

CHEMISTRY · JEE MAIN

Carbohydrates & Biomolecules

Chapter-wise previous year questions, with answer key

60

PYQS

2020–2025

PAPERS

5

TOPICS

Carbohydrates

Amino Acids and Proteins

Vitamins

Enzymes

Nucleic Acids

- 1 Attempt each question on paper first — they're grouped by topic, newest papers first.
- 2 Check yourself against the answer key at the end.
- 3 Got one wrong? Tap “Step-by-step solution” under it for the full working.

Stuck on a question?

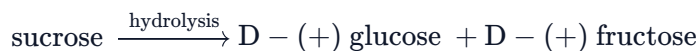
Every question has a free step-by-step solution on PrepWiser — tap “Step-by-step solution” under it.

Practise this chapter online with instant answer checking: prepwiser.in/learn · No signup needed to browse

Q1 JEE Main 2025 · 7 Apr · Shift 1

Given below are two statements:

Statement I: D-(+)-glucose + D-(+) fructose $\xrightarrow{-\text{H}_2\text{O}}$ Sucrose



Statement II: Invert sugar is formed during sucrose hydrolysis

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

- (A) Both Statement I and Statement II are False
- (B) Statement I is false but Statement II are true
- (C) Both Statement I and Statement II are true
- (D) Statement I is true but Statement II is false

[Step-by-step solution ▶ prepwiser.in/questions/ojkHj_0j0w](https://www.prepwiser.in/questions/ojkHj_0j0w)

Q2 JEE Main 2025 · 28 Jan · Shift 2

Match List-I with List-II.

List - I (Saccharides)	List - II (Glycosidic-linkages found)
(A) Sucrose	(I) α 1 – 4
(B) Maltose	(II) α 1 – 4 and α 1 – 6
(C) Lactose	(III) α 1 – β 2
(D) Amylopectin	(IV) β 1 – 4

Choose the **correct** answer from the options given below :

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

[Step-by-step solution ▶ prepwiser.in/questions/4jLP7jhKoD](https://www.prepwiser.in/questions/4jLP7jhKoD)

Q3 JEE Main 2025 · 28 Jan · Shift 1

Given below are two statements:

Statement I : D-glucose pentaacetate reacts with 2,4 -dinitrophenylhydrazine

Statement II : Starch, on heating with concentrated sulfuric acid at 100°C and 2 – 3atmosphere pressure produces glucose.

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

- (A) Statement I is true but Statement II is false
- (B) Both Statement I and Statement II are true
- (C) Statement I is false but Statement II is true
- (D) Both Statement I and Statement II are false

[Step-by-step solution ▶ prepwiser.in/questions/ugpV8HXpCR](https://www.prepwiser.in/questions/ugpV8HXpCR)

Q4 JEE Main 2025 · 28 Jan · Shift 2

Identify correct conversion during acidic hydrolysis from the following :

- (A) starch gives galactose.
- (B) cane sugar gives equal amount of glucose and fructose.
- (C) milk sugar gives glucose and galactose.
- (D) amylopectin gives glucose and fructose.
- (E) amylose gives only glucose.

Choose the **correct** answer from the options given below :

- (A) (A), (B) and (C) only
- (B) (B), (C) and (D) only
- (C) (B), (C) and (E) only
- (D) (C), (D) and (E) only

[Step-by-step solution ► prepwiser.in/questions/dfbXqUH0Z7](https://www.prepwiser.in/questions/dfbXqUH0Z7)

Q5 JEE Main 2024 · 9 Apr · Shift 2

The incorrect statement about Glucose is :

- (A) Glucose remains in multiple isomeric form in its aqueous solution
- (B) Glucose is soluble in water because of having aldehyde functional group
- (C) Glucose is an aldohexose
- (D) Glucose is one of the monomer unit in sucrose

[Step-by-step solution ► prepwiser.in/questions/YvWKsmVJAM](https://www.prepwiser.in/questions/YvWKsmVJAM)

Q6 JEE Main 2024 · 30 Jan · Shift 1

Sugar which does not give reddish brown precipitate with Fehling's reagent, is :

- | | |
|-------------|-------------|
| (A) Glucose | (B) Sucrose |
| (C) Lactose | (D) Maltose |

[Step-by-step solution ► prepwiser.in/questions/hsrhTNTbu8](https://www.prepwiser.in/questions/hsrhTNTbu8)

Q7 JEE Main 2023 · 11 Apr · Shift 2

Number of compounds from the following which will not produce orange red precipitate with Benedict solution is _____.

Glucose, maltose, sucrose, ribose, 2-deoxyribose, amylose, lactose

Numerical answer — enter the value.

[Step-by-step solution ► prepwiser.in/questions/sk-9ex6Xk5](https://www.prepwiser.in/questions/sk-9ex6Xk5)

Q8 JEE Main 2023 · 30 Jan · Shift 1

Given below are two statements : one is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A) : Ketoses give Seliwanoff's test faster than Aldoses.

Reason (R) : Ketoses undergo β -elimination followed by formation of furfural.

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

- (A) (A) is false but (R) is true
- (B) Both (A) and (R) are true but (R) is not the correct explanation of (A)
- (C) (A) is true but (R) is false
- (D) Both (A) and (R) are true and (R) is the correct explanation of (A)

[Step-by-step solution ► prepwisser.in/questions/Jv9PSXOjc0](https://www.prepwisser.in/questions/Jv9PSXOjc0)

Q9 JEE Main 2022 · 29 Jul · Shift 2

Given below are two statements. One is labelled as Assertion A and the other is labelled as Reason R.

Assertion A: Amylose is insoluble in water.

Reason R: Amylose is a long linear molecule with more than 200 glucose units.

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

- (A) Both **A** and **R** are correct and **R** is the correct explanation of **A**.
- (B) Both **A** and **R** are correct but **R** is NOT the correct explanation of **A**.
- (C) **A** is correct but **R** is not correct
- (D) **A** is not correct but **R** is correct.

[Step-by-step solution ► prepwisser.in/questions/yYXZ7KUFWW](https://www.prepwisser.in/questions/yYXZ7KUFWW)

Q10 JEE Main 2022 · 26 Jul · Shift 2

Animal starch is the other name of

- | | |
|---------------|------------------|
| (A) amylose. | (B) maltose. |
| (C) glycogen. | (D) amylopectin. |

[Step-by-step solution ► prepwisser.in/questions/Pa88W9f9-2](https://www.prepwisser.in/questions/Pa88W9f9-2)

Q11 JEE Main 2021 · 31 Aug · Shift 1

Which one of the following compounds contains β -C₁-C₄ glycosidic linkage?

- | | |
|-------------|-------------|
| (A) Lactose | (B) Sucrose |
| (C) Maltose | (D) Amylose |

[Step-by-step solution ► prepwisser.in/questions/yQNM2ZFtZt](https://www.prepwisser.in/questions/yQNM2ZFtZt)

Q12 JEE Main 2021 · 27 Aug · Shift 2

Hydrolysis of sucrose gives :

- (A) α -D-(–)-Glucose and β -D-(–)-Fructose
- (B) α -D-(+)-Glucose and α -D-(–)-Fructose
- (C) α -D-(–)-Glucose and α -D-(+)-Fructose
- (D) α -D-(+)-Glucose and β -D-(–)-Fructose

[Step-by-step solution ► prepwisser.in/questions/DKqDVPbtck](https://www.prepwisser.in/questions/DKqDVPbtck)

Q13 JEE Main 2021 · 26 Aug · Shift 2

Given below are two statements : one is labelled as Assertion (A) and other is labelled as Reason (R).

Assertion (A) : Sucrose is a disaccharide and a non-reducing sugar.

Reason (R) : Sucrose involves glycosidic linkage between C_1 of β -glucose and C_2 of α -fructose.

Choose the most appropriate answer from the options given below :

- (A) Both (A) and (R) are true but (R) is not the true explanation of (A).
- (B) (A) is false but (R) is true.
- (C) (A) is true but (R) is false.
- (D) Both (A) and (R) are true and (R) is the true explanation of (A)

Step-by-step solution ► [prepwisser.in/questions/TwMH5F89aD](https://www.prepwisser.in/questions/TwMH5F89aD)

Q14 JEE Main 2021 · 27 Jul · Shift 2

Compound A gives D-Galactose and D-Glucose on hydrolysis. The compound A is :

- (A) Amylose
- (B) Sucrose
- (C) Maltose
- (D) Lactose

Step-by-step solution ► [prepwisser.in/questions/SuhknDKSkr](https://www.prepwisser.in/questions/SuhknDKSkr)

Q15 JEE Main 2021 · 27 Jul · Shift 1

Which one among the following chemical tests is used to distinguish monosaccharide from disaccharide?

- (A) Seliwanoff's test
- (B) Iodine test
- (C) Barfoed test
- (D) Tollen's test

Step-by-step solution ► [prepwisser.in/questions/aNVK_sSYAz](https://www.prepwisser.in/questions/aNVK_sSYAz)

Q16 JEE Main 2021 · 18 Mar · Shift 1

A non-reducing sugar "A" hydrolyses to give two reducing mono saccharides. Sugar A is

- (A) Fructose
- (B) Galactose
- (C) Glucose
- (D) Sucrose

Step-by-step solution ► [prepwisser.in/questions/4-HqnRPshB](https://www.prepwisser.in/questions/4-HqnRPshB)

Match List - I with List - II.

List - I		List - II	
(a)	Sucrose	(i)	β -D-Galactose and β -D-Glucose
(b)	Lactose	(ii)	α -D-Glucose and β -D-Fructose
(c)	Maltose	(iii)	α -D-Glucose and α -D-Glucose

Choose the correct answer from the options given below :

(A) (a) $\rightarrow$ (iii), (b) $\rightarrow$ (ii), (c) $\rightarrow$ (i)**(B)** (a) $\rightarrow$ (i), (b) $\rightarrow$ (iii), (c) $\rightarrow$ (ii)**(C)** (a) $\rightarrow$ (ii), (b) $\rightarrow$ (i), (c) $\rightarrow$ (iii)**(D)** (a) $\rightarrow$ (iii), (b) $\rightarrow$ (i), (c) $\rightarrow$ (ii)**Step-by-step solution** ► [prepwisar.in/questions/tzx8K-XGo9](https://www.prepwisar.in/questions/tzx8K-XGo9)

Two monomers in maltose are :

(A) α -D-glucose and α -D-galactose**(B)** α -D-glucose and α -D-Fructose**(C)** α -D-glucose and α -D-glucose**(D)** α -D-glucose and β -D-glucose**Step-by-step solution** ► [prepwisar.in/questions/G-xjDK90tB](https://www.prepwisar.in/questions/G-xjDK90tB)

Which of the following statement is not true for glucose?

(A) Glucose gives Schiff's test for aldehyde**(B)** Glucose reacts with hydroxylamine to form oxime**(C)** The pentaacetate of glucose does not react with hydroxylamine to give oxime**(D)** Glucose exists in two crystalline forms α and β **Step-by-step solution** ► [prepwisar.in/questions/50Q0_ZDdI5](https://www.prepwisar.in/questions/50Q0_ZDdI5)

Q20 JEE Main 2025 · 7 Apr · Shift 2

Given below are two statements :

Statement (I) : On hydrolysis, oligo peptides give rise to fewer number of α -amino acids while proteins give rise to a large number of β -amino acids.

Statement (II) : Natural proteins are denatured by acids which convert the water soluble form of fibrous proteins to their water insoluble form.

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

(A) **Statement I** is incorrect but **Statement II** is correct

(B) Both **Statement I** and **Statement II** are incorrect

(C) Both **Statement I** and **Statement II** are correct

(D) **Statement I** is correct but **Statement II** is incorrect

[Step-by-step solution ► prepwiser.in/questions/Az6_9650ib](https://www.prepwiser.in/questions/Az6_9650ib)

Q21 JEE Main 2025 · 2 Apr · Shift 2

A tetrapeptide, " x " on complete hydrolysis produced glycine (Gly), alanine (Ala), valine (Val), leucine (Leu) in equimolar proportion each. The number of tetrapeptides (sequences) possible involving each of these amino acids is :

(A) 32

(B) 24

(C) 8

(D) 16

[Step-by-step solution ► prepwiser.in/questions/cNNqHITzCR](https://www.prepwiser.in/questions/cNNqHITzCR)

Q22 JEE Main 2025 · 29 Jan · Shift 2

Identify the essential amino acids from below:

(A) Valine

(B) Proline

(C) Lysine

(D) Threonine

(E) Tyrosine

Choose the correct answer from the options given below:

(A) (A), (C) and (D) only

(B) (C), (D) and (E) only

(C) (A), (C) and (E) only

(D) (B), (C) and (E) only

[Step-by-step solution ► prepwiser.in/questions/b7aw-V18z4](https://www.prepwiser.in/questions/b7aw-V18z4)

Q23 JEE Main 2025 · 23 Jan · Shift 2

The α -Helix and β - Pleated sheet structures of protein are associated with its :

(A) tertiary structure

(B) quaternary structure

(C) primary structure

(D) secondary structure

[Step-by-step solution ► prepwiser.in/questions/Xcvdb-CTjq](https://www.prepwiser.in/questions/Xcvdb-CTjq)

Q24 JEE Main 2024 · 9 Apr · Shift 1

Total number of essential amino acid among the given list of amino acids is _____.

Arginine, Phenylalanine, Aspartic acid, Cysteine, Histidine, Valine, Proline

Numerical answer — enter the value.

[Step-by-step solution ► prepwiser.in/questions/9ADpQwN-kG](https://www.prepwiser.in/questions/9ADpQwN-kG)

Q25 JEE Main 2024 · 5 Apr · Shift 1

Which of the following gives a positive test with ninhydrin ?

(A) Polyvinyl chloride

(B) Cellulose

(C) Egg albumin

(D) Starch

[Step-by-step solution ► prepwiser.in/questions/6ZCAcNboY5](https://www.prepwiser.in/questions/6ZCAcNboY5)

Q26 JEE Main 2024 · 1 Feb · Shift 2

The number of tripeptides formed by three different amino acids using each amino acid once is _____.

Numerical answer — enter the value.

[Step-by-step solution ► prepwiser.in/questions/gewle9Uxdq](https://www.prepwiser.in/questions/gewle9Uxdq)

Q27 JEE Main 2024 · 29 Jan · Shift 1

Type of amino acids obtained by hydrolysis of proteins is :

(A) γ

(B) β

(C) α

(D) δ

[Step-by-step solution ► prepwiser.in/questions/_vDdb-hiTh](https://www.prepwiser.in/questions/_vDdb-hiTh)

Q28 JEE Main 2024 · 27 Jan · Shift 2

Which structure of protein remains intact after coagulation of egg white on boiling?

(A) Quaternary

(B) Primary

(C) Secondary

(D) Tertiary

[Step-by-step solution ► prepwiser.in/questions/j-6a6vYiF9](https://www.prepwiser.in/questions/j-6a6vYiF9)

Q29 JEE Main 2023 · 13 Apr · Shift 2

The naturally occurring amino acid that contains only one basic functional group in its chemical structure is

(A) asparagine

(B) arginine

(C) histidine

(D) lysine

[Step-by-step solution ► prepwiser.in/questions/0WV4hhwGwK](https://www.prepwiser.in/questions/0WV4hhwGwK)

Q30 JEE Main 2023 · 10 Apr · Shift 1

The one that does not stabilize 2° and 3° structures of proteins is

(A) —O —O —linkage

(B) —S —S —linkage

(C) van der Waals forces

(D) H-bonding

[Step-by-step solution ► prepwiser.in/questions/IN_T-lyZhg](https://www.prepwiser.in/questions/IN_T-lyZhg)

Q31 JEE Main 2023 · 30 Jan · Shift 2

A short peptide on complete hydrolysis produces 3 moles of glycine (G), two moles of leucine (L) and two moles of valine (V) per mole of peptide. The number of peptide linkages in it are _____.

Numerical answer — enter the value.

[Step-by-step solution ► prepwiser.in/questions/ub-uUiZCPq](https://www.prepwiser.in/questions/ub-uUiZCPq)

Q32 JEE Main 2023 · 29 Jan · Shift 1

Number of cyclic tripeptides formed with 2 amino acids A and B is :

- | | |
|-------|-------|
| (A) 2 | (B) 3 |
| (C) 5 | (D) 4 |

[Step-by-step solution ► prepwiser.in/questions/vsd4LjZdUF](https://www.prepwiser.in/questions/vsd4LjZdUF)

Q33 JEE Main 2023 · 24 Jan · Shift 2

Total number of tripeptides possible by mixing of valine and proline is _____

Numerical answer — enter the value.

[Step-by-step solution ► prepwiser.in/questions/GdK4Itt_w9](https://www.prepwiser.in/questions/GdK4Itt_w9)

Q34 JEE Main 2022 · 29 Jul · Shift 1

In a linear tetrapeptide (Constituted with different amino acids), (number of amino acids) – (number of peptide bonds) is _____.

Numerical answer — enter the value.

[Step-by-step solution ► prepwiser.in/questions/n61jAmB1Qs](https://www.prepwiser.in/questions/n61jAmB1Qs)

Q35 JEE Main 2022 · 25 Jul · Shift 1

During the denaturation of proteins, which of these structures will remain intact?

- | | |
|--------------|----------------|
| (A) Primary | (B) Secondary |
| (C) Tertiary | (D) Quaternary |

[Step-by-step solution ► prepwiser.in/questions/2413JNVYYx](https://www.prepwiser.in/questions/2413JNVYYx)

Q36 JEE Main 2022 · 29 Jun · Shift 2

The structure of protein that is unaffected by heating is

- | | |
|-------------------------|--------------------------|
| (A) secondary structure | (B) tertiary structure |
| (C) primary structure | (D) quaternary structure |

[Step-by-step solution ► prepwiser.in/questions/_qU90j4GYM](https://www.prepwiser.in/questions/_qU90j4GYM)

Q37 JEE Main 2022 · 28 Jun · Shift 1

Stability of α -Helix structure of proteins depends upon

- | | |
|--------------------------|---------------------------------|
| (A) dipolar interaction | (B) H-bonding interaction |
| (C) van der Waals forces | (D) π -stacking interaction |

[Step-by-step solution ► prepwiser.in/questions/53Wkww8U_U](https://www.prepwiser.in/questions/53Wkww8U_U)

Q38 JEE Main 2022 · 25 Jun · Shift 2

How many of the given compounds will give a positive Biuret test _____ ?

Glycine, Glycylalanine, Tripeptide, Biuret

Numerical answer — enter the value.

[Step-by-step solution ► prepwiser.in/questions/9m853VcYko](https://www.prepwiser.in/questions/9m853VcYko)

Q39 JEE Main 2022 · 24 Jun · Shift 2

In alanyl glycyl leucyl alanyl valine, the number of peptide linkages is _____.

Numerical answer — enter the value.

[Step-by-step solution ► prepwiser.in/questions/hkp9u2t9DA](https://www.prepwiser.in/questions/hkp9u2t9DA)

Q40 JEE Main 2021 · 1 Sep · Shift 2

A peptide synthesized by the reactions of one molecule each of Glycine, Leucine, Aspartic acid and Histidine will have _____ peptide linkages.

Numerical answer — enter the value.

[Step-by-step solution ► prepwiser.in/questions/3dxbczYHSv](https://www.prepwiser.in/questions/3dxbczYHSv)

Q41 JEE Main 2021 · 31 Aug · Shift 2

Which of the following is not an example of fibrous protein?

(A) Keratin

(B) Albumin

(C) Collagen

(D) Myosin

[Step-by-step solution ► prepwiser.in/questions/KSWDZU-YhS](https://www.prepwiser.in/questions/KSWDZU-YhS)

Q42 JEE Main 2021 · 25 Jul · Shift 1

The water soluble protein is :

(A) Fibrin

(B) Albumin

(C) Myosin

(D) Collagen

[Step-by-step solution ► prepwiser.in/questions/AuVA2iiGJu](https://www.prepwiser.in/questions/AuVA2iiGJu)

Q43 JEE Main 2021 · 16 Mar · Shift 2

The secondary structure of protein is stabilised by:

(A) Hydrogen bonding

(B) glycosidic bond

(C) Peptide bond

(D) van der Waals forces

[Step-by-step solution ► prepwiser.in/questions/5Y6nsS8dhP](https://www.prepwiser.in/questions/5Y6nsS8dhP)

Q44 JEE Main 2020 · 5 Sep · Shift 1

Which of the following is not an essential amino acid :

(A) Valine

(B) Leucine

(C) Lysine

(D) Tyrosine

[Step-by-step solution ► prepwiser.in/questions/prkbUTOkFC](https://www.prepwiser.in/questions/prkbUTOkFC)

Q45 JEE Main 2025 · 3 Apr · Shift 2

Fat soluble vitamins are:

- A. Vitamin B₁
- B. Vitamin C
- C. Vitamin E
- D. Vitamin B₁₂
- E. Vitamin K

Choose the correct answer from the options given below:

- | | |
|----------------|----------------|
| (A) B & C Only | (B) C & D Only |
| (C) C & E Only | (D) A & B Only |

[Step-by-step solution ► prepwiser.in/questions/HvNSgIjdVg](https://www.prepwiser.in/questions/HvNSgIjdVg)

Q46 JEE Main 2025 · 22 Jan · Shift 1

Which of the following acids is a vitamin ?

- | | |
|--------------------|-------------------|
| (A) Saccharic acid | (B) Ascorbic acid |
| (C) Aspartic acid | (D) Adipic acid |

[Step-by-step solution ► prepwiser.in/questions/Uo4TXCybIy](https://www.prepwiser.in/questions/Uo4TXCybIy)

Q47 JEE Main 2024 · 31 Jan · Shift 2

From the vitamins

A, B₁, B₆, B₁₂, C, D, E

and K, the number of vitamins that can be stored in our body is _____.

Numerical answer — enter the value.

[Step-by-step solution ► prepwiser.in/questions/_9ZRdiH25n](https://www.prepwiser.in/questions/_9ZRdiH25n)

Q48 JEE Main 2022 · 26 Jun · Shift 2

Which one of the following is a water soluble vitamin, that is not excreted easily?

- (A) Vitamin B₂
- (B) Vitamin B₁
- (C) Vitamin B₆
- (D) Vitamin B₁₂

[Step-by-step solution ► prepwiser.in/questions/9UOsG9IIE0](https://www.prepwiser.in/questions/9UOsG9IIE0)

Q49 JEE Main 2021 · 22 Jul · Shift 2

Thiamine and pyridoxine are also known respectively as :

- (A) Vitamin B₂ and Vitamin E
- (B) Vitamin E and Vitamin B₂
- (C) Vitamin B₆ and Vitamin B₂
- (D) Vitamin B₁ and Vitamin B₆

[Step-by-step solution ► prepwise.in/questions/LTtBwHkhLb](https://www.prepwise.in/questions/LTtBwHkhLb)

Q50 JEE Main 2021 · 18 Mar · Shift 2

Deficiency of vitamin K causes :

- (A) Cheilosis
- (B) Decrease in blood clotting time
- (C) Increase in blood clotting time
- (D) Increase in fragility of RBC's

[Step-by-step solution ► prepwise.in/questions/6ijF5Mse_C](https://www.prepwise.in/questions/6ijF5Mse_C)

Q51 JEE Main 2021 · 16 Mar · Shift 1

Which among the following pairs of Vitamins is stored in our body relatively for longer duration?

- (A) Thiamine and Vitamin A
- (B) Ascorbic acid and Vitamin D
- (C) Thiamine and Ascorbic acid
- (D) Vitamin A and Vitamin D

[Step-by-step solution ► prepwise.in/questions/kG3sd88bNb](https://www.prepwise.in/questions/kG3sd88bNb)

Q52 JEE Main 2021 · 26 Feb · Shift 1

Which of the following vitamin is helpful in delaying the blood clotting?

- (A) Vitamin K
- (B) Vitamin C
- (C) Vitamin E
- (D) Vitamin B

[Step-by-step solution ► prepwise.in/questions/n74GYUI0-H](https://www.prepwise.in/questions/n74GYUI0-H)

Q53 JEE Main 2020 · 7 Jan · Shift 1

Match the following :

- (i) Riboflavin (a) Beriberi
- (ii) Thiamine (b) Scurvy
- (iii) Pyridoxine (c) Cheliosis
- (iv) Ascorbic acid (d) Convulsions

- (A) (i)-(c), (ii)-(d), (iii)-(a), (iv)-(b)
- (B) (i)-(d), (ii)-(b), (iii)-(a), (iv)-(c)
- (C) (i)-c, (ii)-(a), (iii)-(d), (iv)-(b)
- (D) (i)-(a), (ii)-(d), (iii)-(c), (iv)-(b)

[Step-by-step solution ► prepwise.in/questions/gxNKPowTgV](https://www.prepwise.in/questions/gxNKPowTgV)

Enzymes · 2 PYQs

Q54 JEE Main 2024 · 6 Apr · Shift 2

The incorrect statements regarding enzymes are :

- (A) Enzymes are biocatalysts.
- (B) Enzymes are non-specific and can catalyse different kinds of reactions.
- (C) Most Enzymes are globular proteins.
- (D) Enzyme - oxidase catalyses the hydrolysis of maltose into glucose.

Choose the correct answer from the option given below :

- (A) (B) and (D)
- (B) (A), (B) and (C)
- (C) (B) and (C)
- (D) (B), (C) and (D)

[Step-by-step solution ► prepwiser.in/questions/5kj3hMAj4r](https://www.prepwiser.in/questions/5kj3hMAj4r)

Q55 JEE Main 2021 · 20 Jul · Shift 2

Which one of the following statements is not true about enzymes?

- (A) Enzymes are non-specific for a reaction and substrate.
- (B) Almost all enzymes are proteins.
- (C) Enzymes work as catalysts by lowering the activation energy of a biochemical reaction.
- (D) The action of enzymes is temperature and pH specific.

[Step-by-step solution ► prepwiser.in/questions/9TiRO0moEo](https://www.prepwiser.in/questions/9TiRO0moEo)

Nucleic Acids · 5 PYQs

Q56 JEE Main 2025 · 4 Apr · Shift 1

The total number of hydrogen bonds of a DNA-double Helix strand whose one strand has the following sequence of bases is _____.



Numerical answer — enter the value.

[Step-by-step solution ► prepwiser.in/questions/3xQm1aknjq](https://www.prepwiser.in/questions/3xQm1aknjq)

Q57 JEE Main 2024 · 1 Feb · Shift 1

If one strand of a DNA has the sequence ATGCTTCA, sequence of the bases in complementary strand is :

- (A) CATTAGCT
- (B) TACGAAGT
- (C) ATGCGACT
- (D) GTACTTAC

[Step-by-step solution ► prepwiser.in/questions/m7S8qPaRR9](https://www.prepwiser.in/questions/m7S8qPaRR9)

Q58 JEE Main 2024 · 30 Jan · Shift 2

The total number of correct statements, regarding the nucleic acids is _____.

- A. RNA is regarded as the reserve of genetic information
- B. DNA molecule self-duplicates during cell division
- C. DNA synthesizes proteins in the cell
- D. The message for the synthesis of particular proteins is present in DNA
- E. Identical DNA strands are transferred to daughter cells.

Numerical answer — enter the value.

Step-by-step solution ► prepwiser.in/questions/Y8kpMNRT2Y

Q59 JEE Main 2022 · 30 Jun · Shift 1

The sugar produced after complete hydrolysis of DNA is

- (A) a pentose sugar.
- (B) a hexose sugar.
- (C) a polysaccharide.
- (D) a disaccharide.

Step-by-step solution ► prepwiser.in/questions/VrWICZUqFH

Q60 JEE Main 2022 · 29 Jun · Shift 1

Sugar moiety in DNA and RNA molecules respectively are

- (A) β -D-2-deoxyribose, β -D-deoxyribose.
- (B) β -D-2-deoxyribose, β -D-ribose
- (C) β -D-ribose, β -D-2-deoxyribose.
- (D) β -D-deoxyribose, β -D-2-deoxyribose.

Step-by-step solution ► prepwiser.in/questions/HZvplzQFqT

Answer key — Carbohydrates & Biomolecules

Numbers match the question numbers above. For full working, open the solution link under each question.

1	B	2	A	3	C	4	C	5	B	6	B	7	2	8	C
9	D	10	C	11	A	12	D	13	C	14	D	15	C	16	D
17	C	18	C	19	A	20	B	21	B	22	A	23	D	24	4
25	C	26	6	27	C	28	B	29	A	30	A	31	6	32	D
33	8	34	1	35	A	36	C	37	B	38	2	39	4	40	3
41	B	42	B	43	A	44	D	45	C	46	B	47	5	48	D
49	D	50	C	51	D	52	A	53	C	54	A	55	A	56	33
57	B	58	3	59	A	60	B								

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