

Unit 4 - Week 2: Nucleic acids and proteins

Course outline

How does an NPTEL online course work?

Week 0: Prerequisite

Week 1: Nucleic acids and proteins

Week 2: Nucleic acids and proteins

- Lec 4 : Amino acids and Proteins
- Lec 5 : Protein 3D structures, folding and denaturation
- Lec 6 : Chemical synthesis pyrimidine nucleobases
- Quiz : Assignment 2
- Lecture notes: week 2
- weekly feedback form for week 2
- Solution for Assignment "2"

Week 3 : Synthesis of Nucleobases and Nucleotides

Week 4 : DNA Replication, Polymerases, DNA Sequencing and PCR

Week 5 : DNA Replication, Polymerases, DNA Sequencing and PCR

Week 6: DNA damage, mutation and cancer

Week 7: DNA to proteins: transcription, translation and genetic code`

Week 8: Protein Sequencing and Solid Phase Peptide Synthesis (SPPS)

Week 9: Chemical Synthesis of Peptides and its therapeutic applications; Spectroscopic techniques for biomolecules.

Week 10: Modern techniques for biomolecules study, purification and characterization; Molecular probes

Week 11: Molecular probes and Chemistry of carbohydrates

Week 12: Chemistry of carbohydrates and Recap

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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 2020-02-12, 23:59 IST.

1) Among the following, the amino acids with 'R' configuration is:

1 point

- (a) Alanine
- (b) Tryptophan
- (c) Proline
- (d) Cystein

No, the answer is incorrect.
Score: 0

Accepted Answers:
(d) Cystein

2) Number of optically active centres for a Ala-Ala dipeptide is:

1 point

- (a) 2
- (b) 1
- (c) 0
- (d) 4

No, the answer is incorrect.
Score: 0

Accepted Answers:
(a) 2

3) The amino acids that will exhibit three neutralization points when titrated against NaOH is:

1 point

- (a) Alanine and Valine
- (b) Aspartic acid and Leucine
- (c) Arginine and Aspartic acid
- (d) Valine and Isoleucine

No, the answer is incorrect.
Score: 0

Accepted Answers:
(c) Arginine and Aspartic acid

4) The amino acid that is susceptible to form a dimer is:

1 point

- (a) Lysine
- (b) Cystein
- (c) Methionine
- (d) Proline

No, the answer is incorrect.
Score: 0

Accepted Answers:
(b) Cystein

5) The correct statements from the following are:

2 points

- (a) Protein folding is a spontaneous process
- (b) Presence of p- mercaptoethanol will inhibit protein synthesis
- (c) Presence of p- mercaptoethanol will favour protein synthesis
- (d) Protein folding requires high energy

No, the answer is incorrect.
Score: 0

Accepted Answers:
(a) Protein folding is a spontaneous process
(b) Presence of p- mercaptoethanol will inhibit protein synthesis

6) The PI of Ala, Arg & Glu will be of the order:

2 points

- (a) Ala> Arg> Glu
- (b) Arg> Ala> Glu
- (c) Glu> Arg> Ala
- (d) Glu> Ala> Arg

No, the answer is incorrect.
Score: 0

Accepted Answers:
(b) Arg> Ala> Glu

7) Denaturation of a protein will disrupt:

2 points

- (a) Primary Structure
- (b) Secondary Structure
- (c) Tertiary Structure

No, the answer is incorrect.
Score: 0

Accepted Answers:
(b) Secondary Structure
(c) Tertiary Structure