

PYQSide

NEET BIOMOLECULES (BIOLOGY) — BIOMACROMOLECULES: AMINO ACIDS AND PROTEINS (STRUCTURE) — PYQS

Max. Marks: 76

Questions: 19

Section A (MCQ)

Q.1 Which of the following statements are correct regarding amino acids ?

- A. They are substituted methanes.
 B. Serine is an aromatic amino acid.
 C. Valine is a neutral amino acid.
 D. Lysine is an acidic amino acid.

Choose the correct answer from the options given below :

[NEET (UG) 2026]

- (1) A and B only (2) C and D only
 (3) B and C only (4) A and C only

Scan or tap for the full solution



Q.2 Match List-I with List-II. [RE-NEET (UG) 2026]

List-I		List-II	
A.	Starch	I.	Fights infection
B.	Antibody	II.	Energy storage
C.	Concanavalin A	III.	Glucose transport
D.	Glut-4	IV.	Lectin

- (1) A-I, B-II, C-III, D-IV (2) A-I, B-II, C-IV, D-III
 (3) A-II, B-I, C-IV, D-III (4) A-II, B-I, C-III, D-IV

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Q.3 Match List I with List II

List-I		List-II	
A.	GLUT-4	I.	Hormone
B.	Insulin	II.	Enzyme
C.	Trypsin	III.	Intercellular ground substance
D.	Collagen	IV.	Enables glucose transport into cells

Choose the correct answer from the options given below.

[NEET (UG) 2024]

- (1) A-IV, B-I, C-II, D-III (2) A-I, B-II, C-III, D-IV
 (3) A-II, B-III, C-IV, D-I (4) A-III, B-IV, C-I, D-II

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Q.4 Match List-I with List-II.

List - I		List - II	
A.	Primary structure of protein	I.	Human haemoglobin
B.	Secondary structure of protein	II.	Disulphide bonds
C.	Tertiary structure of protein	III.	Polypeptide chain
D.	Quaternary structure of protein	IV.	Alpha helix and β sheet

Choose the correct answer from the options given below :

[RE-NEET (UG) 2024]

- (1) A-III, B-IV, C-II, D-I (2) A-III, B-II, C-I, D-IV
 (3) A-I, B-III, C-II, D-IV (4) A-IV, B-III, C-II, D-I

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Q.5 Given below are two statements:

Statement-I: A protein is imagined as a line, the left end represented by first amino acid (C-terminal) and the right end represented by last amino acid (N-terminal).

Statement-II: Adult human haemoglobin consists of 4 subunits (two subunits of α type and two subunits of β type).

In the light of the above statements, choose the correct answer from the options given below:

[NEET (UG) 2023]

- (1) Both Statement-I and Statement-II are false.
 (2) Statement-I is true but Statement-II is false.
 (3) Statement-I is false but Statement-II is true.
 (4) Both Statement-I and Statement-II are true.

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Q.6 Match List-I with List-II:

List-I (Biological Molecules)		List-II (Biological functions)	
a.	Glycogen	i.	Hormone
b.	Globulin	ii.	Biocatalyst

List-I (Biological Molecules)		List-II (Biological functions)	
c.	Steroids	iii.	Antibody
d.	Thrombin	iv.	Storage product

Choose the correct answer from the options given below:

[NEET (UG) 2022]

- (1) (a)-(iii), (b)-(ii), (c)-(iv), (d)-(i)
- (2) (a)-(iv), (b)-(ii), (c)-(i), (d)-(iii)
- (3) (a)-(ii), (b)-(iv), (c)-(iii), (d)-(i)
- (4) (a)-(iv), (b)-(iii), (c)-(i), (d)-(ii)

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Q.7 Primary proteins are also called as polypeptides because :

[NEET (UG) 2022 (Phase 2)]

- (1) They can assume many conformations
- (2) They are linear chains
- (3) They are polymers of peptide monomers
- (4) Successive amino acids are joined by peptide bonds

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Q.8 Given below are two statements:

Statement-I: Amino acids have a property of ionizable nature of $-\text{NH}_2$ and $-\text{COOH}$ groups, hence have different structures at different pH.

Statement-II: Amino acids can exist as Zwitterionic form at acidic and basic pH.

In the light of the above statements, choose the most appropriate answer from the options given below:

[NEET (UG) 2022 (Phase 2)]

- (1) Statement-I is incorrect but Statement-II is correct
- (2) Both Statement-I and Statement-II are correct
- (3) Both Statement-I and Statement-II are incorrect
- (4) Statement-I is correct but Statement-II is incorrect

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Q.9 Which one of the following is the most abundant protein in the animals?

[NEET (UG) 2020]

- (1) Collagen
- (2) Lectin
- (3) Insulin
- (4) Haemoglobin

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Q.10 Identify the basic amino acid from the following

[NEET (UG) 2020]

- (1) Valine
- (2) Lysine
- (3) Tyrosine
- (4) Glutamic Acid

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Q.11 Which one of the following statements is wrong?

[NEET 2016 (Phase 1)]

- (1) Uracil is a pyrimidine.
- (2) Glycine is a sulphur containing amino acid.
- (3) Sucrose is a disaccharide.
- (4) Cellulose is a polysaccharide.

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Q.12 Which of the following is the least likely to be involved in establishing the three-dimensional folding of most proteins?

[NEET 2016 (Phase 2)]

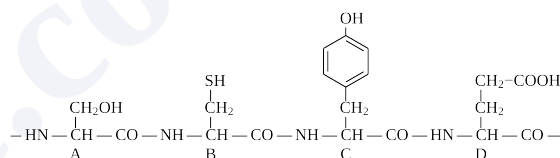
- (1) Hydrogen bonds
- (2) Electrostatic interaction
- (3) Hydrophobic interaction
- (4) Ester bonds

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Q.13 The figure shows a hypothetical tetrapeptide portion of a protein with parts labelled A - D. Which one of the following options is correct?

[NEET 2013 (Karnataka)]



- (1) D is an acidic amino acid-glutamic acid.
- (2) C is an aromatic amino acid-tryptophan.
- (3) A is the C-terminal amino acid and D is N-terminal amino acid.
- (4) A is a sulphur containing amino acid methionine.

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Q.14 Which one out of A - D given below correctly represents the structural formula of the basic amino acid?

[AIPMT 2012 (Prelims)]

A	B	C	D
$\begin{array}{c} \text{NH}_2 \\ \\ \text{H}-\text{C}-\text{COOH} \\ \\ \text{CH}_2 \\ \\ \text{CH}_2 \\ \\ \text{C}=\text{O} \\ \\ \text{OH} \end{array}$	$\begin{array}{c} \text{NH}_2 \\ \\ \text{H}-\text{C}-\text{COOH} \\ \\ \text{CH}_2 \\ \\ \text{OH} \end{array}$	$\begin{array}{c} \text{CH}_2\text{OH} \\ \\ \text{CH}_2 \\ \\ \text{CH}_2 \\ \\ \text{NH}_2 \end{array}$	$\begin{array}{c} \text{NH}_2 \\ \\ \text{H}-\text{C}-\text{COOH} \\ \\ \text{CH}_2 \\ \\ \text{CH}_2 \\ \\ \text{CH}_2 \\ \\ \text{CH}_2 \\ \\ \text{NH}_2 \end{array}$

- (1) C
- (2) D
- (3) A
- (4) B

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Q.15 Which one is the most abundant protein in the animal world? [AIPMT 2012 (Prelims)]

- (1) Trypsin (2) Haemoglobin
(3) Collagen (4) Insulin

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Q.16 Which of the following is the simplest amino acid? [AIPMT 2005]

- (1) Alanine (2) Asparagine
(3) Glycine (4) Tyrosine

Scan or tap for the full solution



Q.17 Collagen is: [AIPMT 2002]

- (1) Globular protein (2) Fibrous protein
(3) Carbohydrate (4) Lipid

Scan or tap for the full solution



Q.18 Which of the following have carbohydrate as prosthetic group? [AIPMT 2000]

- (1) Glycoprotein (2) Chromoprotein
(3) Lipoprotein (4) Nucleoprotein

Scan or tap for the full solution



Q.19 Essential amino acid is [AIPMT 2000]

- (1) phenylalanine (2) glycine
(3) aspartic acid (4) serine

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	4	3	1	1	3	4	4	4	1	2	2
Ques.	12	13	14	15	16	17	18	19			
Ans.	4	1	2	3	3	2	1	1			