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NEET BIOMOLECULES — PYQS

Max. Marks: 260 **Questions:** 65

Section A (MCQ) — 65 questions

Q.1 The correct statement with regard to the secondary structure of DNA/RNA is : [NEET (UG) 2026]

(1) DNA possesses a double strand helix structure and contains thymine as one of the four bases

(2) DNA possesses a single strand helix structure and contains uracil as one of the four bases

(3) RNA possesses a double strand helix structure and contains uracil as one of the four bases

(4) RNA possesses a single strand helix structure and contains thymine as one of the four bases

Scan or tap for the full solution

Q.2 The correct statement about peptides and proteins is [RE-NEET (UG) 2026]

(1) In α-helices, the polypeptide chain is twisted into a left-handed screw (helix) through intramolecular hydrogen bonds

(2) Tertiary structure of proteins has two or more polypeptide subunits

(3) Only the proteins having a quaternary structure are biologically active

(4) In β-pleated sheet structures, peptide chains are held together by intermolecular hydrogen bonds

Scan or tap for the full solution

Q.3 The amino acid that gives a red-blood colour on treating its sodium fusion extract with sodium nitroprusside is [RE-NEET (UG) 2026]

(1) serine (2) leucine

(3) threonine (4) methionine

Scan or tap for the full solution

Q.4 Match the vitamins in **List I** with their sources in **List II** [RE-NEET (UG) 2026]

List I		List II	
A.	vitamin A	I.	meat
B.	vitamin B_{12}	II.	sunflower oil
C.	vitamin E	III.	green leafy vegetables
D.	vitamin K	IV.	carrots

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

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

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

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

Solution

Q.5 Sugar 'X'

A. is found in honey

B. is a keto sugar

C. exists in α and β-anomeric forms.

D. Is laevorotatory.

'X' is : [NEET (UG) 2025]

(1) Maltose (2) Sucrose

(3) D-Glucose (4) D-Fructose

Scan or tap for the full solution

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

List-I (Name of Vitamin)		List-II (Deficiency disease)	
A.	Vitamin B_{12}	I.	Cheilosis
B.	Vitamin D	II.	Convulsions
C.	Vitamin B_2	III.	Rickets
D.	Vitamin B_6	IV.	Pernicious anaemia

Choose the correct answer from the options given below: [NEET (UG) 2025]

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

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

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

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

Solution

Q.7 The reagents with which glucose does not react to give the corresponding tests/products are

A. Tollens' reagent B. Schiff's reagent

C. HCN D. NH_2OH

E. $NaHSO_3$

Choose the correct options from the given below: [NEET (UG) 2024]

(1) B and C (2) A and D

(3) B and E (4) E and D

Scan or tap for the full solution

Q.8 Given below are two statements :

Statement-I: Glycogen is similar to amylose in its structure.

Statement-II: Glycogen is found in yeast and fungi also.

In the light of the above statements, choose the correct answer from the options given below : [RE-NEET (UG) 2024]

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

Scan or tap for the full solution

Q.9 Given below are two statements:
Statement-I: A unit formed by the attachment of a base to 1' position of sugar is known as nucleoside
Statement-II: When nucleoside is linked to phosphorous acid at 5' position of sugar moiety, we get nucleotide.

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

Scan or tap for the full solution

Q.10 The incorrect statement regarding enzymes is [NEET (UG) 2022]

(1) Enzymes are biocatalysts.
(2) Like chemical catalysts enzymes reduce the activation energy of bio processes.
(3) Enzymes are polysaccharides.
(4) Enzymes are very specific for a particular reaction and substrate.

Scan or tap for the full solution

Q.11 The incorrect statement about denaturation of proteins is : [NEET (UG) 2022 (Phase 2)]

(1) Uncoiling of the helical structure takes place
(2) It results due to change of temperature and/or pH
(3) It results in loss of biological activity of proteins
(4) A protein is formed from amino acids linked by peptide bonds

Scan or tap for the full solution

Q.12 The RBC deficiency is deficiency disease of : [NEET (UG) 2021]

(1) Vitamin B_2 (2) Vitamin B_{12}
(3) Vitamin B_6 (4) Vitamin B_1

Scan or tap for the full solution

Q.13 Which of the following is a basic amino acid? [NEET (UG) 2020]

(1) Alanine (2) Tyrosine
(3) Lysine (4) Serine

Scan or tap for the full solution

Q.14 Sucrose on hydrolysis gives : [NEET (UG) 2020]

(1) α-D-Glucose + β-D-Glucose
(2) α-D-Glucose + β-D-Fructose
(3) α-D-Fructose + β-D-Fructose
(4) α-D-Glucose + α-D-Fructose

Solution

Q.15 The non-essential amino acid among the following is : [NEET (UG) 2019]

(1) alanine (2) lysine (3) valine (4) leucine

Scan or tap for the full solution

Q.16 The difference between amylose and amylopectin is [NEET 2018]

(1) amylopectin have $1 \longrightarrow 4$ α-linkage and $1 \longrightarrow 6$ α-linkage
(2) amylose have $1 \longrightarrow 4$ α-linkage and $1 \longrightarrow 6$ β-linkage
(3) amylopectin have $1 \longrightarrow 4$ α-linkage and $1 \longrightarrow 6$ β-linkage
(4) amylose is made up of glucose and galactose

Scan or tap for the full solution

Q.17 Which of the following compounds can form a zwitter ion? [NEET 2018]

(1) Aniline (2) Acetanilide
(3) Benzoic acid (4) Glycine

Scan or tap for the full solution

Q.18 Which of the following statements is not correct? [NEET 2017]

(1) Ovalbumin is a simple food reserve in egg-white.
(2) Blood proteins thrombin and fibrinogen are involved in blood clotting.
(3) Denaturation makes the proteins more active.
(4) Insulin maintains sugar level in the blood of a human body.

Scan or tap for the full solution

Q.19 The correct statement regarding RNA and DNA, respectively is [NEET 2016 (Phase 1)]

(1) The sugar component in RNA is arabinose and the sugar component in DNA is ribose
(2) The sugar component in RNA is 2'-deoxyribose and the sugar component in DNA is arabinose
(3) The sugar component in RNA is arabinose and the sugar component in DNA is 2'-deoxyribose
(4) The sugar component in RNA is ribose and the sugar component in DNA is 2'-deoxyribose.

Scan or tap for the full solution

Q.20 In a protein molecule various amino acids are linked together by [NEET 2016 (Phase 1)]

(1) peptide bond (2) dative bond
(3) α-glycosidic bond (4) β-glycosidic bond.

Scan or tap for the full solution

Q.21 Which one given below is a non-reducing sugar? [NEET 2016 (Phase 1)]

(1) Glucose (2) Sucrose
(3) Maltose (4) Lactose

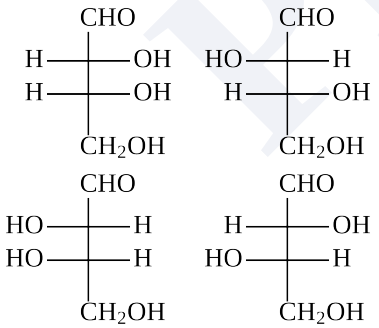
Scan or tap for the full solution

Q.22 The central dogma of molecular genetics states that the genetic information flows from [NEET 2016 (Phase 2)]

(1) Amino acids ⟶ Proteins ⟶ DNA
(2) DNA ⟶ Carbohydrates ⟶ Proteins
(3) DNA ⟶ RNA ⟶ Proteins
(4) DNA ⟶ RNA ⟶ Carbohydrates

Scan or tap for the full solution

Q.23 The correct corresponding order of names of four aldoses with configuration given below



respectively, is [NEET 2016 (Phase 2)]

(1) L-erythrose, L-threose, L-erythrose, D-threose
(2) D-threose, D-erythrose, L-threose, L-erythrose
(3) L-erythrose, L-threose, D-erythrose, D-threose
(4) D-erythrose, D-threose, L-erythrose, L-threose

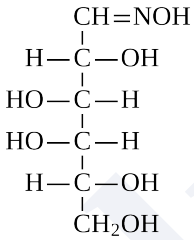
Scan or tap for the full solution

Q.24 Which of the following hormones is produced under the condition of stress which stimulate glycogenolysis in the liver of human beings? [AIPMT 2014]

(1) Thyroxine (2) Insulin
(3) Adrenaline (4) Estradiol

Scan or tap for the full solution

Q.25 D(+)-glucose reacts with hydroxylamine and yields an oxime. The structure of the oxime would be [AIPMT 2014]

(1)


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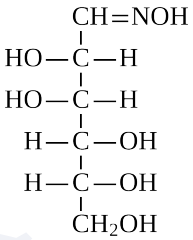

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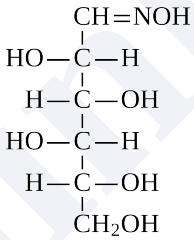

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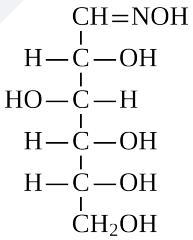

Scan or tap for the full solution

Q.26 In DNA, the linkages between different nitrogenous bases are [NEET 2013 (Karnataka)]

(1) phosphate linkage (2) H-bonding
(3) glycosidic linkage (4) peptide linkage

Scan or tap for the full solution

Q.27 Deficiency of vitamin B_1 causes the disease [AIPMT 2012 (Prelims)]

(1) convulsions (2) beri-beri
(3) cheilosis (4) sterility

Scan or tap for the full solution

Q.28 Which one of the following sets of monosaccharides forms sucrose? [AIPMT 2012 (Prelims)]

(1) α-D-galactopyranose and α-D-glucopyranose
(2) α-D-glucopyranose and β-D-fructofuranose
(3) β-D-glucopyranose and α-D-fructofuranose
(4) α-D-glucopyranose and β-D-fructopyranose

Scan or tap for the full solution

Q.29 Which of the following is not a fat soluble vitamin? [AIPMT 2011 (Mains)]

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(1) Vitamin B complex (2) Vitamin D
(3) Vitamin E (4) Vitamin A

Scan or tap for the full solution

Q.30 Which of the statements about "Denaturation" given below are correct?

A. Denaturation of proteins causes loss of secondary and tertiary structures of the protein.
B. Denaturation leads to the conversion of double strand of DNA into single strand.
C. Denaturation affects primary structure which gets distorted. [AIPMT 2011 (Mains)]

(1) B and C (2) A and C
(3) A and B (4) A, B and C

Scan or tap for the full solution

Q.31 Which one of the following statements is not true regarding (+) lactose? [AIPMT 2011 (Prelims)]

(1) On hydrolysis (+) lactose gives equal amount of D(+) glucose and D(+) galactose.
(2) (+) Lactose is a β-glucoside formed by the union of a molecule of D(+) glucose and a molecule of D(+) galactose.
(3) (+) Lactose is a reducing sugar and does not exhibit mutarotation.
(4) (+) Lactose, $C_{12}H_{22}O_{11}$ contains 8 –OH groups

Scan or tap for the full solution

Q.32 Fructose reduces Tollens' reagent due to [AIPMT 2010 (Mains)]

(1) asymmetric carbons
(2) primary alcoholic group
(3) secondary alcoholic group
(4) enolisation of fructose followed by conversion to aldehyde by base

Scan or tap for the full solution

Q.33 Which one of the following does not exhibit the phenomenon of mutarotation? [AIPMT 2010 (Prelims)]

(1) (+) Sucrose (2) (+) Lactose
(3) (+) Maltose (4) (−) Fructose

Scan or tap for the full solution

Q.34 The segment of DNA which acts as the instructional manual for the synthesis of the protein is [AIPMT 2009]

(1) ribose (2) gene
(3) nucleoside (4) nucleotide

Scan or tap for the full solution

Q.35 Which of the following hormones contains iodine? [AIPMT 2009]

(1) Testosterone (2) Adrenaline
(3) Thyroxine (4) Insulin

Scan or tap for the full solution

Q.36 In DNA, the complementary bases are [AIPMT 2008]

(1) adenine and guanine; thymine and cytosine
(2) uracil and adenine; cytosine and guanine
(3) adenine and thymine; guanine and cytosine
(4) adenine and thymine; guanine and uracil.

Scan or tap for the full solution

Q.37 Which of the following is an amine hormone? [AIPMT 2008]

(1) Insulin (2) Progesterone
(3) Thyroxine (4) Oxypurine

Scan or tap for the full solution

Q.38 RNA and DNA are chiral molecules, their chirality is due to [AIPMT 2007]

(1) chiral bases
(2) chiral phosphate ester units
(3) D-sugar component
(4) L-sugar component

Solution

Q.39 Which of the following vitamins is water-soluble? [AIPMT 2007]

(1) Vitamin E (2) Vitamin K
(3) Vitamin A (4) Vitamin B

Scan or tap for the full solution

Q.40 The human body does not produce [AIPMT 2006]

(1) enzymes (2) DNA
(3) vitamins (4) hormones

Scan or tap for the full solution

Q.41 Which one of the following is a peptide hormone? [AIPMT 2006]

(1) Adrenaline (2) Glucagon
(3) Testosterone (4) Thyroxine

Scan or tap for the full solution

Q.42 During the process of digestion, the proteins present in food materials are hydrolysed to amino acids. The two enzymes involved in the process

$$\text{Proteins} \xrightarrow{\text{enzyme (A)}} \text{Polypeptide} \xrightarrow{\text{enzyme (B)}} \text{Amino acids}$$

are respectively [AIPMT 2006]

(1) invertase and zymase
(2) amylase and maltase
(3) diastase and lipase
(4) pepsin and trypsin

Solution

Q.43 Which functional group participates in disulphide bond formation in proteins? [AIPMT 2005]

(1) Thioester (2) Thioether
(3) Thiol (4) Thiolactone

Scan or tap for the full solution

Q.44 The cell membranes are mainly composed of [AIPMT 2005]

(1) fats (2) proteins
(3) phospholipids (4) carbohydrates

Scan or tap for the full solution

Q.45 A sequence of how many nucleotides in messenger RNA makes a codon for an amino acid? [AIPMT 2004]

(1) Three (2) Four (3) One (4) Two

Scan or tap for the full solution

Q.46 The enzyme which hydrolyses triglycerides to fatty acids and glycerol is called [AIPMT 2004]

(1) maltase (2) lipase
(3) zymase (4) pepsin

Solution

Q.47 The hormone that helps in the conversion of glucose to glycogen is [AIPMT 2004]

(1) cortisone (2) bile acids
(3) adrenaline (4) insulin

Scan or tap for the full solution

Q.48 The correct statement in respect of protein haemoglobin is that it [AIPMT 2004]

(1) functions as a catalyst for biological reactions
(2) maintains blood sugar level
(3) acts as an oxygen carrier in the blood
(4) forms antibodies and offers resistance to diseases.

Scan or tap for the full solution

Q.49 Number of chiral carbons in β-D-(+)-glucose is [AIPMT 2004]

(1) five (2) six (3) three (4) four

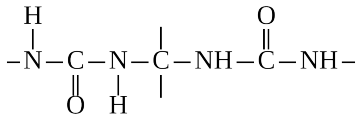
Scan or tap for the full solution

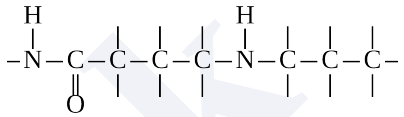
Q.50 The helical structure of protein is stabilised by [AIPMT 2004]

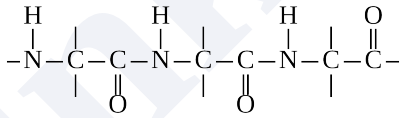
(1) dipeptide bonds (2) hydrogen bonds
(3) ether bonds (4) peptide bonds

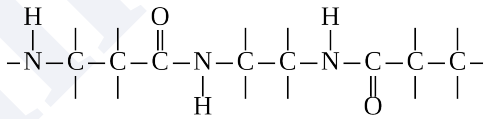
Scan or tap for the full solution

Q.51 Which of the following structures represents the peptide chain? [AIPMT 2004]

(1) 

(2) 

(3) 

(4) 

Scan or tap for the full solution

Q.52 Glycolysis is [AIPMT 2003]

(1) oxidation of glucose to glutamate
(2) conversion of pyruvate to citrate
(3) oxidation of glucose to pyruvate
(4) conversion of glucose to haem

Solution

Q.53 Phospholipids are esters of glycerol with [AIPMT 2003]

(1) three carboxylic acid residues
(2) two carboxylic acid residues and one phosphate group
(3) one carboxylic acid residue and two phosphate groups
(4) three phosphate groups

Scan or tap for the full solution

Q.54 Chargaff's rule states that in an organism [AIPMT 2003]

(1) amount of adenine (A) is equal to that of thymine (T) and the amount of guanine (G) is equal to that of cytosine (C)
(2) amount of adenine (A) is equal to that of guanine (G) and the amount of thymine (T) is equal to that of cytosine (C)

(3) amount of adenine (A) is equal to that of cytosine (C) and the amount of thymine (T) is equal to that of guanine (G)

(4) amounts of all bases are equal

Scan or tap for the full solution

Q.55 Enzymes are made up of [AIPMT 2002]

(1) edible proteins

(2) proteins with specific structure

(3) nitrogen containing carbohydrates

(4) carbohydrates

Scan or tap for the full solution

Q.56 Which is not a true statement? [AIPMT 2002]

(1) α-carbon of α-amino acid is asymmetric

(2) All proteins are found in L-form

(3) Human body can synthesise all proteins it needs

(4) At pH = 7, both amino and carboxylic groups exist in ionised form

Scan or tap for the full solution

Q.57 Cellulose is polymer of [AIPMT 2002]

(1) glucose (2) fructose

(3) ribose (4) sucrose

Scan or tap for the full solution

Q.58 Which of the following give positive Fehling solution test? [AIPMT 2001]

(1) Sucrose (2) Glucose

(3) Fats (4) Protein

Scan or tap for the full solution

Q.59 Which of the following is correct about H-bonding in nucleotide? [AIPMT 2001]

(1) A–T, G–C (2) A–G, T–C

(3) G–T, A–C (4) A–A, T–T

Scan or tap for the full solution

Q.60 Which of the following is correct? [AIPMT 2001]

(1) Cycloheptane is an aromatic compound.

(2) Diastase is an enzyme

(3) Acetophenone is an ether.

(4) All of these.

Solution

Q.61 Which is the correct statement? [AIPMT 2001]

(1) Starch is a polymer of α-glucose.

(2) Amylose is a component of cellulose.

(3) Proteins are composed of only one type of amino acid.

(4) In cyclic structure of fructose, there are four carbons and one oxygen atom.

Scan or tap for the full solution

Q.62 $-\overset{\overset{\displaystyle O}{\|}}{C}-\ddot{N}H-$ (peptide bond)

Which statement is incorrect about peptide bond? [AIPMT 2001]

(1) C–N bond length in proteins is longer than usual bond length of N–C bond.

(2) Spectroscopic analysis shows planar structure of $-\underset{\underset{\displaystyle O}{\|}}{C}-NH-$ group.

(3) C–N bond length in proteins is smaller than usual bond length of C–N bond.

(4) None of the above.

Scan or tap for the full solution

Q.63 α-D-glucose and β-D-glucose are [AIPMT 2000]

(1) epimers (2) anomers

(3) enantiomers (4) diastereomers

Scan or tap for the full solution

Q.64 Which one is responsible for production of energy in bio-reaction? [AIPMT 2000]

(1) Thyroxine (2) Adrenaline

(3) Oestrogen (4) Progesterone

Scan or tap for the full solution

Q.65 How do enzymes increase the rate of reactions? [AIPMT 2000]

(1) by lowering activation energy

(2) by increasing activation energy

(3) by changing equilibrium constant

(4) by forming enzyme substrate complex.

Scan or tap for the full solution

ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	1	4	4	3	4	4	3	2	2	3	4
Ques.	12	13	14	15	16	17	18	19	20	21	22
Ans.	2	3	2	1	1	4	3	4	1	2	3
Ques.	23	24	25	26	27	28	29	30	31	32	33
Ans.	4	3	4	2	2	2	1	3	3	4	1
Ques.	34	35	36	37	38	39	40	41	42	43	44
Ans.	2	3	3	3	3	4	3	2	4	3	3
Ques.	45	46	47	48	49	50	51	52	53	54	55
Ans.	1	2	4	3	1	2	3	3	2	1	2

Ques.	56	57	58	59	60	61	62	63	64	65	
Ans.	**2**	**1**	**2**	**1**	**2**	**1**	**1**	**2**	**1**	**1**	

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