Unit 9 - Week 7: DNA to proteins: transcription, translation and genetic code`

Course outline

How does an NPTEL online course work?

Week 0: Prerequisite

Week 1: Nucleic acids and proteins

Week 2: Nucleic acids and proteins

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`

- Lec 20: Transcription - The transfer of genetic information from DNA to mRNA
- Lec 21: Translation - The transfer of genetic information from mRNA to protein I
- Lec 22: Translation - The transfer of genetic information from mRNA to protein II
- Quiz : Assignment 7
- Weekly feedback form for week 7
- Lecture notes: Week 7

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

Download Videos

Assignment 7

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

Due on 2020-03-18, 23:59 IST.

1) Peptidyl transferase for the synthesis of peptide bond is located in the: ***1 point***

- Small subunit of ribosome
- Large subunit of ribosome
- tRNA anticodon
- Near 5′ untranslated region

No, the answer is incorrect.
Score: 0

Accepted Answers:
Large subunit of ribosome

2) A new peptide bond is formed when: ***2 points***

- Free amino acid at E-site reacts with A-site
- Free amino acid at A-site reacts with P-site
- Free amino acid at A-site reacts with E-site
- Free amino acid at P-site reacts with E-site

No, the answer is incorrect.
Score: 0

Accepted Answers:
Free amino acid at A-site reacts with P-site

3) Two of the arms of tRNA loop _____ and _____ has ribosome recognition site. ***2 points***

- D-loop (Dihydro U loop), TΨC loop
- Anticodon loop, TΨC loop
- Acceptor stem, D-loop
- TΨC loop, Anticodon loop

No, the answer is incorrect.
Score: 0

Accepted Answers:
D-loop (Dihydro U loop), TΨC loop

4) Enzyme use for the attachment of appropriate amino acids onto its tRNA is, ***1 point***

- Peptidyl transferase
- Aminoacyl tRNA synthetase
- RNA polymerase
- Reverse transcriptase

No, the answer is incorrect.
Score: 0

Accepted Answers:
Aminoacyl tRNA synthetase

5) Protein folding starts alongside with the elongation of the peptide chain at the time of translation. ***1 point***

- True
- False

No, the answer is incorrect.
Score: 0

Accepted Answers:
True

6) Which amino acid starts protein synthesis in eukaryotes as well as in prokaryotes ***1 point***

- Lysin
- Phenylalanine
- Methionine
- Tryptophan

No, the answer is incorrect.
Score: 0

Accepted Answers:
Methionine

7) Identify the nonsense codon: ***2 points***

- [ ] UAA
- [ ] AUG
- [ ] UGA
- [ ] AUU

No, the answer is incorrect.
Score: 0

Accepted Answers:
UAA
UGA