramidal  
 tetrahedral  
 trigonal  
 trigonal bipyramidal

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
tetrahedral

4) In Urey-Miller experiment, on obtaining a mix of amino acids, how were the constituent amino acids separated from the mixture

1 point

- centrifugation  
 paper chromatography  
 gas chromatography coupled mass spectrometry  
 decantation

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
paper chromatography

5) Which of these gases were avoided in Urey-Miller experiment to emulate primitive earth

1 point

- Ammonia  
 Hydrogen  
 Methane  
 Oxygen

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
Oxygen

6) For UV ray of wavelength 250 nm (given plank's constant =  $6.62607004 \times 10^{-34} \text{ m}^2 \text{ kg /s}$ ), the associated energy would be

1 point

- $2.65 \times 10^{-25} \text{ kgm/s}$   
  $3.65 \times 10^{-35} \text{ kgm/s}$   
  $2.65 \times 10^{-35} \text{ kgm/s}$   
  $3.65 \times 10^{-25} \text{ kgm/s}$

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
 $2.65 \times 10^{-25} \text{ kgm/s}$

7) Entropy is represented by \_\_\_\_\_

1 point

- H  
 S  
 C  
 A

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
S

8) A closed system is one that exchanges

1 point

- energy  
 matter  
 energy and matter  
 light

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
energy

9) Which of these is not an archebacteria.

1 point

- Halophiles  
 Sulfur bacteria  
 Thermo-acidophilic  
 Spirochete

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
Spirochete

10) Change in enthalpy indicates if a reaction is \_\_\_\_\_ but does not indicate \_\_\_\_\_ of a reaction

1 point

- spontaneous, rate  
 possible, heat content  
 exothermic or endothermic, spontaneity  
 spontaneous, heat content

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
exothermic or endothermic, spontaneity