

Unit 2 - Week 0 Assignment 0

Course outline

How does an NPTEL online course work?

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Assignment 0

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

Due on 2020-01-27, 23:59 IST.

1) Choose the **INCORRECT** statement out of the followings:

1 point

- a) Only L amino acids are found in the biological system
- b) Glycine is optically inactive
- c) Tyrosine is a modified amino acid
- d) Lysine is an essential amino acid

- a)
 b)
 c)
 d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

c)

2) For amino acids with neutral R groups, at any *pH* below the *pI* of the amino acid, the amino acids in solution are most likely to have

1 point

- a) a net negative charge
- b) a net positive charge
- c) no net charge
- d) a charge dependent on the *pI* of the amino acid

- a)
 b)
 c)
 d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

b)

3) Which of the following types of non-covalent bonds or interactions is thought to be primarily responsible for driving the three-dimensional folding of a protein?

1 point

- a) Ionic bonds
- b) Hydrogen bonds
- c) van der Waals Interactions
- d) Hydrophobic Interactions

- a)
 b)
 c)
 d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

d)

4) A dipeptide has

1 point

- a) 2 amino acids and 2 peptide bond
- b) 2 amino acids and 1 peptide bonds
- c) 2 amino acids and 3 peptide bonds
- d) 3 amino acids and 2 peptide bonds

- a)
 b)
 c)
 d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

b)

5) Glycolysis is the name given to the pathway involving the conversion of:

1 point

- a) glycogen to glucose-6-phosphate
- b) glycogen or glucose to fructose
- c) glycogen or glucose to pyruvate or lactate
- d) glucose or fatty acids to pyruvate or acetyl CoA

- a)
 b)
 c)
 d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

c)

6) Aerobic resynthesis of ATP occurs:

1 point

- a) in the mitochondria in a process called oxidative phosphorylation
- b) in the mitochondria in a process called glycogenolysis
- c) in the cytosol
- d) in the sarcoplasmic reticulum

- a)
 b)
 c)
 d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

a)

7) How many CO₂ and ATP molecules are formed during one complete turn of the tricarboxylic acid cycle (Krebs cycle)?

1 point

- a) 2CO₂ and 2ATP
- b) 2CO₂ and 1ATP
- c) 2CO₂ and 12ATP
- d) 1CO₂ and 5ATP

- a)
 b)
 c)
 d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

b)

8) The process of translation requires the presence of:

1 point

- a) mRNA, tRNA and ribosomes
- b) mRNA, ribosomes and RNA polymerase
- c) DNA, mRNA and RNA polymerase
- d) DNA, chromatin and amino acids

- a)
 b)
 c)
 d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

a)

9) Which of the following Vitamins helps in coagulation of blood?

1 point

- a) Vitamin A
- b) Vitamin C
- c) Vitamin K
- d) Vitamin D

- a)
 b)
 c)
 d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

c)

10) The most abundant RNA in the cell is

1 point

- a) t-RNA threonine
- b) m-RNA
- c) t-RNA
- d) r-RNA

- a)
 b)
 c)
 d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

d)

11) The three-dimensional structure of proteins can be determined by which of the following methods:

1 point

- I. Nuclear magnetic resonance
- II. X-ray crystallography
- III. Linear Dichroism

- a) I
- b) I and III
- c) I and II
- d) II and III

- a)
 b)
 c)
 d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

c)

12) The rate determining step of Michaelis-Menten kinetics is

1 point

- a) the [ES] complex dissociation step to produce products
- b) the [ES] complex formation step
- c) the product formation step
- d) the [ES] complex dissociation step back to reactants

- a)
 b)
 c)
 d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

a)

13) The enzyme ptyalin used for the digestion of food is present in

1 point

- a) Saliva
- b) Blood
- c) Intestines
- d) Adrenal glands

- a)
 b)
 c)
 d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

a)

14) Which of the following is least likely to result in protein denaturation?

1 point

- a) Altering net charge by changing pH
- b) Changing the salt concentration
- c) Disruption of weak interactions by boiling
- d) Exposure to detergents

- a)
 b)
 c)
 d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

b)

15) Which of the following is not known to be involved in the process of assisted folding of proteins?

1 point

- a) Chaperones
- b) Disulfide interchange
- c) Heat shock proteins
- d) Peptide bond hydrolysis

- a)
 b)
 c)
 d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

d)