

Unit 5 - Week 3 :

Course outline

How to access the portal?

Week 0 Assignment 0

Week 1 :

Week 2 :

Week 3 :

- Lecture 10 : Hierarchical structure of proteins: Secondary, tertiary and quaternary structure

- Lecture 11 : Ramachandran plot and protein purification techniques

- Lecture 12 : Protein purification techniques (continued)..

- Lecture 13 : Introduction to Enzymes and its kinetics

- Lecture 14 : Enzyme catalysed reactions and introduction to catalytic activity of proteases

 Quiz : Assignment 3

 Feedback for Week 3

Week 4 :

Week 5 :

Week 6 :

Week 7 :

Week 8 :

Week 9 :

Week 10 :

Week 11 :

Week 12 :

DOWNLOAD VIDEOS

Assignment Solution

Text Transcripts

Live Session

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.

1) What is the primary interaction in stabilizing secondary structure of a protein?

1 point

- a. van der Waals forces
- b. Hydrogen bonding
- c. Covalent bond
- d. Hydrophobic bond

-
- a.
-
-
- b.
-
-
- c.
-
-
- d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

b.

2) How many amino acid residues are there in per turn of α -helix?

1 point

- a. 3.6
- b. 4.6
- c. 3.0
- d. 2.5

-
- a.
-
-
- b.
-
-
- c.
-
-
- d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

a.

3) Which of the following statements is not correct about proteins?

1 point

- a. Proteins function as hormone
- b. Proteins function as enzyme-catalyst
- c. All proteins get denatured at 70 °C
- d. Proteins function as antibody

-
- a.
-
-
- b.
-
-
- c.
-
-
- d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

c.

4) Which of the following statements is true about size-exclusion chromatography?

1 point

- a. During the separation of a mixture of proteins, protein with smallest molecular weight is eluted first
- b. During the separation of a mixture of proteins, protein with largest molecular weight is eluted first
- c. During the separation of a mixture of proteins, protein with largest molecular weight is eluted last
- d. During the separation of a mixture of proteins, protein with largest molecular weight is trapped in the pores of adsorbent beads

-
- a.
-
-
- b.
-
-
- c.
-
-
- d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

b.

5) Which of the following statements is true about affinity chromatography?

1 point

- a. During the separation of a mixture of proteins, the protein which does not bind to ligand is eluted first
- b. During the separation of a mixture of proteins, the protein which does not bind to ligand is eluted last
- c. During the separation of a mixture of proteins, the protein which binds to ligand is eluted first
- d. Unwanted proteins are eluted by ligand solution

-
- a.
-
-
- b.
-
-
- c.
-
-
- d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

a.

6) Which of the following statements is true about ion-exchange chromatography?

1 point

- a. It separates proteins according to their size
- b. The column matrix with bound anionic groups is called cationic exchanger
- c. The column matrix with bound anionic groups is called anionic exchanger
- d. The column matrix with bound cationic groups is called cationic exchanger

-
- a.
-
-
- b.
-
-
- c.
-
-
- d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

b.

7) Which of the following statements is true about SDS polyacrylamide chromatography?

1 point

- a. SDS polyacrylamide gel electrophoresis separates proteins on the basis of isoelectric point
- b. SDS polyacrylamide gel electrophoresis separates proteins on the basis of charge
- c. SDS binds to proteins non-covalently with a stoichiometry of around one SDS molecule per three amino acids
- d. SDS binds to proteins non-covalently with a stoichiometry of around one SDS molecule per one amino acid

-
- a.
-
-
- b.
-
-
- c.
-
-
- d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

d.

8) Which of the following statements is true about two-dimensional electrophoresis?

1 point

- a. Proteins are separated on the basis of molecular weight
- b. Proteins are separated on the basis of pI
- c. Proteins are separated on the basis of both molecular weight and pI
- d. Isoelectric focusing is also termed as two-dimensional electrophoresis

-
- a.
-
-
- b.
-
-
- c.
-
-
- d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

c.

9) In addition to weak interaction, a covalent bond may also play a role in maintaining the tertiary structure of a protein. It is

1 point

- a. Sulfide
- b. Disulfide
- c. H-bond
- d. Peptide

-
- a.
-
-
- b.
-
-
- c.
-
-
- d.

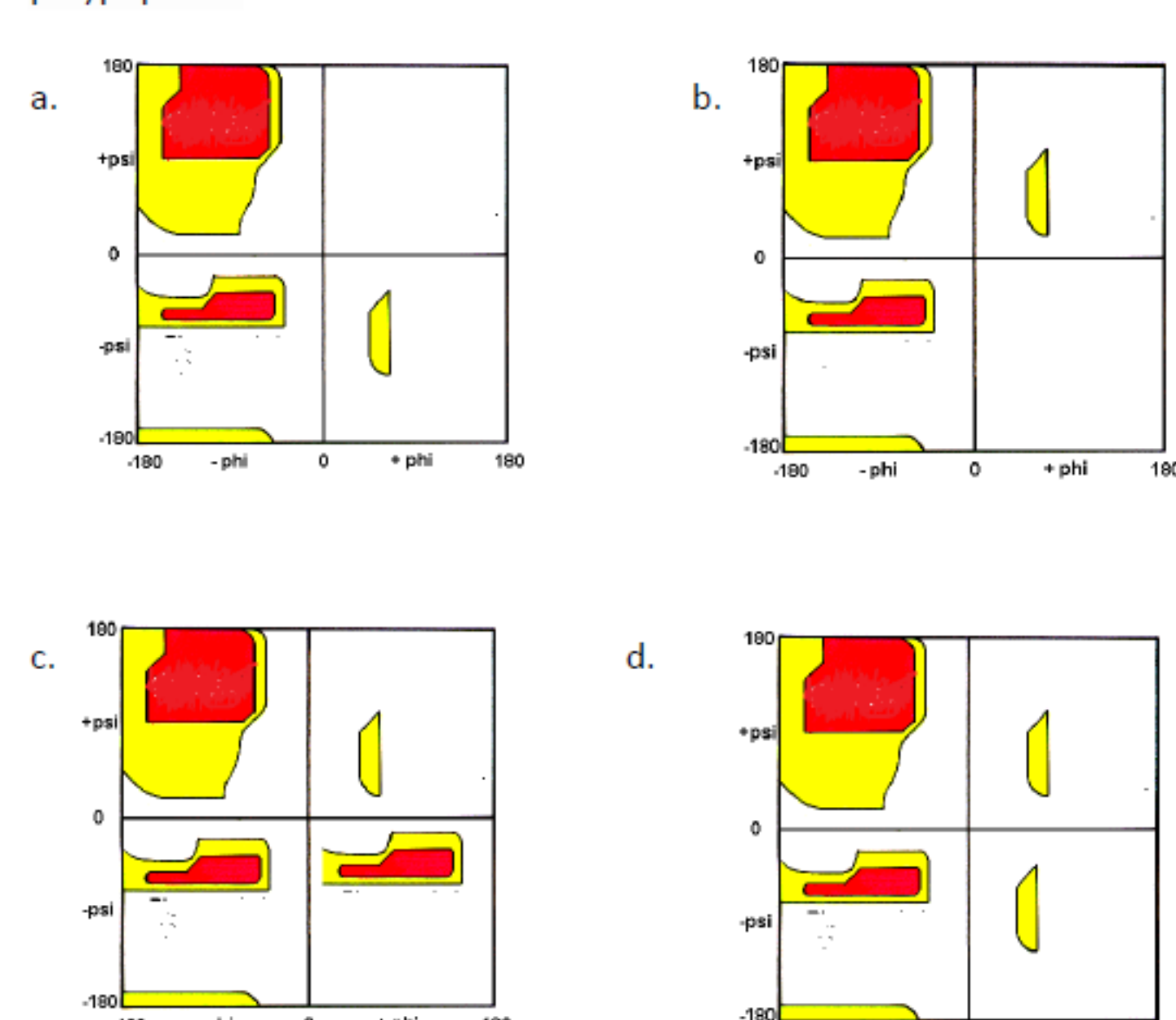
No, the answer is incorrect.
Score: 0

Accepted Answers:

b.

10) Which of the following Ramachandran plots is compatible with the 3D-structure of a polypeptide?

1 point



-
- a.
-
-
- b.
-
-
- c.
-
-
- d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

b.