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## EdLoop JEE

CHEMISTRY · JEE MAIN

# Biomolecules

## Previous Year Questions with answers

**207** questions · **183** papers · **2002–2026** · newest paper first

**Step-by-step solutions for every question: free in the EdLoop JEE app (Google Play) · pyq.edloop.in**

**What is in this PDF:** every Biomolecules question we hold from past JEE Main and AIEEE papers, with its options and answer. Where an answer comes from a source other than the official final key, it says so next to the answer.

**Step-by-step solutions** for every question are free in the EdLoop JEE app (Google Play) and on app.edloop.in. More chapters: pyq.edloop.in/free-pdfs/

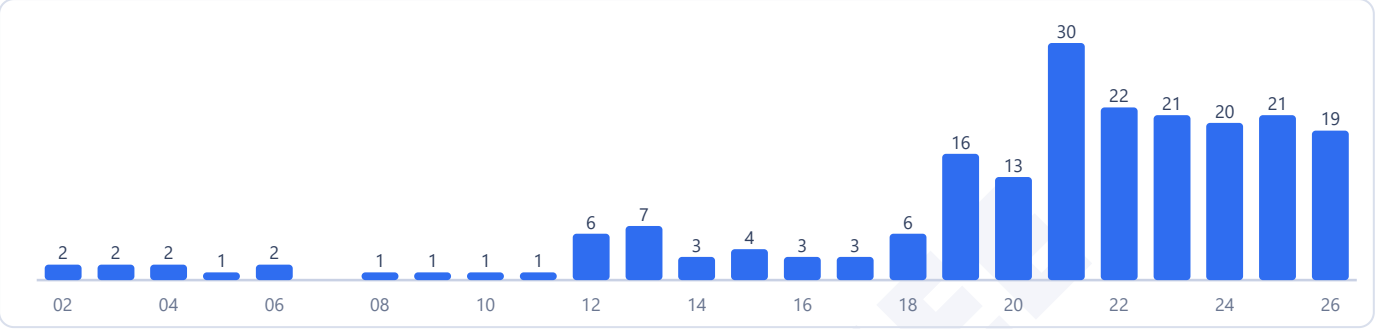
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# Chapter at a glance

| 3.5% | 207 | 148 of 162 | 188 / 19 |
|---|---|---|---|
| of Chemistry questions, 2019–2026 | questions, 2002–2026 | papers asked it, 2019–2026 | MCQ / numerical, 2002–2026 |

**Trend.** Steady: 1 questions per paper in 2024–2026 against 1 in 2019–2023.

### Questions per year




Counts are the questions we hold: 207 in 183 papers. 2 questions in this chapter came back in more than one paper.

### Most-asked topics in this chapter (2002–2026)

| | |
|---|---|
| Carbohydrates | 91 |
| Amino Acids & Proteins | 73 |
| Vitamins, Nucleic Acids & Hormones | 43 |

## How often it comes up

Biomolecules bridges organic chemistry with biological structures under Unit 19: Biomolecules in the Class 12 curriculum, holding rank 14 of 31 chapters with a 3.5% share of the chemistry section. During 2019 to 2026, Biomolecules accounted for 162 questions across 162 exam papers, delivering 3.5% of the chemistry section and holding rank 14 of 31 chapters. In the earlier 2002 to 2018 testing span, it contributed 45 questions across 38 papers with a 3.4% share. Over the recent 2024 to 2026 cycle, question numbers reached 60 questions across 58 papers, accounting for a 3.9% share. Comparing 2002 to 2018 against 2024 to 2026, the trend is up, while comparing 2019 to 2026 against 2024 to 2026, the testing share has remained about the same.

The chapter has appeared every year from 2019 to 2026. Across 2019 to 2026, students met an average of 1.0 question per paper, identical to the 1.0 question per paper recorded between 2024 and 2026. Nineteen numerical answer questions were presented from 2019 to 2026, often counting peptide bonds, chiral carbons, or stereoisomeric peptides.

## Most-asked topics

The syllabus organizes across three core topics:

- Carbohydrates: The leading topic with 91 total questions (73 in 2019 to 2026), evaluated continuously through 2026. Key areas investigate glucose chemical reactions (forming pentaacetate with acetic anhydride, saccharic acid with nitric acid, and n-hexane with HI and red phosphorus), cyclic alpha/beta anomers, mutarotation, Haworth projections, glycosidic linkages in maltose, lactose, and sucrose, and the structural basis of invert sugar.
- Amino Acids & Proteins: Contributed 73 total questions (60 in 2019 to 2026), tested through 2026. Focuses on classification into essential and non-essential amino acids, acidic/basic/neutral side chains, zwitterionic forms, peptide bond formation, secondary protein stabilization via hydrogen bonding (alpha-helix and beta-pleated

sheets), and protein denaturation disrupting secondary and tertiary conformations while preserving primary structure.

- Vitamins, Nucleic Acids & Hormones: Produced 43 total questions (29 in 2019 to 2026), active through 2026. Examines water-soluble versus fat-soluble vitamins (deficiency diseases like scurvy, rickets, beriberi, and night blindness), chemical components of DNA versus RNA (purine and pyrimidine base pairing), chirality of the pentose sugar backbone, and thyroid/pancreatic hormones.

## What the questions look like

Examiners test structural knowledge directly through diagrams and reaction matching. A recurring carbohydrate question presents four disaccharide structures and asks candidates to identify the non-reducing sugar by checking whether all anomeric carbons participate in glycosidic linkages (as in sucrose).

Protein questions often evaluate amino acid structures, asking students to identify essential amino acids, count peptide linkages in a drawn oligopeptide, or explain why glycine is the only standard proteinogenic amino acid lacking an asymmetric chiral alpha-carbon.

## How to practise it

Prepare for biomolecules by memorizing exact chemical formulas, linkages, and test responses:

1. Memorize glucose chemical reactions: Glucose with bromine water gives gluconic acid (monocarboxylic); with concentrated nitric acid gives saccharic acid (dicarboxylic); with acetic anhydride gives pentaacetate confirming five hydroxyl groups. 2. Note why sucrose is a non-reducing sugar: In sucrose, the hemiacetal hydroxyl of alpha-D-glucose and the hemiketal hydroxyl of beta-D-fructose link together through a glycosidic bond, leaving no free anomeric carbon to reduce Tollens or Fehling solutions. 3. Classify vitamins by solubility: Vitamins B and C are water-soluble (excreted readily, requiring regular intake, except vitamin B12); vitamins A, D, E, and K are fat-soluble (stored in liver and adipose tissue). 4. Identify essential amino acids: Memorize the ten essential amino acids (valine, leucine, isoleucine, lysine, methionine, threonine, phenylalanine, tryptophan, histidine, arginine). 5. Understand nucleic acid structures: Adenine pairs with thymine via two hydrogen bonds; guanine pairs with cytosine via three hydrogen bonds. In RNA, uracil replaces thymine.

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**Q1** JEE Main 2026 · 8 Apr · Shift 2 MCQ

The **incorrect** statement from the following with respect to carbohydrates is :

(A) All monosaccharides are reducing sugars.

(B) The monosaccharide units obtained from hydrolysis of oligosaccharides are always the same.

(C) Starch and cellulose are typical examples of polysaccharides, which are very high molecular weight compounds of more than ten monosaccharide units.

(D) Open chain and cyclic structures co-exist at equilibrium that are responsible for certain properties as in the case of D−(+)−glucose.

**Answer: (B) The monosaccharide units obtained from hydrolysis of oligosaccharides are always the same.** · Official NTA final key

**Q2** JEE Main 2026 · 6 Apr · Shift 1 MCQ

Match the **LIST-I** with **LIST-II**

| **List-I Deficiency Disease** | **List-II Vitamin** |
|---|---|
| A. Scurvy | I. Pyridoxine |
| B. Convulsions | II. Vitamin A |
| C. Cheilosis | III. Ascorbic Acid |
| D. Xerophthalmia | IV. Riboflavin |

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

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

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

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

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

**Answer: (C) A-III, B-I, C-IV, D-II** · Official NTA final key

**Q3** JEE Main 2026 · 5 Apr · Shift 1 MCQ

Identify the **correct** statements.

A. Glucose exists in two anomeric forms.

B. Anomers of glucose differ in configuration at C−1 in cyclic hemiacetal structure.

C. Melting point of $\alpha$ - anomer of glucose is greater than $\beta$ - anomer.

D. Specific rotation of $\alpha$ - anomer is +19° while for $\beta$ - anomer is +112°

E. $\alpha$ and $\beta$ - anomers of glucose are prepared by crystallization of saturated glucose solution at 303 K and 371 K respectively.

Choose the correct answer from the options given below:

(A) A and B Only
(B) B and C Only
(C) A, B and D Only
(D) A, B and E Only

**Answer: (D) A, B and E Only** · Official NTA final key

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**Q4** JEE Main 2026 · 5 Apr · Shift 2 MCQ

Identify the **incorrect** statement about tertiary structure of proteins.

(A) They can be fibrous or globular in structure.
(B) The main forces that stabilize the structure are hydrogen bonding, disulphide links, van der Waals and electrostatic forces of attraction.
(C) The structure remains intact when exposed to pH changes.
(D) A linear polypeptide chain will convert to a secondary structure and then further folding of the secondary structure will convert to tertiary structure.

**Answer: (C) The structure remains intact when exposed to pH changes.** · Official NTA final key

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**Q5** JEE Main 2026 · 5 Apr · Shift 2 MCQ

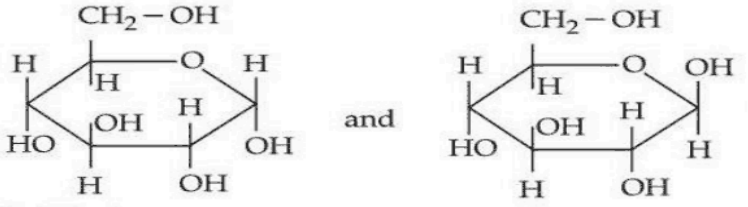
Given below are two statements :

**Statement I :** *(see the figure above)* and *(see the figure above)* are two anomers of D-(+)-glucose.

**Statement II :** The open chain forms of D-glucose and D- fructose contain three similar chiral carbons at $C_3$, $C_4$ and $C_5$.

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

Given below are two statements :

**Statement I :**  and  are two anomers of D-(+)-glucose.

**Statement II :** The open chain forms of D-glucose and D- fructose contain three similar chiral carbons at $C_3$, $C_4$ and $C_5$.

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

**Options :**

6911211773. Both **Statement I** and **Statement II** are true

6911211774. Both **Statement I** and **Statement II** are false

6911211775. **Statement I** is true but **Statement II** is false

6911211776. **Statement I** is false but **Statement II** is true

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

**Answer: (A) Both Statement I and Statement II are true** · Official NTA final key

## Q6 JEE Main 2026 · 4 Apr · Shift 1 MCQ

Given below are two statements:

**Statement I:** The structure of Maltose is given below:

*(see the figure above)*

Maltose is a non-reducing sugar.

**Statement II:** The structure of Lactose is given below:

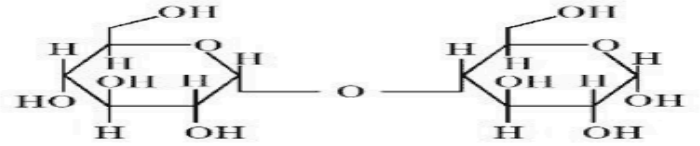
*(see the figure above)*

Lactose is a reducing sugar.

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

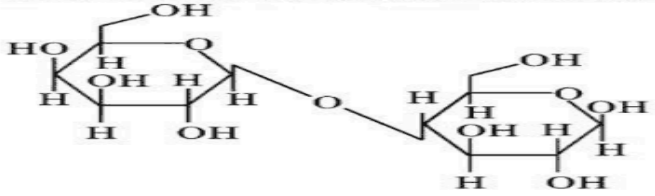
Given below are two statements:

**Statement I:** The structure of Maltose is given below:



Maltose is a non-reducing sugar.

**Statement II:** The structure of Lactose is given below:



Lactose is a reducing sugar.

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

**Options :**

6952781004. Both Statement I and Statement II are true

6952781005. Both Statement I and Statement II are false

6952781006. Statement I is true but Statement II is false

6952781007. Statement I is false but Statement II is true

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

**Answer: (D) Statement I is false but Statement II is true** · Official NTA final key

**Q7** JEE Main 2026 · 4 Apr · Shift 1 MCQ

Match the **LIST-I** with **LIST-II**

| **List-I Name of amino acid** | **List-II One letter symbol/type** |
|---|---|
| A. Arginine | I. D/Non-essential |
| B. Aspartic acid | II. R/Essential |
| C. Lysine | III. E/Non-essential |
| D. Glutamic acid | IV. K/Essential |

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

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

**Answer: (A) A-II, B-I, C-IV, D-III** · Official NTA final key

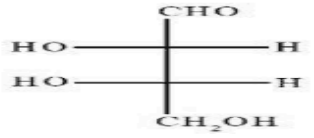
**Q8** JEE Main 2026 · 4 Apr · Shift 2 MCQ

A D-aldotetrose on oxidation with concentrated $HNO_3$ resulted in optically inactive dicarboxylic acid. The structure of the D-aldotetrose is:

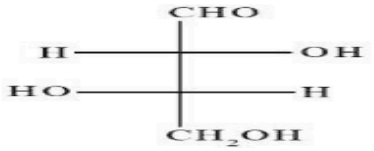
A D-aldotetrose on oxidation with concentrated $HNO_3$ resulted in optically inactive dicarboxylic acid. The structure of the D-aldotetrose is:

**Options :**

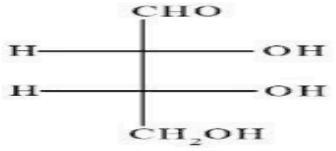
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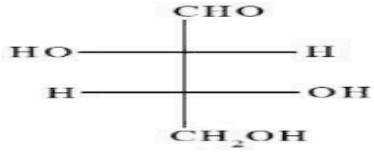

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6952781517.



(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

**Answer: (C)** · Official NTA final key

**Q9** JEE Main 2026 · 2 Apr · Shift 1 MCQ

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

| **List - I Vitamin** | **List - II Name** |
|---|---|
| A. Vitamin $B_1$ | I. Pyridoxine |
| B. Vitamin $B_2$ | II. Ascorbic acid |
| C. Vitamin $B_6$ | III. Thiamine |
| D. Vitamin C | IV. Riboflavin |

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

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

**Answer: (C) A-III, B-IV, C-I, D-II** · Official NTA final key

**Q10** JEE Main 2026 · 2 Apr · Shift 2 MCQ

Identify the correct pair having amino acid (A) and the hormone (B) that is iodinated derivative of the amino acid (A).
(T and Y represent one letter code for amino acids)

Amino acid (A) Hormone (B)

(A) T; Insulin
(B) T; Thyroxine
(C) Y; Thyroxine
(D) Y; Insulin

**Answer: (C) Y; Thyroxine** · Official NTA final key

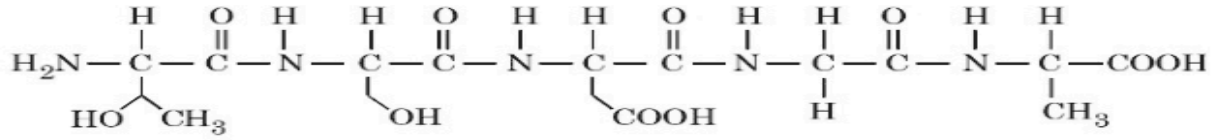
**Q11** JEE Main 2026 · 28 Jan · Shift 1 MCQ

In the given pentapeptide, find out an essential amino acid (Y) and the sequence present in the pentapeptide:

*(see the figure above)*

Choose the correct answer from the options given below:

**Q.70** In the given pentapeptide, find out an essential amino acid (Y) and the sequence present in the pentapeptide:



Choose the correct answer from the options given below:

**Options**

1.

| (Y) | (Sequence) |
|---|---|
| Threonine | Thr–Ser–Asp–Gly–Ala |

2.

| (Y) | (Sequence) |
|---|---|
| Serine | Ser–Asp–Thr–Ala–Gly |

3.

| (Y) | (Sequence) |
|---|---|
| Serine | Thr–Ser–Asp–Ala–Gly |

4.

| (Y) | (Sequence) |
|---|---|
| Threonine | Ser–Thr–Asp–Gly–Ala |

(A) (Y): Threonine ; (Sequence): Thr–Ser–Asp–Gly–Ala

(B) (Y): Serine ; (Sequence): Ser–Asp–Thr–Ala–Gly

(C) (Y): Serine ; (Sequence): Thr–Ser–Asp–Ala–Gly

(D) (Y): Threonine ; (Sequence): Ser–Thr–Asp–Gly–Ala

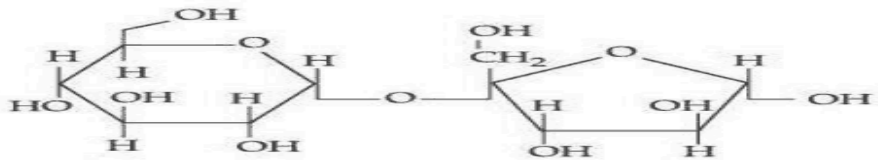
**Answer: (A)** (Y): Threonine ; (Sequence): Thr–Ser–Asp–Gly–Ala · Official NTA final key

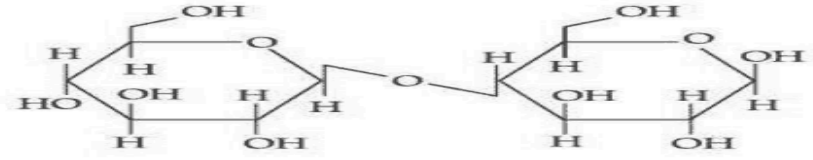
## Q12 JEE Main 2026 · 28 Jan · Shift 2 MCQ

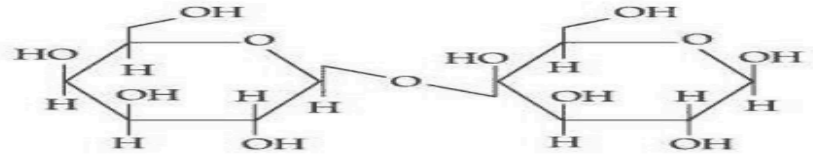
Structures of four disaccharides are given below. Among the given disaccharides, the non-reducing sugar is :

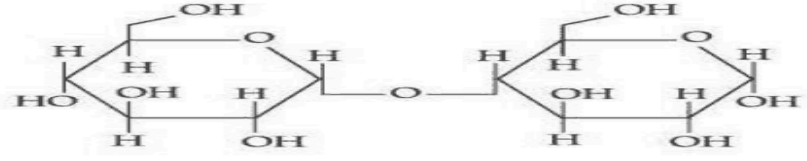
**Q.68** Structures of four disaccharides are given below. Among the given disaccharides, the non-reducing sugar is :

**Options**

1. 

2. 

3. 

4. 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

**Answer: (A)** · Official NTA final key

## Q13 JEE Main 2026 · 24 Jan · Shift 2 MCQ

The number of possible tripeptides formed involving alanine (ala), glycine (gly) and valine (val), where no amino acid has been used more than once is:

(A) 3
(B) 6
(C) 8
(D) 4

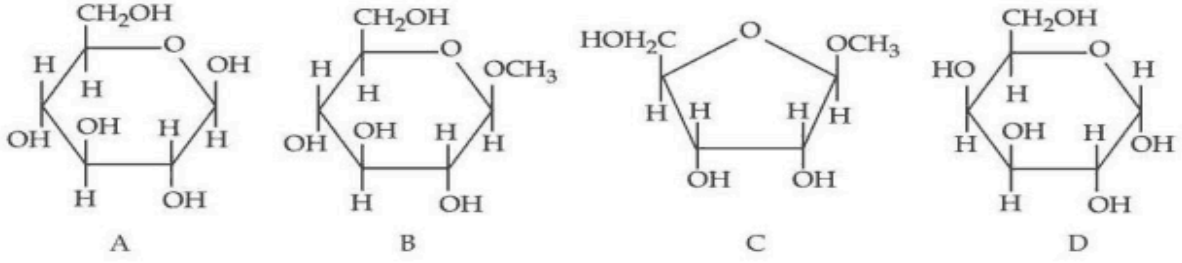
**Answer: (B) 6** · Official NTA final key

## Q14 JEE Main 2026 · 23 Jan · Shift 1 MCQ

From the given following (A to D) cyclic structures, those which will not react with Tollen's reagent are :

*(see the figure above)*

Q.62 From the given following (A to D) cyclic structures, those which will not react with Tollen's reagent are :




Options
1. A and D
2. B and C
3. A and B
4. B and D

(A) A and D
(B) B and C
(C) A and B
(D) B and D

**Answer: (B) B and C** · Official NTA final key

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**Q15** JEE Main 2026 · 23 Jan · Shift 2 MCQ

Both human DNA and RNA are chiral molecules. The chirality in DNA and RNA arises due to the presence of

(A) Base unit
(B) Chiral phosphate unit
(C) L−sugar component
(D) D−sugar component

**Answer: (D) D−sugar component** · Official NTA final key

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**Q16** JEE Main 2026 · 22 Jan · Shift 1 MCQ

Given below are two statements:

**Statement I:** Sucrose is dextrorotatory. However, sucrose upon hydrolysis gives a solution having mixture of products. This solution shows laevorotation.

**Statement II:** Hydrolysis of sucrose gives glucose and fructose. Since the laevorotation of glucose is more than the dextrorotation of fructose, the resulting solution becomes laevorotatory.

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

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

**Answer: (B) Statement I is true but Statement II is false** · Official NTA final key

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**Q17** JEE Main 2026 · 22 Jan · Shift 2 MCQ

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

| List - I Reaction of Glucose with | List - II Product formed |
|---|---|
| A. Hydroxylamine | I. Gluconic acid |
| B. $Br_2$ water | II. Glucose pentaacetate |
| C. Excess acetic anhydride | III. Saccharic acid |
| D. Concentrated $HNO_3$ | IV. Glucoxime |

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

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

**Answer: (A) A-IV, B-I, C-II, D-III** · Official NTA final key

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**Q18** JEE Main 2026 · 21 Jan · Shift 1 MCQ

Identify the **correct** statements.

A. Arginine and Tryptophan are essential amino acids.

B. Histidine does not contain heterocyclic ring in its structure.

C. Proline is a six membered cyclic ring amino acid.

D. Glycine does not have chiral centre.

E. Cysteine has characteristic feature of side chain as MeS$-\mathrm{CH_2}-\mathrm{CH_2}-$.

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

(A) B and E Only
(B) A and D Only
(C) C and D Only
(D) C and E Only

**Answer: (B) A and D Only** · Official NTA final key

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**Q19** JEE Main 2026 · 21 Jan · Shift 2 MCQ

The **correct** statements are :

A. Activation energy for enzyme catalysed hydrolysis of sucrose is lower than that of acid catalysed hydrolysis.

B. During denaturation, secondary and tertiary structures of a protein are destroyed but primary structure remains intact.

C. Nucleotides are joined together by glycosidic linkage between $\mathrm{C_1}$ and $\mathrm{C_4}$ carbons of the pentose sugar.

D. Quaternary structure of proteins represents overall folding of the polypeptide chain.

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

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

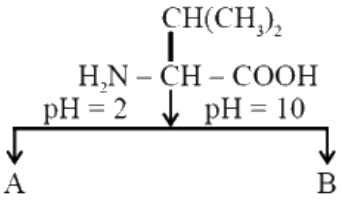
**Answer: (B) A and B Only** · Official NTA final key

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## Q20 JEE Main 2025 · 8 Apr · Shift 2 MCQ

*see figure*

7.




Choose the correct option for structures of A and B, respectively

(1) $H_3^+N-\underset{CH(CH_3)_2}{\underset{|}{CH}}-COOH$ and $H_2N-\underset{CH(CH_3)_2}{\underset{|}{CH}}-COO^-$

(2) $H_2N-\underset{CH(CH_3)_2}{\underset{|}{CH}}-COO^{\ominus}$ and $H_3^+N-\underset{CH(CH_3)_2}{\underset{|}{CH}}-COO^-$

(3) $H_2N-\underset{CH(CH_3)_2}{\underset{|}{CH}}-COO^-$ and $H_3^+N-\underset{CH(CH_3)_2}{\underset{|}{CH}}-COOH$

(4) $H_3^+N-\underset{CH(CH_3)_2}{\underset{|}{CH}}-COO^-$ and $H_3^+N-\underset{CH(CH_3)_2}{\underset{|}{CH}}-COOH$

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

**Answer: (A)** · Key from source paper

## Q21 JEE Main 2025 · 7 Apr · Shift 1 MCQ

Given below are two statements:

Statement I: D-(+)-glucose + D-(+) fructose $\xrightarrow{-H_2O}$ Sucrose

sucrose $\xrightarrow{hydrolysis}$ D- (+) glucose $+D-(+)$ fructose

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

**Answer: (D) Statement I is false but Statement II are true** · Key from source paper

## Q22 JEE Main 2025 · 7 Apr · Shift 2 MCQ

Given below are two statements :

Statement (I) : On hydrolysis, oligo peptides give rise to fewer number of $\alpha$ -amino acids while proteins give rise to a large number of $\beta$ -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 correct
(C) Statement I is correct but Statement II is incorrect
(D) Both Statement I and Statement II are incorrect

**Answer: (D) Both Statement I and Statement II are incorrect** · Key from source paper

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**Q23** JEE Main 2025 · 4 Apr · Shift 1 MCQ

Identify the pair of reactants that upon reaction, with elimination of HCl will give rise to the dipeptide Gly-Ala.

(A) $NH_2 - CH_2 - COOH$ and $NH_2 - CH(CH_3) - COCl$
(B) $NH_2 - CH_2 - COCl$ and $NH_2 - CH(CH_3) - COOH$
(C) $NH_2 - CH_2 - COOH$ and $NH_2 - CH(CH_3) - COOH$
(D) $NH_2 - CH_2 - COCl$ and $\overset{\oplus}{N}H_3 - CH(CH_3) - COCl$

**Answer: (B)** $NH_2 - CH_2 - COCl$ **and** $NH_2 - CH(CH_3) - COOH$ · Key from source paper

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**Q24** JEE Main 2025 · 4 Apr · Shift 1 Numerical

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

5' G–G–C–A–A–A–T–C–G–G–C–T–A–3'

Numerical value type: the answer is a number.

**Answer: 33.** · Key from source paper

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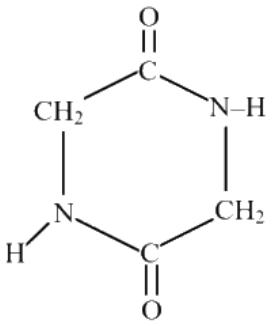
**Q25** JEE Main 2025 · 4 Apr · Shift 2 MCQ

A dipeptide, " $x$ " on complete hydrolysis gives " $y$ " and " $z$ ". " $y$ " on treatment with aq. $HNO_2$ produces lactic acid. On the other hand " $z$ " on heating gives the following cyclic molecule.

*(see the figure above)*

Based on the information given, the dipeptide X is :

**6.** A dipeptide, "$x$" on complete hydrolysis gives "$y$" and "$z$". "$y$" on treatment with aq. $HNO_2$ produces lactic acid. On the other hand "$z$" on heating gives the following cyclic molecule.




Based on the information given, the dipeptide X is :

(1) valine-leucine (2) alanine-glycine (3) valine-glycine (4) alanine-alanine

(A) valine-leucine

(B) alanine-glycine

(C) valine-glycine

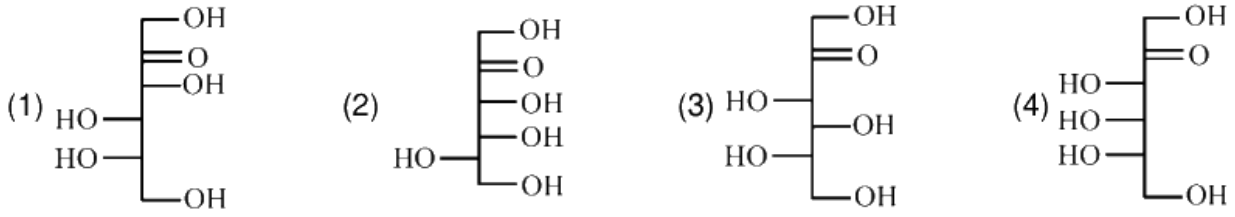
(D) alanine-alanine

**Answer: (B) alanine-glycine** · Key from source paper

## Q26 JEE Main 2025 · 3 Apr · Shift 1 MCQ

Which of the following is the correct structure of L- Fructose?

**12.** Which of the following is the correct structure of L- Fructose?




(A) *see figure*

(B) *see figure*

(C) *see figure*

(D) *see figure*

**Answer: (A)** · Key from source paper

## Q27 JEE Main 2025 · 3 Apr · Shift 2 MCQ

Fat soluble vitamins are:

A. Vitamin $B_1$ B. Vitamin C C. Vitamin E D. Vitamin $B_{12}$ E. Vitamin K

Choose the correct answer from the options given below:

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

**Answer: (D) C & E Only** · Key from source paper

---

**Q28** JEE Main 2025 · 2 Apr · Shift 1 MCQ

Identify the correct statement among the following :

(A) All naturally occurring amino acids are optically active.
(B) All naturally occurring amino acids except glycine contain one chiral centre.
(C) Amino acid, cysteine can easily undergo dimerisation due to the presence of free SH group.
(D) Glutamic acid is the only amino acid that contains a - COOH group at the side chain.

**Answer: (C) Amino acid, cysteine can easily undergo dimerisation due to the presence of free SH group.** · Key from source paper

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**Q29** JEE Main 2025 · 2 Apr · Shift 2 MCQ

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) 8
(C) 24
(D) 16

**Answer: (C) 24** · Key from source paper

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**Q30** JEE Main 2025 · 29 Jan · Shift 1 MCQ

Match List - I with List - II.

| List - I (Carbohydrate) | List - II (Linkage Source) |
|---|---|
| (A) Amylose | (I) $\beta - C_1 - C_4$, plant |
| (B) Cellulose | (II) $\alpha - C_1 - C_4$, animal |
| (C) Glycogen | (III) $\alpha - C_1 - C_4, \alpha - C_1 - C_6$, plant |
| (D) Amylopectin | (IV) $\alpha - C_1 - C_4$, plant |

Choose the correct answer from the options given below :

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

**Answer: (D)** (A)-(IV), (B)-(I), (C)-(II), (D)-(III) · Key from source paper

## Q31 JEE Main 2025 · 29 Jan · Shift 2 MCQ

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

**Answer: (B)** (A), (C) and (D) only · Key from source paper

## Q32 JEE Main 2025 · 28 Jan · Shift 1 MCQ

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 $100^{\circ}C$ and 2-3 atmosphere pressure produces glucose. In the light of the above statements, choose the correct answer from the options given below

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

**Answer: (A)** Statement I is false but Statement II is true · Key from source paper

## Q33 JEE Main 2025 · 28 Jan · Shift 2 MCQ

Match List - I with List - II.

| List - I (Saccharides) | List - II (Glycosidic-linkages found) |
|---|---|
| (A) Sucrose | (I) $\alpha$ 1 – 4 |
| (B) Maltose | (II) $\alpha$ 1 – 4 and $\alpha$ 1 – 6 |
| (C) Lactose | (III) $\alpha$ 1 – $\beta$ 2 |
| (D) Amylopectin | (IV) $\beta$ 1 – 4 |

Choose the correct answer from the options given below :

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

**Answer: (C)** (A)-(III), (B)-(I), (C)-(IV), (D)-(II) · Key from source paper

---

**Q34** JEE Main 2025 · 28 Jan · Shift 2 MCQ

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

**Answer: (B)** (B), (C) and (E) only · Key from source paper

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**Q35** JEE Main 2025 · 24 Jan · Shift 1 MCQ

The carbohydrate "Ribose" present in DNA, is A. A pentose sugar B. present in pyranose from C. in "D" configuration D. a reducing sugar, when free E. in $\alpha$-anomeric form Choose the correct answer from the options given below:

A A, D and E Only
B A, C and D Only
C A, B and E Only
D B, D and E Only

**Answer: (B)** A, C and D Only · Key from source paper

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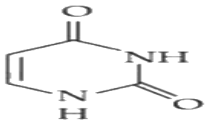
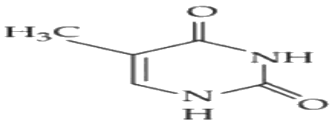
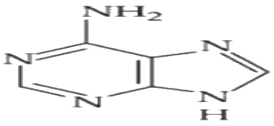
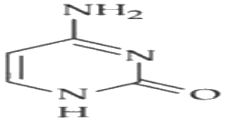
**Q36** JEE Main 2025 · 24 Jan · Shift 2 MCQ

Match List - I with List - II.

*(see the figure above)*

Choose the correct answer from the options given below :

**Q68.** Match List - I with List - II.

| List - I | | List - II |
|---|---|---|
| (A) Adenine | (I) |  |
| (B) Cytosine | (II) |  |
| (C) Thymine | (III) |  |
| (D) Uracil | (IV) |  |

Choose the correct answer from the options given below :

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

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

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

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

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

**Answer: (B)** (A)-(III), (B)-(IV), (C)-(II), (D)-(I) · Key from source paper

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## Q37 JEE Main 2025 · 23 Jan · Shift 1 MCQ

Given below are two statements: Statement I: Fructose does not contain an aldehydic group but still reduces Tollen's reagent Statement II: In the presence of base, fructose undergoes rearrangement to give glucose. In the light of the above statements, choose the correct answer from the options given below

(A) Both Statement I and Statement II are true

(B) Both Statement I and Statement II are false

(C) Statement I is true but Statement II is false

(D) Statement I is true but Statement II is false

**Answer: (A) Both Statement I and Statement II are true** · Key from source paper

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## Q38 JEE Main 2025 · 23 Jan · Shift 2 MCQ

The $\alpha$-Helix and $\beta$ - Pleated sheet structures of protein are associated with its :

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

**Answer: (C) secondary structure** · Key from source paper

## Q39 JEE Main 2025 · 22 Jan · Shift 1 MCQ

Which of the following acids is a vitamin?

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

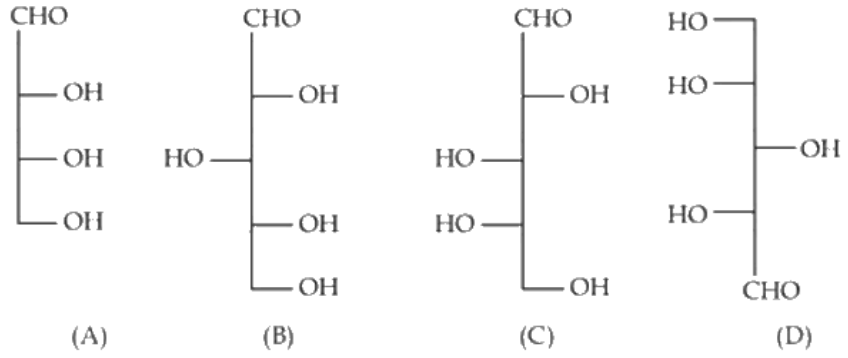
**Answer: (B) Ascorbic acid** · Key from source paper

## Q40 JEE Main 2025 · 22 Jan · Shift 2 MCQ

Identify the number of structure/s from the following which can be correlated to D-glyceraldehyde.

*(see the figure above)*

**Q61.** Identify the number of structure/s from the following which can be correlated to D-glyceraldehyde.




(1) four
(2) one
(3) two
(4) three

(A) four
(B) one
(C) two
(D) three

**Answer: (D) three** · Key from source paper

**Q41** JEE Main 2024 · 9 Apr · Shift 1 · Numerical

Total number of essential amino acid among the given list of amino acids is _____ Arginine, Phenylalanine, Aspartic acid, Cysteine, Histidine, Valine, Proline

Numerical value type: the answer is a number.

**Answer: 4.** · Key from source paper

**Q42** JEE Main 2024 · 9 Apr · Shift 2 · MCQ

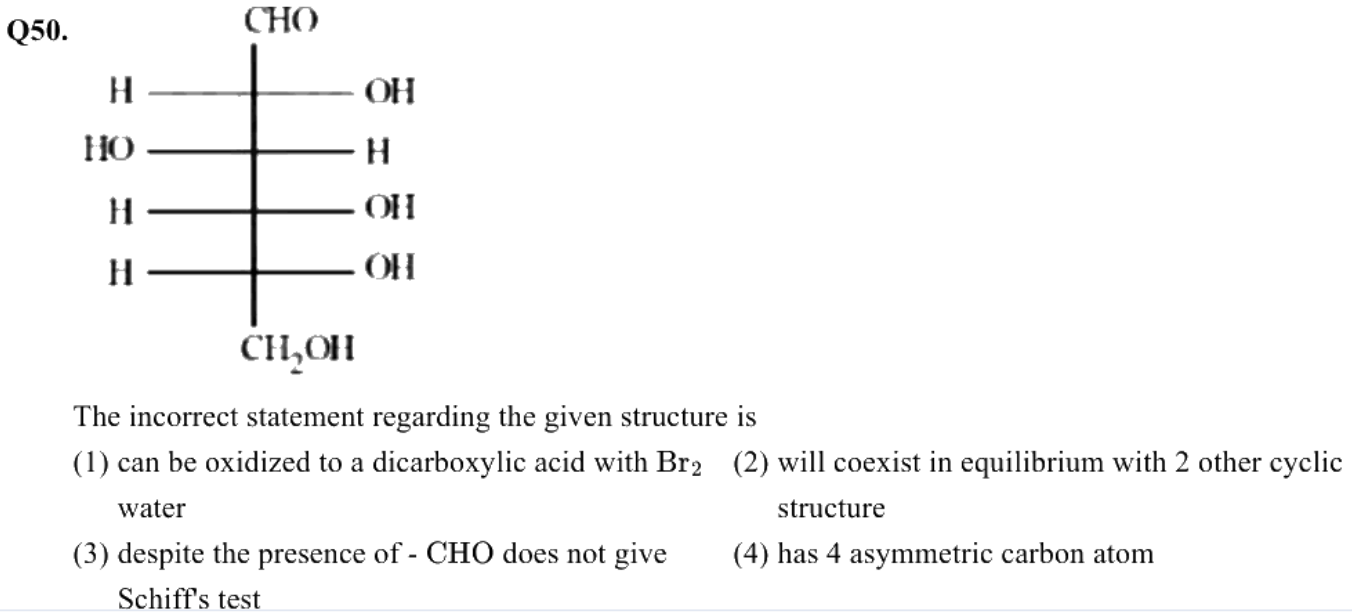
The incorrect statement about Glucose is :

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

**Answer: (A) Glucose is soluble in water because of having aldehyde functional group** · Key from source paper

**Q43** JEE Main 2024 · 8 Apr · Shift 1 · MCQ

*see figure*




(A) can be oxidized to a dicarboxylic acid with $Br_2$ water
(B) will coexist in equilibrium with 2 other cyclic structure
(C) despite the presence of - CHO does not give Schiff's test
(D) has 4 asymmetric carbon atom

**Answer: (A) can be oxidized to a dicarboxylic acid with $Br_2$ water** · Key from source paper

**Q44** JEE Main 2024 · 8 Apr · Shift 2 Numerical

The total number of carbon atoms present in tyrosine, an amino acid, is _____

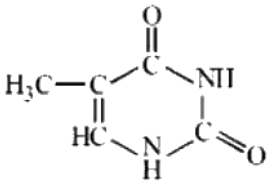
Numerical value type: the answer is a number.

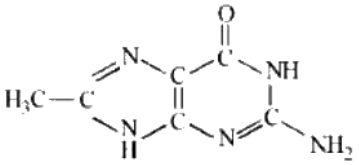
**Answer: 9.** · Key from source paper

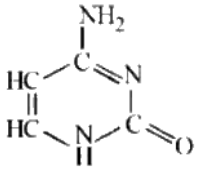
**Q45** JEE Main 2024 · 6 Apr · Shift 1 MCQ

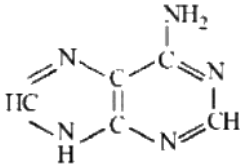
DNA molecule contains 4 bases whose structure are shown below. One of the structures is not correct, identify the incorrect base structure.

**Q50.** DNA molecule contains 4 bases whose structure are shown below. One of the structures is not correct, identify the incorrect base structure.

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

**Answer: (B)** · Key from source paper

**Q46** JEE Main 2024 · 6 Apr · Shift 2 MCQ

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

**Answer: (B)** (B) and (D) · Key from source paper

**Q47** JEE Main 2024 · 5 Apr · Shift 1 MCQ

Which of the following gives a positive test with ninhydrin?

(A) Starch
(B) Egg albumin
(C) Polyvinyl chloride
(D) Cellulose

**Answer: (B) Egg albumin** · Key from source paper

## Q48 JEE Main 2024 · 5 Apr · Shift 2 MCQ

Coagulation of egg, on heating is because of :

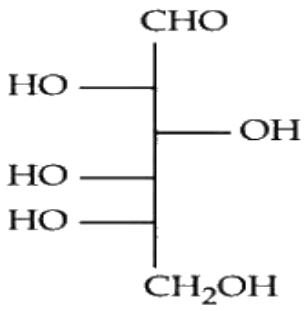
(A) The secondary structure of protein remains unchanged
(B) Denaturation of protein occurs
(C) Biological property of protein remains unchanged
(D) Breaking of the peptide linkage in the primary structure of protein occurs

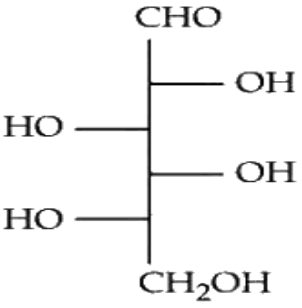
**Answer: (B) Denaturation of protein occurs** · Key from source paper

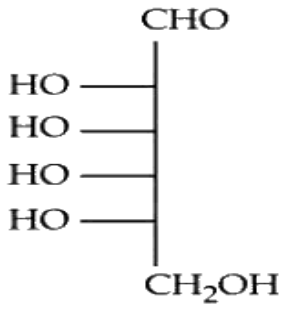
## Q49 JEE Main 2024 · 4 Apr · Shift 1 MCQ

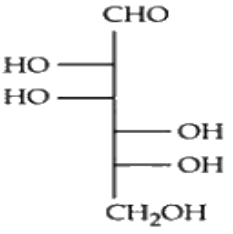
Which of the following is the correct structure of L-Glucose?

**Q50.** Which of the following is the correct structure of L-Glucose?

(1)



(2)



(3)



(4)



(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

**Answer: (A)** · Key from source paper

**Q50** JEE Main 2024 · 4 Apr · Shift 2 MCQ

Match List I with List II

| List - I | List - II |
|---|---|
| A. $\alpha$ - Glucose and $\alpha$ - Galactose | I. Functional isomers |
| B. $\alpha$ - Glucose and $\beta$ - Glucose | II. Homologous |
| C. $\alpha$ - Glucose and $\alpha$ - Fructose | III. Anomers |
| D. $\alpha$ - Glucose and $\alpha$ - Ribose | IV. Epimers |

Choose the correct answer from the options given below:

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

**Answer: (A) A-IV, B-III, C-I, D-II** · Key from source paper

**Q51** JEE Main 2024 · 1 Feb · Shift 1 MCQ

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

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

**Answer: (B) TACGAAGT** · Key from source paper

**Q52** JEE Main 2024 · 1 Feb · Shift 2 Numerical

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

Numerical value type: the answer is a number.

**Answer: 6.** · Key from source paper

**Q53** JEE Main 2024 · 31 Jan · Shift 1 MCQ

Match List I with List II

| List-I | List-II |
|---|---|
| A. Glucose/$NaHCO_3$ / $\Delta$ | I. Gluconic acid |
| B. Glucose/$HNO_3$ | II. No reaction |
| C. Glucose/HI / $\Delta$ | III. n-hexane |

D. Glucose/Bromine water IV. Saccharic acid

Choose the correct answer from the options given below:

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

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

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

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

**Answer: (B) A-II, B-IV, C-III, D-I** · Key from source paper

**Q54** JEE Main 2024 · 31 Jan · Shift 2 Numerical

From the vitamins $A, B_1, B_6, B_{12}, C, D, E$ and $K$, the number vitamins that can be stored in our body is _____.

Numerical value type: the answer is a number.

**Answer: 5.** · Key from source paper

**Q55** JEE Main 2024 · 30 Jan · Shift 1 MCQ

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

(A) Sucrose

(B) Lactose

(C) Glucose

(D) Maltose

**Answer: (A) Sucrose** · Key from source paper

**Q56** JEE Main 2024 · 30 Jan · Shift 2 Numerical

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 value type: the answer is a number.

**Answer: 3.** · Key from source paper

**Q57** JEE Main 2024 · 29 Jan · Shift 1 MCQ

Type of amino acids obtained by hydrolysis of proteins is :

(A) $\beta$
(B) $\alpha$
(C) $\delta$
(D) $\gamma$

**Answer: (B)** $\alpha$ · Key from source paper

## Q58 JEE Main 2024 · 29 Jan · Shift 2 MCQ

Match List I with List II

| List I (Bio Polymer) | | List II (Monomer) | |
|---|---|---|---|
| A. | Starch | I. | nucleotide |
| B. | Cellulose | II. | $\alpha$-glucose |
| C. | Nucleic acid | III. | $\beta$-glucose |
| D. | Protein | IV. | $\alpha$-amino acid |

Choose the correct answer from the options given below :-

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

**Answer: (D) A-II, B-III, C-I, D-IV** · Key from source paper

## Q59 JEE Main 2024 · 27 Jan · Shift 1 MCQ

Two nucleotides are joined together by a linkage known as :

(A) Phosphodiester linkage
(B) Glycosidic linkage
(C) Disulphide linkage
(D) Peptide linkage

**Answer: (A) Phosphodiester linkage** · Key from source paper

## Q60 JEE Main 2024 · 27 Jan · Shift 2 MCQ

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

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

**Answer: (A) Primary** · Key from source paper

EdLoop JEE

**Q61** JEE Main 2023 · 15 Apr · Shift 1 MCQ

Which is not true for arginine?

(A) It has a fairly high melting point
(B) It is associated with more than one $pK_a$ values.
(C) It has high solubility in benzene.
(D) It is a crystalline solid.

**Answer: (C) It has high solubility in benzene.** · Key from source paper

**Q62** JEE Main 2023 · 13 Apr · Shift 2 MCQ

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

(A) asparagine
(B) histidine
(C) arginine
(D) lysine

**Answer: (A) asparagine** · Key from source paper

**Q63** JEE Main 2023 · 12 Apr · Shift 1 Numerical

In an oligopeptide named Alanylglycylphenyl alanyl isoleucine, the number of $sp^2$ hybridised carbons is _____.

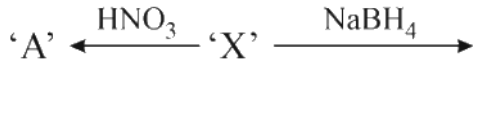
Numerical value type: the answer is a number.

**Answer: 10.** · Key from source paper

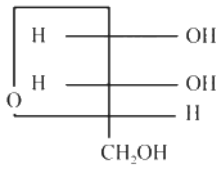
**Q64** JEE Main 2023 · 11 Apr · Shift 1 MCQ

L-isomer of tetrose X $(C_4H_8O_4)$ gives positive Schiff's test and has two chiral carbons. On acetylation 'X' yields triacetate. 'X' also undergoes following reactions.
*(see the figure above)*

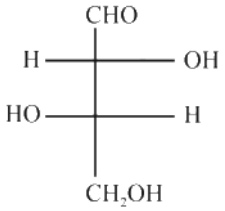
**Q47.** L-isomer of tetrose $X\left(C_4H_8O_4\right)$ gives positive Schiff's test and has two chiral carbons. On acetylation 'X' yields triacetate. 'X' also undergoes following reactions.



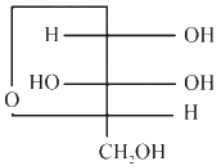

(1)



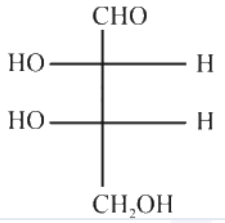

(2)




(3)




(4)




(A) *see figure*

(B) *see figure*

(C) *see figure*

(D) *see figure*

**Answer: (B)** · Key from source paper

---

## Q65 JEE Main 2023 · 11 Apr · Shift 2 Numerical

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 value type: the answer is a number.

**Answer: 2.** · Key from source paper

---

## Q66 JEE Main 2023 · 10 Apr · Shift 1 MCQ

The one that does not stabilize $2^\circ$ and $3^\circ$ structures of proteins is

(A) S - S - linkage

(B) H - bonding

(C) O - O - linkage

(D) van der Waals forces

**Answer: (C)**

- **O - O - linkage**

· Key from source paper

**Q67** JEE Main 2023 · 8 Apr · Shift 1 MCQ

Sulphur (S) containing amino acids from the following are:
(a) isoleucine
(b) cysteine
(c) lysine
(d) methionine
(e) glutamic acid

(A) b, c, e
(B) a, b, c
(C) b, d
(D) a, d

**Answer: (C)** b, d · Key from source paper

**Q68** JEE Main 2023 · 8 Apr · Shift 2 MCQ

Match List I with List II

| List I Natural amino acid | | List II One Letter Code |
|---|---|---|
| (A) Glutamic acid | (I) | Q |
| (B) Glutamine | (II) | W |
| (C) Tyrosine | (III) | E |
| (D) Tryptophan | (IV) | Y |

Choose the correct answer from the options given below:

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

**Answer: (C)** (A)-III, B-I, (C)-IV, (D)-II · Key from source paper

**Q69** JEE Main 2023 · 6 Apr · Shift 1 MCQ

Match List I with List II

| LIST I – Enzymatic reaction | | LIST II - Enzyme |
|---|---|---|
| A Sucrose $\rightarrow$ Glucose and Fructose | I | Zymase |
| B Glucose $\rightarrow$ ethyl alcohol and $CO_2$ | II | Pepsin |
| C Starch $\rightarrow$ Maltose | III | Invertase |
| D Proteins $\rightarrow$ Amino acids | IV | Diastase |

Choose the correct answer from the options given below.

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

**Answer: (B) A - III, B - I, C - IV, D - II** · Key from source paper

---

**Q70** JEE Main 2023 · 6 Apr · Shift 1 MCQ

Match List I and List II

| List I Vitamin | | List II Deficiency disease |
|---|---|---|
| A Vitamin A | I | Beri-Beri |
| B Thiamine | II | Cheilosis |
| C Ascorbic acid | III | Xerophthalmia |
| D Riboflavin | IV | Scurvy |

Choose the correct answer from the options given below

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

**Answer: (A) A - III, B - I, C - IV, D - II** · Key from source paper

---

**Q71** JEE Main 2023 · 6 Apr · Shift 2 MCQ

Match List-I with List-II.

| List-I Natural Amino acid | List-II One Letter Code |
|---|---|
| (A) Arginine | (I) D |
| (B) Aspartic acid | (II) N |
| (C) Asparagine | (III) A |
| (D) Alanine | (IV) R |

Choose the correct answer from the options given below:

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

**Answer: (A) (A)-(IV), B-(I), (C)-(II), (D)-(III)** · Key from source paper

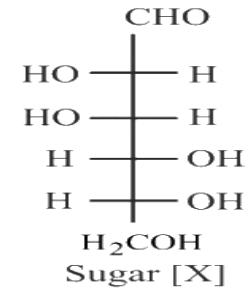
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**Q72** JEE Main 2023 · 1 Feb · Shift 1 MCQ

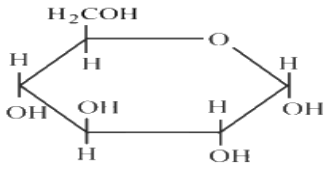
The correct representation in six membered pyranose form for the following sugar [X] is

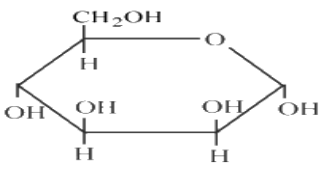
*(see the figure above)*

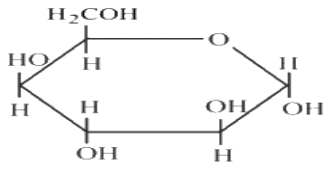
**Q49.** The correct representation in six membered pyranose form for the following sugar [X] is

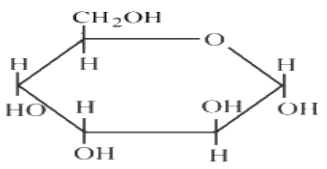


Sugar [X]

(1) 

(2) 

(3) 

(4) 

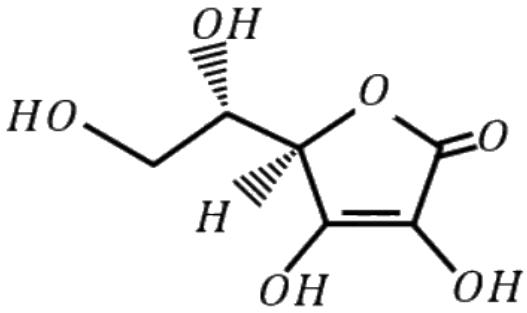
(A) (pyranose drawing 1, see figure)
(B) (pyranose drawing 2, see figure)
(C) (pyranose drawing 3, see figure)
(D) (pyranose drawing 4, see figure)

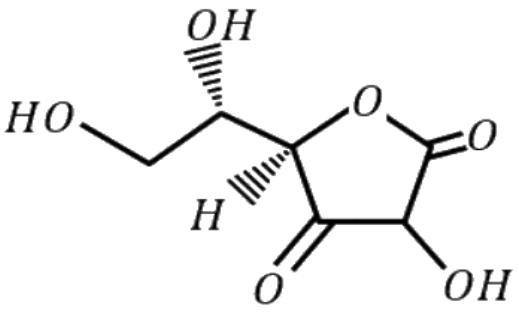
**Answer: (B)** (pyranose drawing 2, see figure) · Key from source paper

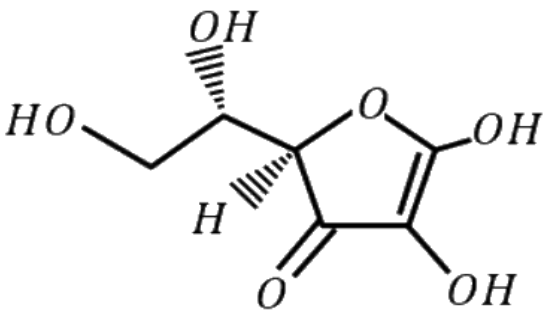
## Q73 JEE Main 2023 · 1 Feb · Shift 2 MCQ

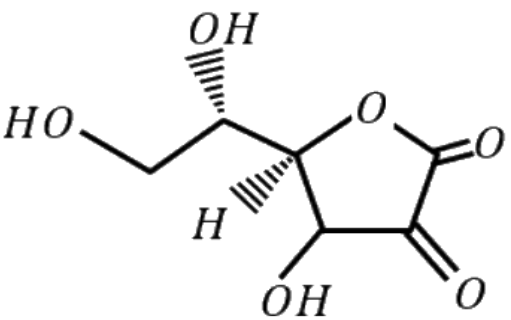
All structures given below are of vitamin C. Most stable of them is:

**Q59.** All structures given below are of vitamin C. Most stable of them is:

(1) 

(2) 

(3) 

(4) 

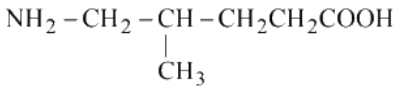
(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

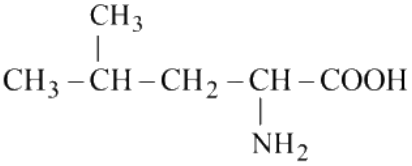
**Answer: (A)** · Key from source paper

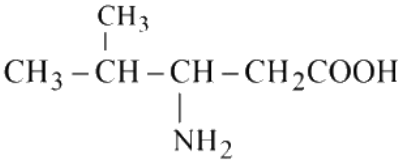
## Q74 JEE Main 2023 · 31 Jan · Shift 1 MCQ

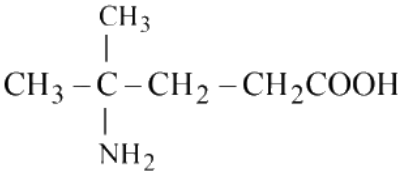
A protein 'X' with molecular weight of 70, 000 u, on hydrolysis gives amino acids. One of these amino acid is

**Q50.** A protein 'X' with molecular weight of 70, 000 u, on hydrolysis gives amino acids. One of these amino acid is

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

**Answer: (B)** · Key from source paper

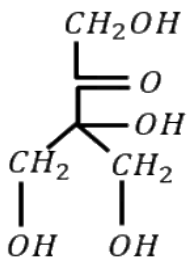
## Q75 JEE Main 2023 · 31 Jan · Shift 2 MCQ

Compound A, $C_5H_{10}O_5$, given a tetraacetate with $AC_2O$ and oxidation of A with $Br_2 - H_2O$ gives an acid, $C_5H_{10}O_6$. Reduction of A with HI gives isopentane. The possible structure of A is :

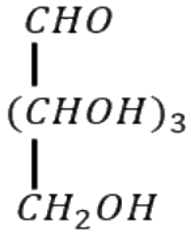
*(see the figure above)*

**Q60.** Compound A, $C_5H_{10}O_5$, given a tetraacetate with $AC_2O$ and oxidation of A with $Br_2 - H_2O$ gives an acid, $C_5H_{10}O_6$. Reduction of A with HI gives isopentane. The possible structure of A is :

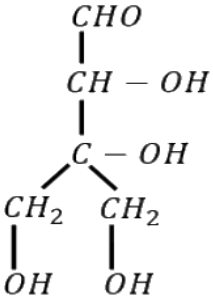
(1)



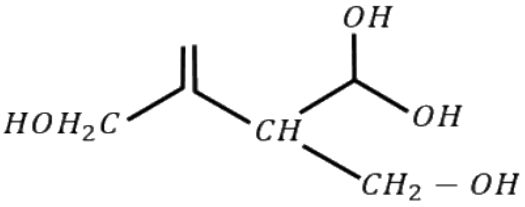
(2)



(3)



(4)



(A) *see figure*

(B) *see figure*

(C) *see figure*

(D) *see figure*

**Answer: (C)** · Key from source paper

---

## Q76 JEE Main 2023 · 30 Jan · Shift 1 MCQ

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 $\beta$-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 and (R) is the correct explanation of (A)

(C) (A) is true but (R) is false

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

**Answer: (C) (A) is true but (R) is false** · Key from source paper

---

## Q77 JEE Main 2023 · 30 Jan · Shift 2 Numerical

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 value type: the answer is a number.

**Answer: 6.** · Key from source paper

## Q78 JEE Main 2023 · 29 Jan · Shift 1 MCQ

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

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

**Answer: (D) 4** · Key from source paper

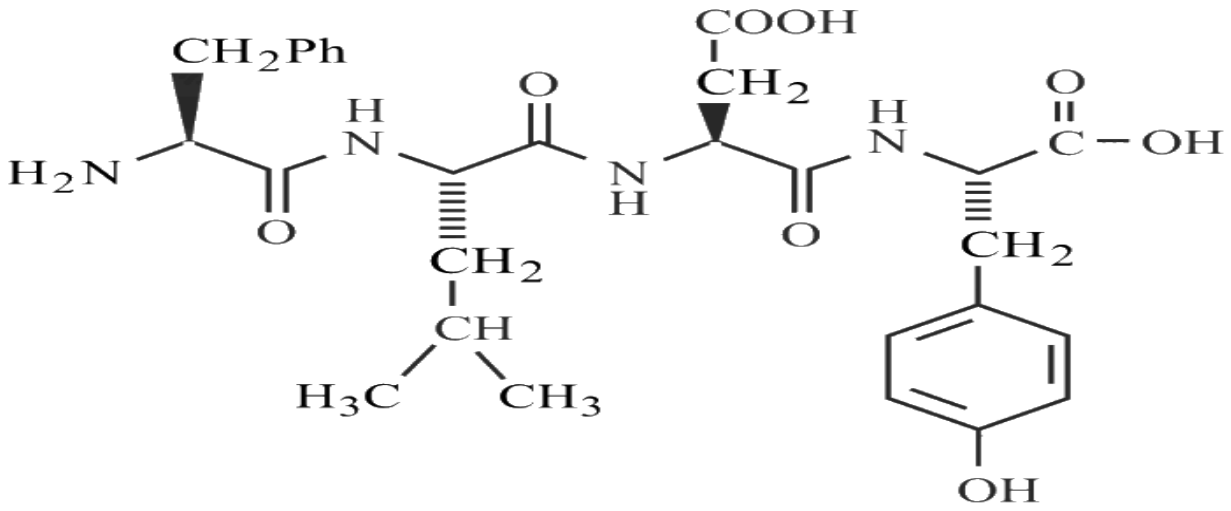
## Q79 JEE Main 2023 · 29 Jan · Shift 2 MCQ

Following tetrapeptide can be represented as

*(see the figure above)*

(F, L, D, Y, I, Q, P are one letter codes for amino acids)

**Q60.** Following tetrapeptide can be represented as




(F, L, D, Y, I, Q, P are one letter codes for amino acids)

(1) FIQY
(2) FLDY
(3) YQLF
(4) PLDY

(A) FIQY
(B) FLDY
(C) YQLF
(D) PLDY

**Answer: (B) FLDY** · Key from source paper

## Q80 JEE Main 2023 · 25 Jan · Shift 1 MCQ

Match items of Row I with those of Row II.

Row I:

(P) *(see the figure above)*

(Q) *(see the figure above)*

(R) *(see the figure above)*

(S) *(see the figure above)*

Row II:

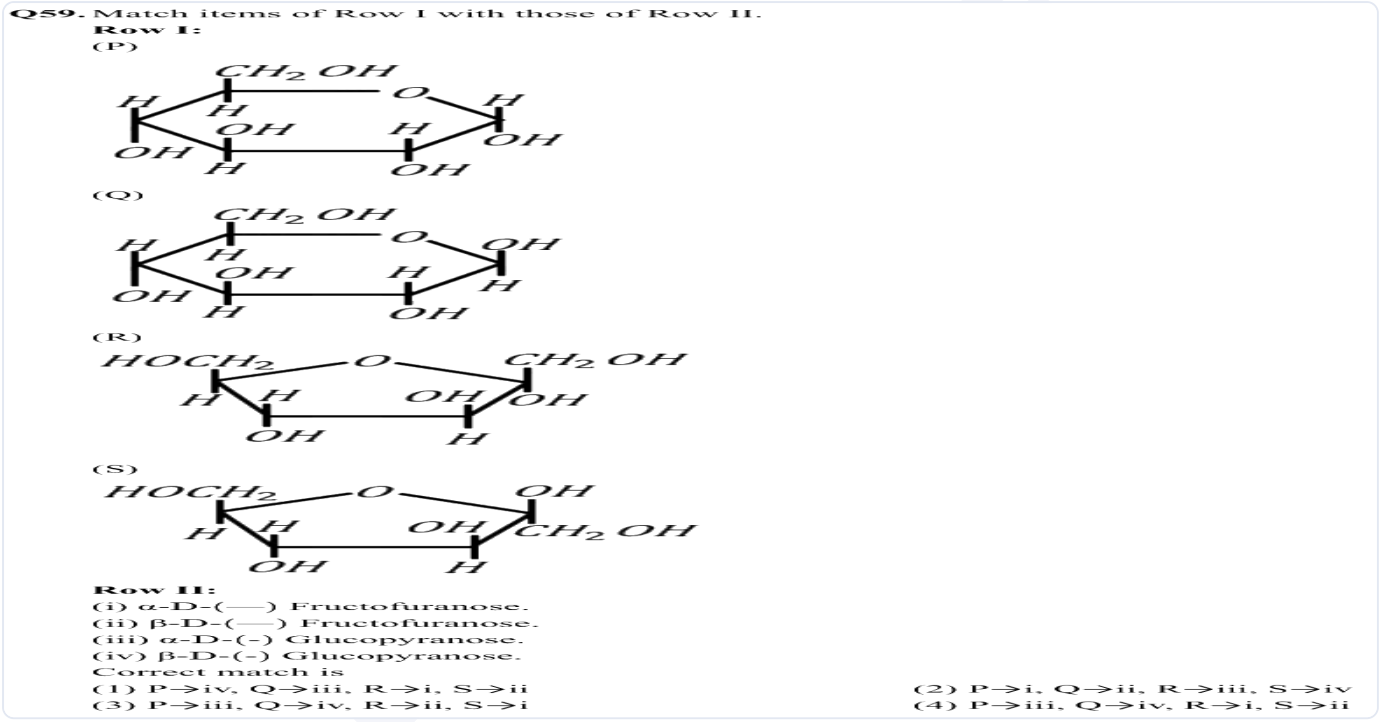
(i) $\alpha$-D-(—) Fructofuranose.

(ii) $\beta$-D-(—) Fructofuranose.

(iii) $\alpha$-D-(-) Glucopyranose.

(iv) $\beta$-D-(-) Glucopyranose.

Correct match is




(A) P→iv, Q→iii, R→i, S→ii

(B) P→i, Q→ii, R→iii, S→iv

(C) P→iii, Q→iv, R→ii, S→i

(D) P→iii, Q→iv, R→i, S→ii

**Answer: (D)** P→iii, Q→iv, R→i, S→ii · Key from source paper

## Q81 JEE Main 2023 · 24 Jan · Shift 2 Numerical

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

Numerical value type: the answer is a number.

**Answer: 8.** · Key from source paper

**Q82** JEE Main 2022 · 29 Jul · Shift 1 · Numerical

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

Numerical value type: the answer is a number.

**Answer: 1.** · Key from source paper

**Q83** JEE Main 2022 · 29 Jul · Shift 2 · MCQ

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 and 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.

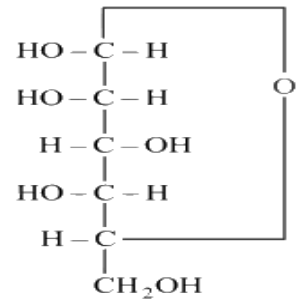
**Answer: (D) A is not correct but R is correct.** · Key from source paper

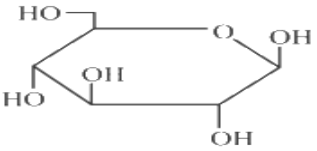
**Q84** JEE Main 2022 · 28 Jul · Shift 1 · MCQ

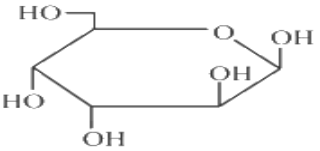
For the below given cyclic hemiacetal X, the correct pyranose structure is

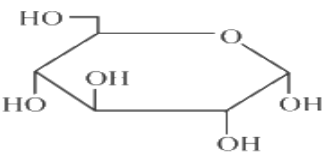
*(see the figure above)*

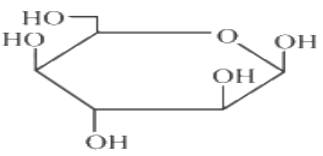
**Q50.** For the below given cyclic hemiacetal X, the correct pyranose structure is



(1)


(2)


(3)


(4)


(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

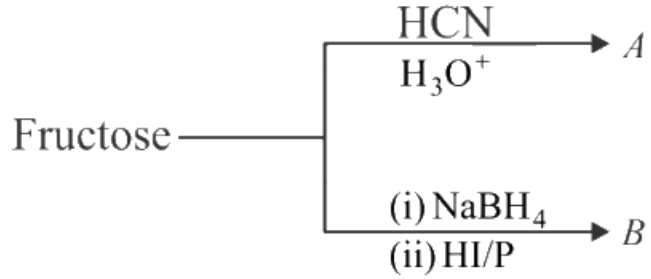
**Answer: (D)** · Key from source paper

## Q85 JEE Main 2022 · 28 Jul · Shift 2 MCQ

The formulas of A and B for the following reaction sequence are

*(see the figure above)*

**Q50.** The formulas of A and B for the following reaction sequence are




(1) $A = C_7H_{14}O_8, B = C_6H_{14}$
(2) $A = C_7H_{13}O_7, B = C_7H_{14}O$
(3) $A = C_7H_{12}O_8, B = C_6H_{14}$
(4) $A = C_7H_{14}O_8, B = C_6H_{14}O_6$

(A) $A = C_7H_{14}O_8,\ B = C_6H_{14}$
(B) $A = C_7H_{13}O_7,\ B = C_7H_{14}O$
(C) $A = C_7H_{12}O_8,\ B = C_6H_{14}$
(D) $A = C_7H_{14}O_8,\ B = C_6H_{14}O_6$

**Answer: (A)** $A = C_7H_{14}O_8,\ B = C_6H_{14}$ · Key from source paper

## Q86 JEE Main 2022 · 27 Jul · Shift 1 MCQ

A sugar 'X' dehydrates very slowly under acidic condition to give furfural which on further reaction with resorcinol gives the coloured product after sometime. Sugar 'X' is

(A) Aldopentose
(B) Aldotetrose
(C) Oxalic acid
(D) Ketotetrose

**Answer: (A)** Aldopentose · Key from source paper

## Q87 JEE Main 2022 · 27 Jul · Shift 2 MCQ

Match List-I with List-II

| List-I | List-II |
|---|---|

| | | | |
|---|---|---|---|
| A | Glucose + HI | I | Gluconic acid |
| B | Glucose + $Br_2$ water | II | Glucose pentacetate |
| C | Glucose + acetic anhydride | III | Saccharic acid |
| D | Glucose + $HNO_3$ | IV | Hexane |

Choose the correct answer from the options given below

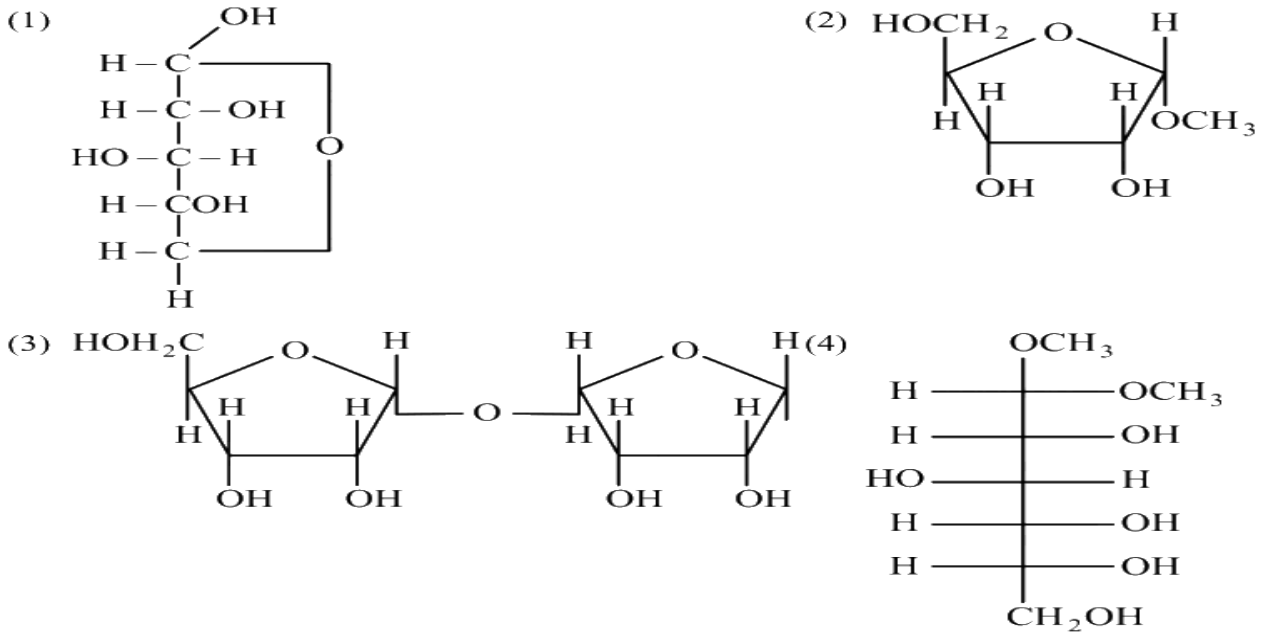
(A) A – IV, B – I, C – II, D – III
(B) A – IV, B – III, C – II, D – I
(C) A – III, B – I, C – IV, D – II
(D) A – I, B – III, C – IV, D – II

**Answer: (A) A – IV, B – I, C – II, D – III** · Key from source paper

## Q88 JEE Main 2022 · 26 Jul · Shift 1 MCQ

Which of the following is reducing sugar?
*(see the figure above)*

**Q50.** Which of the following is reducing sugar?




(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

**Answer: (A)** · Key from source paper

## Q89 JEE Main 2022 · 26 Jul · Shift 2 MCQ

Animal starch is the other name of

(A) amylose
(B) maltose
(C) glycogen
(D) amylopectin

**Answer: (C) glycogen** · Key from source paper

**Q90** JEE Main 2022 · 25 Jul · Shift 1 MCQ

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

(A) Primary
(B) Secondary
(C) Tertiary
(D) Quarternary

**Answer: (A) Primary** · Key from source paper

**Q91** JEE Main 2022 · 25 Jul · Shift 2 MCQ

Glycosidic linkage between $C_1$ of $\alpha$-glucose and $C_2$ of $\beta$-fructose is found in

(A) Maltose
(B) Sucrose
(C) Lactose
(D) amylose

**Answer: (B) Sucrose** · Key from source paper

**Q92** JEE Main 2022 · 29 Jun · Shift 1 MCQ

Sugar moiety in DNA and RNA molecules respectively are

(A) $\beta-\mathrm{D}-2$-deoxyribose, $\beta-\mathrm{D}$-deoxyribose
(B) $\beta-\mathrm{D}$-ribose, $\beta-\mathrm{D}-2$deoxyribose
(C) $\beta-\mathrm{D}-2$-deoxyribose, $\beta-\mathrm{D}$-ribose
(D) $\beta-\mathrm{D}$deoxyribose, $\beta-\mathrm{D}-2$deoxyribose

**Answer: (C) $\beta-\mathrm{D}-2$-deoxyribose, $\beta-\mathrm{D}$-ribose** · Key from source paper

**Q93** JEE Main 2022 · 29 Jun · Shift 2 MCQ

The structure of protein that is unaffected by heating is :

(A) secondary structure
(B) tertiary structure
(C) primary structure
(D) Quaternary structure

**Answer: (C) primary structure** · Key from source paper

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**Q94** JEE Main 2022 · 28 Jun · Shift 1 MCQ

Stability of $\alpha$ - Helix structure of proteins depends upon

(A) H-bonding interaction
(B) dipolar interaction
(C) van der Waals forces
(D) $\pi$-stacking interaction

**Answer: (A) H-bonding interaction** · Key from source paper

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**Q95** JEE Main 2022 · 28 Jun · Shift 2 MCQ

When sugar 'X' is boiled with dilute $H_2SO_4$ in alcoholic solution, two isomers 'A' and 'B' are formed. 'A' on oxidation with $HNO_3$ yields saccharic acid where as 'B' is laevorotatory. The compound 'X' is

(A) Maltose
(B) Sucrose
(C) Lactose
(D) Strach

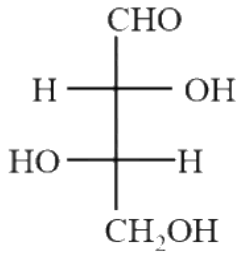
**Answer: (B) Sucrose** · Key from source paper

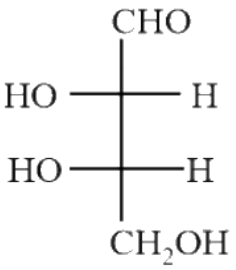
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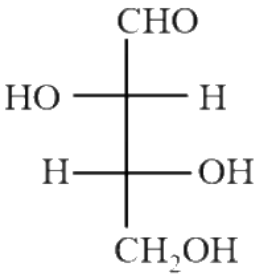
**Q96** JEE Main 2022 · 27 Jun · Shift 1 MCQ

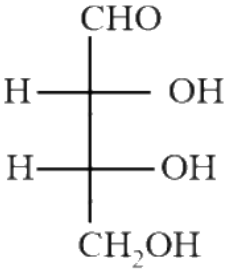
L-isomer of a compound 'A'$(C_4H_8O_4)$gives a positive test with $[Ag(NH_3)_2]^+$. Treatment of 'A' with acetic anhydride yields triacetate derivative. Compound 'A' produces an optically active compound (B) and an optically inactive compound (C) on treatment with bromine water and $HNO_3$ respectively. Compound (A) is :

**Q37.** L-isomer of a compound 'A' $(C_4H_8O_4)$ gives a positive test with $[Ag(NH_3)_2]^+$. Treatment of 'A' with acetic anhydride yields triacetate derivative. Compound 'A' produces an optically active compound (B) and an optically inactive compound (C) on treatment with bromine water and $HNO_3$ respectively. Compound (A) is :

(1) 


(2) 


(3) 


(4) 


(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

**Answer: (B)** · Key from source paper

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## Q97 JEE Main 2022 · 27 Jun · Shift 2 MCQ

Given below are two statements.
Statement I: Maltose has two $\alpha - D-$ glucose units linked at $C_1$ and $C_4$ and is a reducing sugar.
Statement II: Maltose has two monosaccharides: $\alpha$-D-glucose and $\beta$-D-glucose linked at $C_1$ and $C_6$ and it is a non-reducing sugar.
In the light of the above statements, choose the correct answer from the options given below.

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

**Answer: (C) Statement I is true but Statement II is false.** · Key from source paper

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## Q98 JEE Main 2022 · 26 Jun · Shift 1 Numerical

The number of oxygen present in a nucleotide formed from a base, that is present only in RNA is

Numerical value type: the answer is a number.

**Answer: 9.** · Key from source paper

**Q99** JEE Main 2022 · 26 Jun · Shift 2 MCQ

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

(A) Vitamin $B_2$
(B) Vitamin $B_1$
(C) Vitamin $B_6$
(D) Vitamin $B_{12}$

**Answer: (D) Vitamin $B_{12}$** · Key from source paper

**Q100** JEE Main 2022 · 25 Jun · Shift 2 MCQ

Match the following correctly

(i) Zymase (a) Stomach
(ii) Urease (b) Yeast
(iii) Diastase (c) Malt
(iv) Pepsin (d)Soyabean

(A) (i)-B; (ii) D(iii)-C; (iv)-A
(B) (i)-B; (ii)-A; (iii)-C; (iv)-D
(C) (i)-A; (ii)-B; (iii)-C; (iv)-D
(D) (i)-D; (ii)-C; (iii)-B; (iv)-A

**Answer: (A) (i)-B; (ii) D(iii)-C; (iv)-A** · Key from source paper

**Q101** JEE Main 2022 · 25 Jun · Shift 2 Numerical

How many of the given compounds will give a positive Biuret test _____ ?
Glycine, Glycylalanine, Tripeptide, Biuret

Numerical value type: the answer is a number.

**Answer: 2.** · Key from source paper

**Q102** JEE Main 2022 · 24 Jun · Shift 1 MCQ

A polysaccharide 'X' on boiling with dil $H_2SO_4$ at $393\ K$ under $2-3\ atm$ pressure yields 'Y' 'Y' on treatment with bromine water gives gluconic acid. 'X' contains $\beta$-glycosidic linkages only. Compound 'X' is :

(A) starch
(B) cellulose
(C) amylose
(D) amylopectin

**Answer: (B) cellulose** · Key from source paper

**Q103** JEE Main 2022 · 24 Jun · Shift 2 Numerical

In alanylglycylleucylalanylvaline the number of peptide linkages is:

Numerical value type: the answer is a number.

**Answer: 4.** · Key from source paper

**Q104** JEE Main 2021 · 1 Sep · Shift 2 Numerical

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

Numerical value type: the answer is a number.

**Answer: 3.** · Key from source paper

**Q105** JEE Main 2021 · 31 Aug · Shift 1 MCQ

Which one of the following compounds contains $\beta - C_1 - C_4$ glycosidic linkage ?

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

**Answer: (C) Lactose** · Key from source paper

**Q106** JEE Main 2021 · 31 Aug · Shift 2 MCQ

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

(A) Keratin
(B) Albumin
(C) Myosin
(D) Collagen

**Answer: (B) Albumin** · Key from source paper

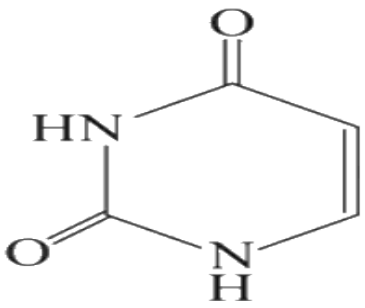
**Q107** JEE Main 2021 · 27 Aug · Shift 1 MCQ

Out of following isomeric forms of uracil, which one is present in RNA?

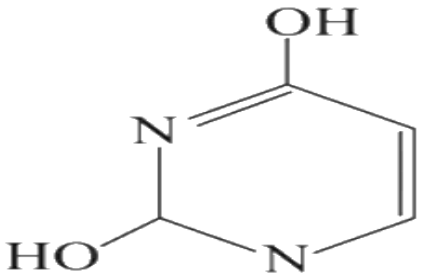
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**Q50.** Out of following isomeric forms of uracil, which one is present in RNA?

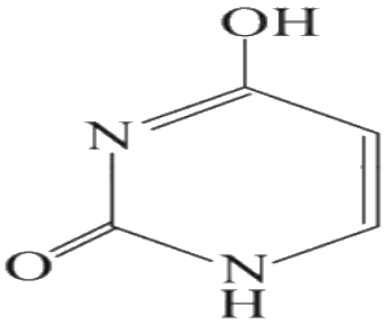
(1)



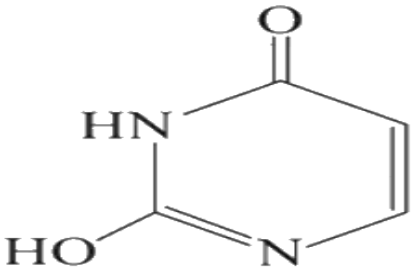
(2)



(3)



(4)



(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

**Answer: (A)** · Key from source paper

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## Q108 JEE Main 2021 · 27 Aug · Shift 2 MCQ

Which one of the following tests used for the identification of functional groups in organic compounds does not use copper reagent?

(A) Seliwanoff's test
(B) Biuret test for peptide bond
(C) Barfoed's test
(D) Benedict's test

**Answer: (A) Seliwanoff's test** · Key from source paper

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## Q109 JEE Main 2021 · 27 Aug · Shift 2 MCQ

Hydrolysis of sucrose gives:

(A) $\alpha-\mathrm{D}-(+)-$ Glucose and $\alpha-\mathrm{D}-(-)-$ Fructose
(B) $\alpha-\mathrm{D}-(+)-$ Glucose and $\beta-\mathrm{D}-(-)-$ Fructose
(C) $\alpha-\mathrm{D}-(-)$-Glucose and $\beta-\mathrm{D}-(-)-$ Fructose
(D) $\alpha-\mathrm{D}-(-)-$ Glucose and $\alpha-\mathrm{D}-(+)-$ Fructose

**Answer: (B)** $\alpha-\mathrm{D}-(+)-$ **Glucose and** $\beta-\mathrm{D}-(-)-$ **Fructose** · Key from source paper

**Q110** JEE Main 2021 · 26 Aug · Shift 1 Numerical

The total number of negative charge in the tetrapeptide, Gly-Glu-Asp-Tyr, at pH $12.5$ will be_____ (Integer answer)

Numerical value type: the answer is a number.

**Answer: 4.** · Key from source paper

**Q111** JEE Main 2021 · 26 Aug · Shift 2 MCQ

Given below are two statements : one is labelled as Assertion (A) and the 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 $\beta$-glucose and $C_2$ of $\alpha$-fructose.
Choose the most appropriate answer from the options given below :

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

**Answer: (B)** (A) is true but (R) is false. · Key from source paper

**Q112** JEE Main 2021 · 27 Jul · Shift 1 MCQ

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

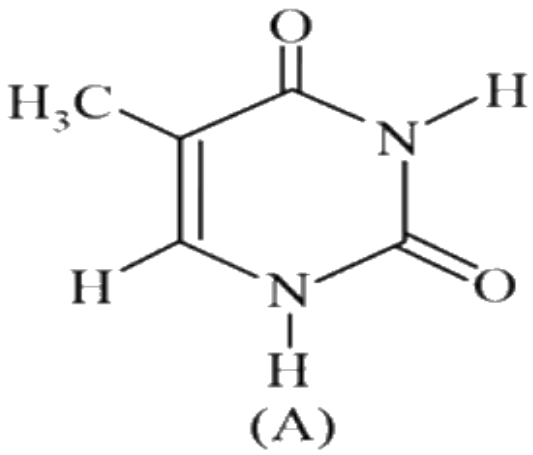
**Answer: (C)** Barfoed test · Key from source paper

**Q113** JEE Main 2021 · 27 Jul · Shift 1 MCQ

*see figure*

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**Q50.**



(A)

The compound 'A' is a complementary base of ..... in DNA strands.

(1) Uracil
(2) Guanine
(3) Adenine
(4) Cytosine

(A) Uracil
(B) Guanine
(C) Adenine
(D) Cytosine

**Answer: (C) Adenine** · Key from source paper

## Q114 JEE Main 2021 · 27 Jul · Shift 2 MCQ

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

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

**Answer: (D) Lactose** · Key from source paper

## Q115 JEE Main 2021 · 25 Jul · Shift 1 MCQ

The water soluble protein is:

(A) Fibrin
(B) Albumin
(C) Myosin
(D) Collagen

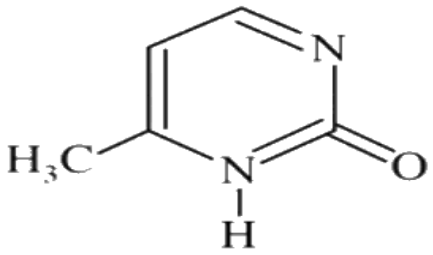
**Answer: (B) Albumin** · Key from source paper

## Q116 JEE Main 2021 · 25 Jul · Shift 2 MCQ

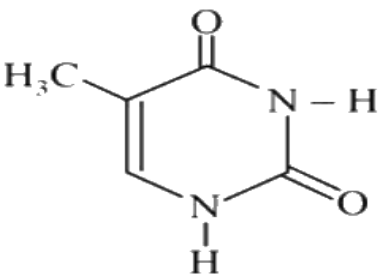
Which one of the following is correct structure for cytosine ?

**Q50.** Which one of the following is correct structure for cytosine ?

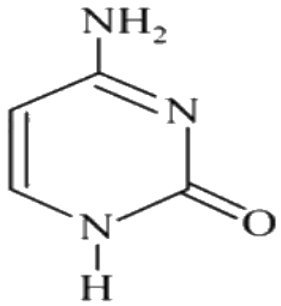
(1)



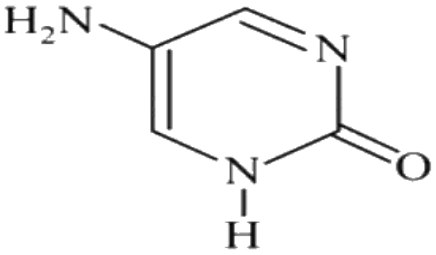
(2)



(3)



(4)



(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

**Answer: (C)** · Key from source paper

## Q117 JEE Main 2021 · 22 Jul · Shift 1 MCQ

Thiamine and pyridoxine are also known respectively as:

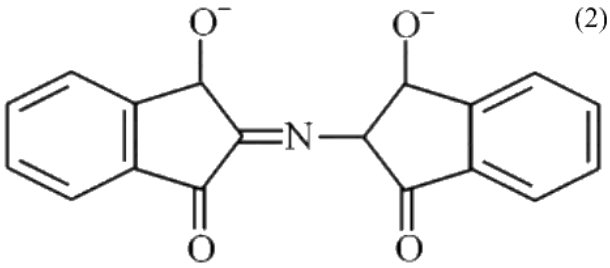
(A) Vitamin $B_2$ and Vitamin E
(B) Vitamin E and Vitamin $B_2$
(C) Vitamin $B_6$ and Vitamin $B_2$
(D) Vitamin $B_1$ and Vitamin $B_6$

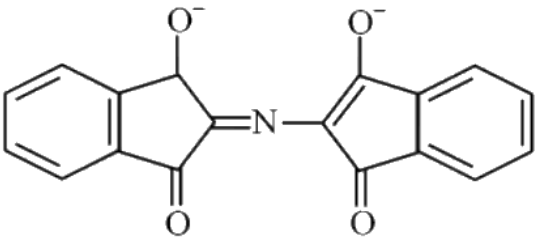
**Answer: (D) Vitamin $B_1$ and Vitamin $B_6$** · Key from source paper

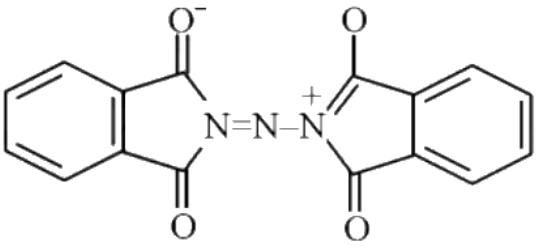
## Q118 JEE Main 2021 · 20 Jul · Shift 1 MCQ

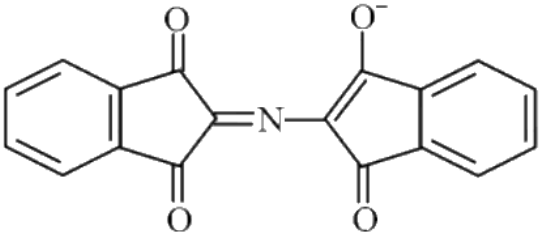
The correct structure of Ruhemann's Purple, the compound formed in the reaction of Ninhydrin with proteins is:

**Q49.** The correct structure of Ruhemann's Purple, the compound formed in the reaction of Ninhydrin with proteins is:

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

**Answer: (D)** · Key from source paper

## Q119 JEE Main 2021 · 20 Jul · Shift 1 MCQ

Identify the incorrect statement from the following.

(A) Amylose is a branched chain polymer of glucose
(B) Starch is a polymer of $\alpha - D$ glucose
(C) $\beta$-Glycosidic linkage makes cellulose polymer
(D) Glycogen is called as animal starch

**Answer: (A) Amylose is a branched chain polymer of glucose** · Key from source paper

## Q120 JEE Main 2021 · 20 Jul · Shift 2 MCQ

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

**Answer: (A) Enzymes are non-specific for a reaction and substrate.** · Key from source paper

## Q121 JEE Main 2021 · 18 Mar · Shift 1 MCQ

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

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

**Answer: (D) Sucrose** · Key from source paper

## Q122 JEE Main 2021 · 18 Mar · Shift 2 MCQ

Deficiency of vitamin K causes :

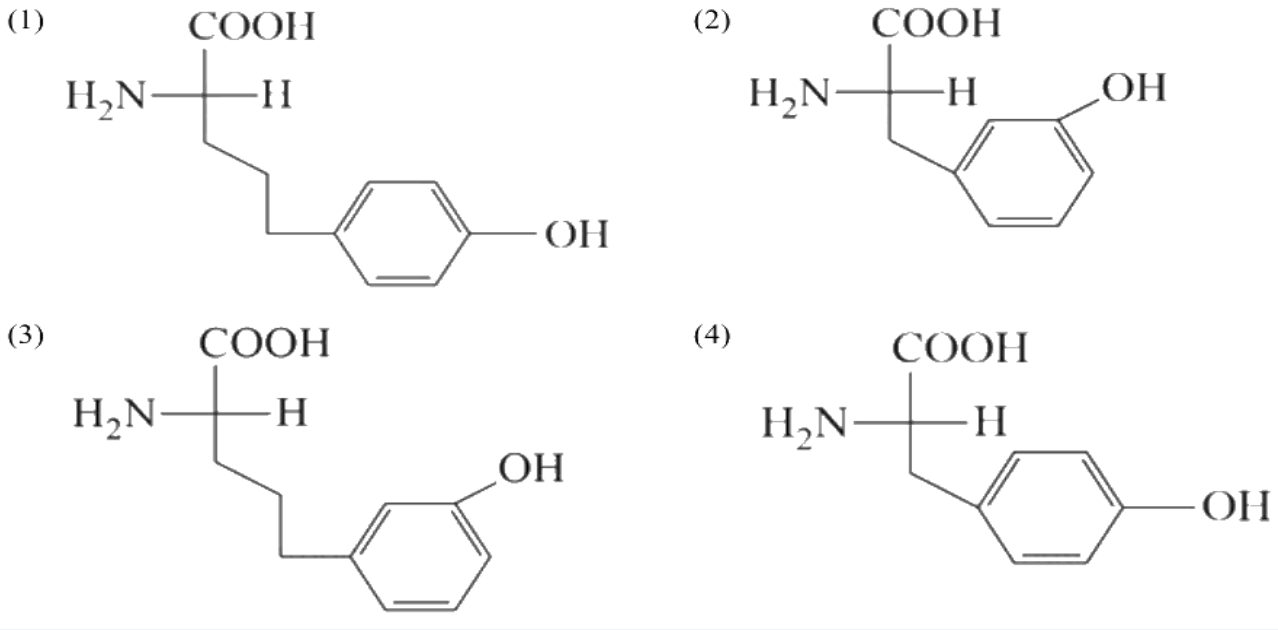
(A) Increase in blood clotting time
(B) Increase in fragility of RBC 's
(C) Cheilosis
(D) Decrease in blood clotting time

**Answer: (A) Increase in blood clotting time** · Key from source paper

## Q123 JEE Main 2021 · 17 Mar · Shift 1 MCQ

Which of the following is correct structure of tyrosine?
*(see the figure above)*

**Q50.** Which of the following is correct structure of tyrosine?




(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

**Answer: (D)** · Key from source paper

**Q124** JEE Main 2021 · 17 Mar · Shift 2 MCQ

Fructose is an example of :-

(A) Pyranose
(B) Ketohexose
(C) Aldohexose
(D) Heptose

**Answer: (B) Ketohexose** · Key from source paper

**Q125** JEE Main 2021 · 17 Mar · Shift 2 MCQ

$C_{12}H_{22}O_{11}$ (Sucrose) $+H_2O \xrightarrow{\text{Enzyme A}} C_6H_{12}O_6$ (Glucose) $+C_6H_{12}O_6$ (Fructose)

$C_6H_{12}O_6$ (Glucose) $\xrightarrow{\text{Enzyme B}} 2C_2H_5OH + 2CO_2$

In the above reactions, the enzyme A and enzyme B respectively are :-

(A) Amylase and Invertase
(B) Invertase and Amylase
(C) Invertase and Zymase
(D) Zymase and Invertase

**Answer: (C) Invertase and Zymase** · Key from source paper

**Q126** JEE Main 2021 · 16 Mar · Shift 1 MCQ

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

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

**Answer: (B) Vitamin A and D** · Key from source paper

**Q127** JEE Main 2021 · 16 Mar · Shift 2 MCQ

The secondary structure of protein is stabilised by:

(A) Peptide bond
(B) glycosidic bond
(C) Hydrogen bonding
(D) van der Waals forces

**Answer: (C) Hydrogen bonding** · Key from source paper

**Q128** JEE Main 2021 · 26 Feb · Shift 1 MCQ

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

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

**Answer: (C) Vitamin K** · Key from source paper

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## Q129 JEE Main 2021 · 26 Feb · Shift 2 MCQ

Match List-I with List-II.

List-I List-II

(a) Sucrose (i) $\beta - \mathrm{D}-$Galactose and $\beta - \mathrm{D}-$Glucose

(b) Lactose (ii) $\alpha - \mathrm{D}-$Glucose and $\beta - \mathrm{D}-$Fructose

(c) Maltose (iii) $\alpha - \mathrm{D}-$Glucose and $\alpha - \mathrm{D}-$Glucose

Choose the correct answer from the options given below:

(A) (a) $\rightarrow$ (iii), (b) $\rightarrow$ (ii), (c) $\rightarrow$ (i)
(B) (a) $\rightarrow$ (iii), (b) $\rightarrow$ (i), (c) $\rightarrow$ (ii)
(C) (a) $\rightarrow$ (ii), (b) $\rightarrow$ (i), (c) $\rightarrow$ (iii)
(D) (a) $\rightarrow$ (i), (b) $\rightarrow$ (iii), (c) $\rightarrow$ (ii)

**Answer: (C) (a) $\rightarrow$ (ii), (b) $\rightarrow$ (i), (c) $\rightarrow$ (iii)** · Key from source paper

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## Q130 JEE Main 2021 · 26 Feb · Shift 2 MCQ

Seliwanoff test and Xanthoproteic test are used for the identification of _____ and _____ respectively.

(A) aldoses, ketoses
(B) ketoses, proteins
(C) proteins, ketoses
(D) ketoses, aldoses

**Answer: (B) ketoses, proteins** · Key from source paper

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## Q131 JEE Main 2021 · 25 Feb · Shift 1 MCQ

Which of the glycosidic linkage between galactose and glucose is present in lactose?

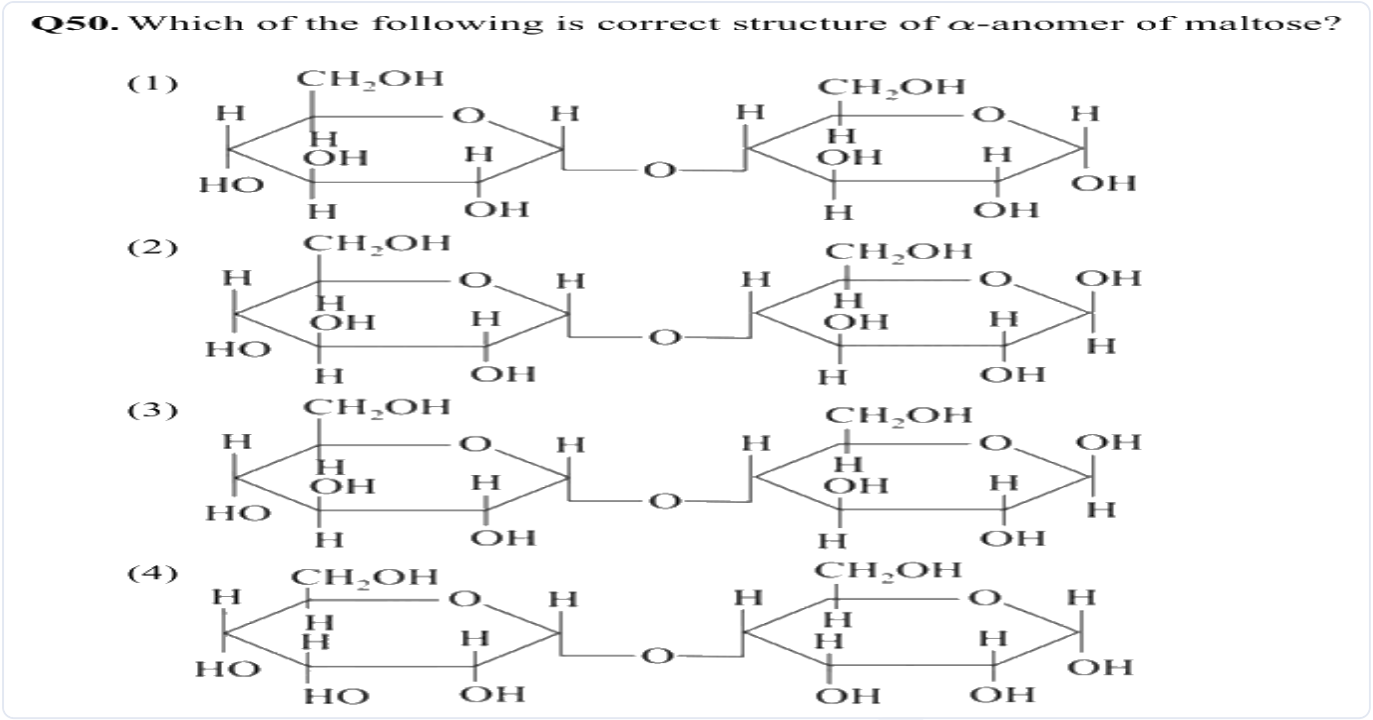
(A) C $-$ 1 of glucose and C $-$ 4 of galactose
(B) C $-$ 1 of glucose and C $-$ 6 of galactose
(C) C $-$ 1 of galactose and C $-$ 4 of glucose
(D) C $-$ 1 of galactose and C $-$ 6 of glucose

**Answer: (C) C $-$ 1 of galactose and C $-$ 4 of glucose** · Key from source paper

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## Q132 JEE Main 2021 · 25 Feb · Shift 2 MCQ

Which of the following is correct structure of $\alpha$-anomer of maltose?




(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

**Answer: (A)** · Key from source paper

## Q133 JEE Main 2021 · 24 Feb · Shift 1 MCQ

Out of the following, which type of interaction is responsible for the stabilisation of $\alpha$ - helix structure of proteins?

(A) Covalent bonding
(B) Ionic bonding
(C) Hydrogen bonding
(D) vander Waals forces

**Answer: (C) Hydrogen bonding** · Key from source paper

## Q134 JEE Main 2020 · 6 Sep · Shift 2 MCQ

Which one of the following statement is not true?

(A) Lactose contains $\alpha-$glycosidic linkage between $C_1$ of galactose and $C_4$ of glucose
(B) Lactose is a reducing sugar and it gives Fehling's test.
(C) Lactose ($C_{11}H_{22}O_{11}$) is a disaccharide and it contains 8 hydroxyl groups.
(D) On acid hydrolysis, lactose gives one molecule of D(+)$-$glucose and one molecule of D(+)$-$galactose.

**Answer: (A) Lactose contains $\alpha-$glycosidic linkage between $C_1$ of galactose and $C_4$ of glucose** · Key from source paper

---

**Q135** JEE Main 2020 · 5 Sep · Shift 1 MCQ

Which of the following is not an essential amino acid?

(A) Tyrosine
(B) Leucine
(C) Valine
(D) Lysine

**Answer: (A) Tyrosine** · Key from source paper

---

**Q136** JEE Main 2020 · 5 Sep · Shift 1 Numerical

The number of chiral carbon(s) present in peptide, Ile-Arg-Pro, is .....

Numerical value type: the answer is a number.

**Answer: 4.** · Key from source paper

---

**Q137** JEE Main 2020 · 5 Sep · Shift 2 Numerical

The number of chiral carbons present in sucrose is _____

Numerical value type: the answer is a number.

**Answer: 9.** · Key from source paper

---

**Q138** JEE Main 2020 · 4 Sep · Shift 1 MCQ

What are the functional groups present in the structure of maltose?

(A) One ketal and one hemiketal
(B) Two acetals
(C) One acetal and one hemiacetal
(D) One acetal and one ketal

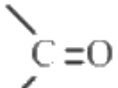
**Answer: (C) One acetal and one hemiacetal** · Key from source paper

---

**Q139** JEE Main 2020 · 3 Sep · Shift 2 Numerical

The number of *(see the figure above)* groups present in a tripeptide Asp – Glu – Lys is _____ .

**Q50.**

The number of  groups present in a tripeptide Asp – Glu – Lys is ____

Numerical value type: the answer is a number.

**Answer: 5.** · Key from source paper

## Q140 JEE Main 2020 · 2 Sep · Shift 1 MCQ

Consider the following reactions :

(i) Glucose $+\mathrm{ROH} \xrightarrow{\text{dry HCl}}$ Acetal $\xrightarrow[(\mathrm{CH_3CO})_2\mathrm{O}]{\text{x eq. of}}$ acetyl derivative

(ii) Glucose $\xrightarrow{\mathrm{Ni/H_2}}$ A $\xrightarrow[(\mathrm{CH_3CO})_2\mathrm{O}]{\text{y eq. of}}$ acetyl derivative

(iii) Glucose $\xrightarrow[(\mathrm{CH_3CO})_2\mathrm{O}]{\text{z eq. of}}$ acetyl derivative 'x', 'y' and 'z' in these reactions are respectively.

(A) 5, 4 & 6

(B) 4, 6 & 5

(C) 4, 5 & 5

(D) 5, 6 & 5

**Answer: (B) 4, 6 & 5** · Key from source paper

## Q141 JEE Main 2020 · 2 Sep · Shift 2 MCQ

The correct observation in the following reaction is:

Sucrose $\xrightarrow[\text{Cleavage (Hydrolysis)}]{\text{Glycosidic bond}}$ A + B $\xrightarrow[\text{Reagent}]{\text{Seliwanoff}}$ ?

(A) Formation of blue colour

(B) Gives no colour

(C) Formation of red colour

(D) Formation of violet colour

**Answer: (C) Formation of red colour** · Key from source paper

## Q142 JEE Main 2020 · 9 Jan · Shift 2 MCQ

A, B and C are three biomolecules. The results of the tests performed on them are given below:

*(see the figure above)*

A, B and C are respectively:

**Q45.** A, B and C are three biomolecules. The results of the tests performed on them are given below:

| | Molisch's test | Barfoed Test | Biuret Test |
|---|---|---|---|
| A | Positive | Negative | Negative |
| B | Positive | Positive | Negative |
| C | Negative | Negative | Positive |

A, B and C are respectively:

(1) A = Glucose, B = Fructose C = Albumin
(2) A = Lactose, B = Glucose, C = Albumin
(3) A = Lactose, B = Glucose, C = Alanine
(4) A = Lactose, B = Fructose, C = Alanine

(A) A = Glucose, B = Fructose C = Albumin
(B) A = Lactose, B = Glucose, C = Albumin
(C) A = Lactose, B = Glucose, C = Alanine
(D) A = Lactose, B = Fructose, C = Alanine

**Answer: (B) A = Lactose, B = Glucose, C = Albumin** · Key from source paper

---

## Q143 JEE Main 2020 · 8 Jan · Shift 1 MCQ

Which of the following statement is not true for glucose?

(A) Glucose exists in two crystalline forms $\alpha$ and $\beta$
(B) Glucose gives Schiff's test for aldehyde
(C) Glucose reacts with hydroxylamine to form oxime
(D) The pentaacetate of glucose does not react with hydroxylamine to give oxime

**Answer: (B) Glucose gives Schiff's test for aldehyde** · Key from source paper

---

## Q144 JEE Main 2020 · 8 Jan · Shift 2 MCQ

Two monomers in maltose are:

(A) $\alpha - D-$ glucose and $\beta - D-$ glucose
(B) $\alpha - D-$ glucose and $\alpha - D-$ galactose
(C) $\alpha - D-$ glucose and $\alpha - D-$ Fructose
(D) $\alpha - D-$ glucose and $\alpha - D-$ glucose

**Answer: (D) $\alpha - D-$ glucose and $\alpha - D-$ glucose** · Key from source paper

---

## Q145 JEE Main 2020 · 7 Jan · Shift 1 MCQ

Match the following :
(i) Riboflavin (a) Beriberi
(ii) Thiamine (b) Scurvy
(iii) Pyridoxine (c) Cheilosis
(iv) Ascorbic acid (d) Convulsions

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

**Answer: (C)** (i) – (c), (ii) – (a), (iii) – (d), (iv) – (b) · Key from source paper

## Q146 JEE Main 2020 · 7 Jan · Shift 2 MCQ

Which of the following statements is correct?

(A) Gluconic acid can form cyclic (acetal/hemiacetal) structure
(B) Gluconic acid is a dicarboxylic acid
(C) Gluconic acid is a partial oxidation product of glucose
(D) Gluconic acid is obtained by oxidation of glucose with $HNO_3$

**Answer: (C) Gluconic acid is a partial oxidation product of glucose** · Key from source paper

## Q147 JEE Main 2019 · 12 Apr · Shift 1 MCQ

Glucose and Galactose are having identical configuration in all the positions except position.

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

**Answer: (B)** C - 4 · Key from source paper

## Q148 JEE Main 2019 · 12 Apr · Shift 1 MCQ

Which of the following statements is not true about RNA?

(A) It controls the synthesis of protein
(B) It usually does not replicate
(C) It has always double standard $\alpha$ - helix structure
(D) It is present in the nucleus of the cell

**Answer: (C) It has always double standard $\alpha$ - helix structure** · Key from source paper

## Q149 JEE Main 2019 · 12 Apr · Shift 2 MCQ

Which of the given statements is incorrect about glycogen?

(A) It is present in animal cells.
(B) It is a straight chain polymer similar to amylose.
(C) It is present in some yeast and fungi
(D) Only $\alpha-$ linkages are present in the molecule.

**Answer: (B) It is a straight chain polymer similar to amylose.** · Key from source paper

---

**Q150** JEE Main 2019 · 10 Apr · Shift 1 MCQ

Amylopectin is composed of:

(A) $\beta-D-$ glucose , $C_1-C_4$ and $C_1-C_6$ linkages
(B) $\alpha-D-$ glucose, $C_1-C_4$ and $C_2-C_6$ linkages
(C) $\alpha-D-$ glucose, $C_1-C_4$ and $C_1-C_6$ linkages
(D) $\beta-D-$ glucose, $C_1-C_4$ and $C_2-C_6$ linkages

**Answer: (C)** $\alpha-D-$ **glucose,** $C_1-C_4$ **and** $C_1-C_6$ **linkages** · Key from source paper

---

**Q151** JEE Main 2019 · 10 Apr · Shift 2 MCQ

Number of stereo centers present in linear and cyclic structures of glucose are respectively:

(A) 4 and 4
(B) 5 and 5
(C) 4 and 5
(D) 5 and 4

**Answer: (C)** 4 and 5 · Key from source paper

---

**Q152** JEE Main 2019 · 9 Apr · Shift 1 MCQ

Which of the following statements is not true about sucrose?

(A) It is also named as invert sugar.
(B) It is a non-reducing sugar.
(C) The glycosidic linkage is present Between $C_1$ of $\alpha$ -glucose and $C_1$ of $\beta$ -fructose.
(D) On hydrolysis, it produces glucose and fructose.

**Options (3) or (1) were accepted. More than one answer was accepted.** · Key from source paper

---

**Q153** JEE Main 2019 · 8 Apr · Shift 1 MCQ

Maltose on treatment with dilute HCl gives:

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

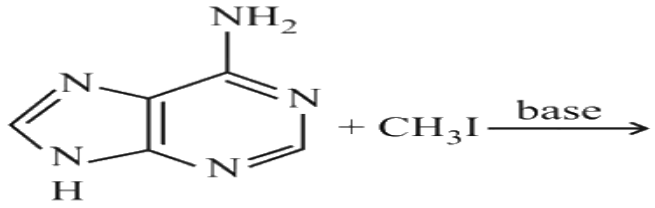
**Answer: (A) D-Glucose** · Key from source paper

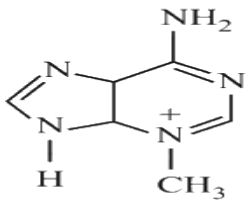
## Q154 JEE Main 2019 · 8 Apr · Shift 2 MCQ

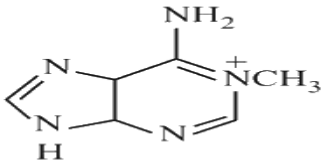
The major product in the following reaction is:

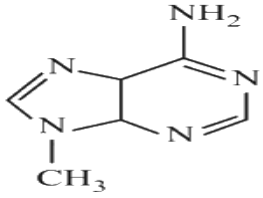
*(see the figure above)*

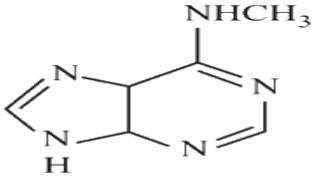
**Q58.** The major product in the following reaction is:




(1)



(2)



(3)



(4)



(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

**Answer: (C)** · Key from source paper

## Q155 JEE Main 2019 · 8 Apr · Shift 2 MCQ

Fructose and glucose can be distinguished by:

(A) Fehling's test
(B) Benedict's test
(C) Barfoed's test
(D) Seliwanoff's test

**Answer: (D) Seliwanoff's test** · Key from source paper

**Q156** JEE Main 2019 · 12 Jan · Shift 1 MCQ

Among the following compounds most basic amino acid is:

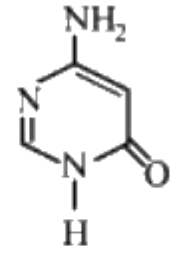
(A) Lysine
(B) Asparagine
(C) Serine
(D) Histidine

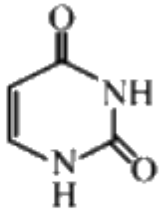
**Answer: (A) Lysine** · Key from source paper

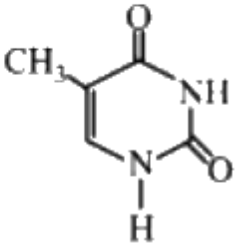
**Q157** JEE Main 2019 · 11 Jan · Shift 1 MCQ

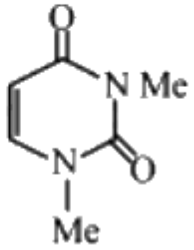
Among the following compounds, which one is found in RNA?
*(see the figure above)*

**Q60.** Among the following compounds, which one is found in RNA?

(1) 


(2) 


(3) 


(4) 


(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

**Answer: (B)** · Key from source paper

**Q158** JEE Main 2019 · 11 Jan · Shift 2 MCQ

*see figure*

**Q60.**

| | Item I | | Item II |
|---|---|---|---|
| (A) | Ester test | (P) | Tyr |
| (B) | Carbylamine test | (Q) | AsP |
| (C) | Phthalein dye test | (R) | Ser |
| | | (S) | Lys |

The correct match between Item I and Item II is:

(1) (A) → (Q, R); (B) → (S); (C) → (P)
(2) (A) → (R); (B) → (Q); (C) → (P)
(3) (A) → (R); (B) → (S); (C) → (Q)
(4) (A) → (Q); (B) → (S); (C) → (R)

A (A) → (Q, R); (B) → (S); (C) → (P)
B (A) → (R); (B) → (Q); (C) → (P)
C (A) → (R); (B) → (S); (C) → (Q)
D (A) → (Q); (B) → (S); (C) → (R)

**Answer: (A)** (A) → (Q, R); (B) → (S); (C) → (P) · Key from source paper

## Q159 JEE Main 2019 · 10 Jan · Shift 1 MCQ

The correct structure of the product 'P' in the following reaction is

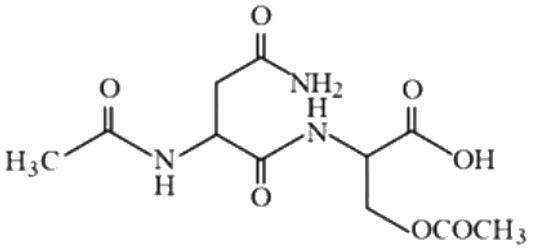
$Asn - Ser + (CH_3\ CO)_2O \xrightarrow{NEt_3} P$ (excess)

*(see the figure above)*

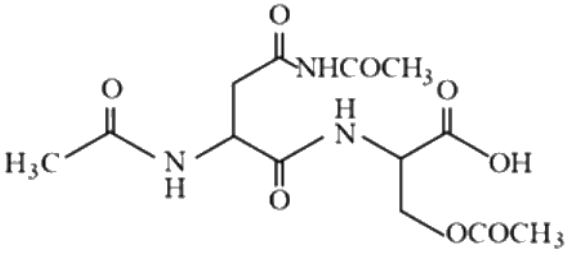
**Q60.** The correct structure of the product 'P' in the following reaction is

$$\text{Asn} - \text{Ser} + \underset{\text{(excess)}}{(CH_3\,CO)_2O} \xrightarrow{NEt_3} P$$

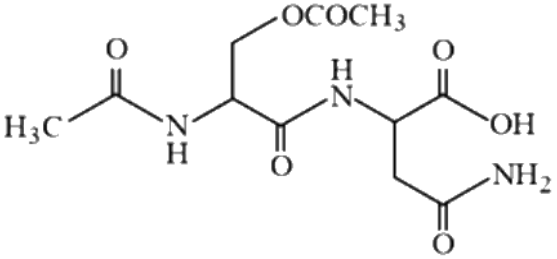
(1)



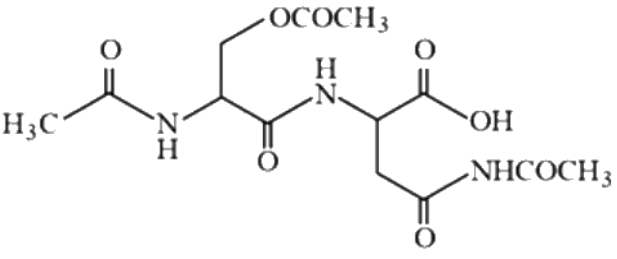
(2)



(3)



(4)



(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

**Answer: (A)** · Key from source paper

## Q160 JEE Main 2019 · 10 Jan · Shift 2 MCQ

Which of the following tests cannot be used for identifying amino acids?

(A) Biuret test
(B) Xanthoproteic test
(C) Barfoed test
(D) Ninhydrin test

**Answer: (C) Barfoed test** · Key from source paper

## Q161 JEE Main 2019 · 9 Jan · Shift 1 MCQ

The increasing order of pKa of the following amino acids in aqueous solution is
Glycine, Aspartate, Lysine, Arginine.

(A) Arginine < Lysine < Glycine < Aspartate
(B) Aspartate < Glycine < Arginine < Lysine
(C) Glycine < Aspartate < Arginine < Lysine
(D) Aspartate < Glycine < Lysine < Arginine

**Answer: (D) Aspartate < Glycine < Lysine < Arginine** · Key from source paper

## Q162 JEE Main 2019 · 9 Jan · Shift 2 MCQ

The correct sequence of amino acids present in the tripeptide given below is:
*(see the figure above)*

EdLoop JEE

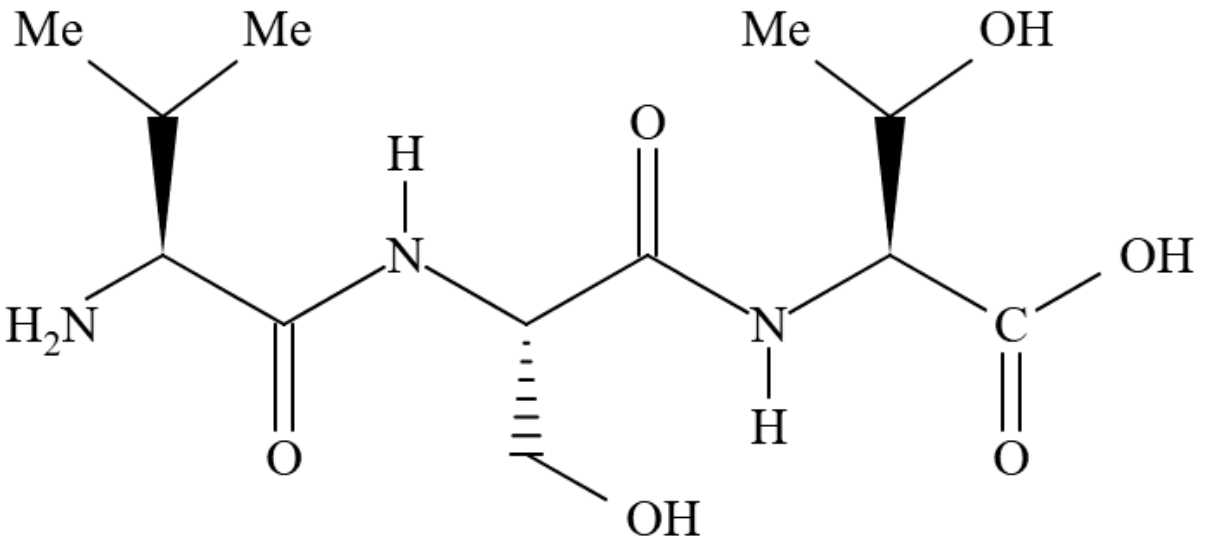



Figure redrawn by EdLoop

(A) $Val - Ser - Thr$

(B) $Leu - Ser - Thr$

(C) $Thr - Ser - Val$

(D) $Thr - Ser - Leu$

**Answer: (A)** $Val - Ser - Thr$ · Key from source paper

## Q163 JEE Main 2018 · 16 Apr · Online MCQ

Among the following, the incorrect statement is

(A) cellulose and amylose has $1, 4-$glycosidic linkage.

(B) lactose contains $\beta - D-$galactose and $\beta - D-$glucose.

(C) maltose and lactose has $1, 4-$glycosidic linkage.

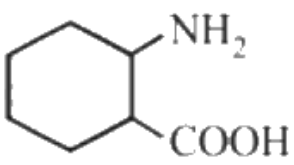
(D) sucrose and amylose has $1, 2-$glycosidic linkage.

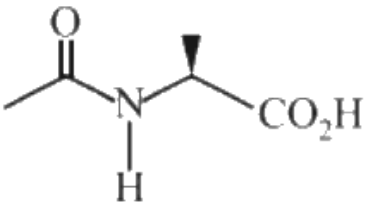
**Answer: (D) sucrose and amylose has $1, 2-$glycosidic linkage.** · Key from source paper

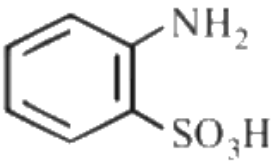
## Q164 JEE Main 2018 · 15 Apr · Shift 1 MCQ

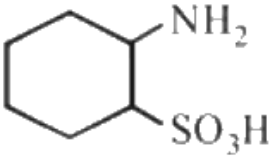
Which of the following will not exist in zwitter ionic form at pH $= 7$ ?

**Q59.** Which of the following will not exist in zwitter ionic form at pH = 7 ?

(1) 

(2) 

(3) 

(4) 

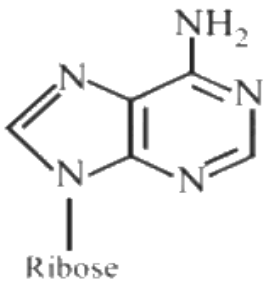
(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

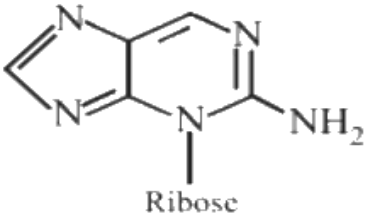
**Answer: (B)** · Key from source paper

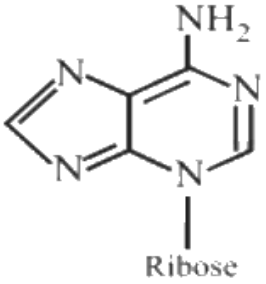
## Q165 JEE Main 2018 · 15 Apr · Shift 1 MCQ

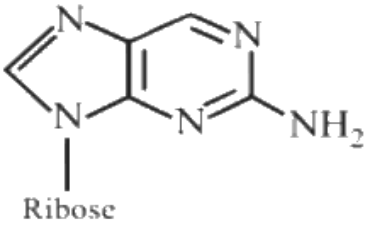
Which of the following is the correct structure of adenosine ?

**Q60.** Which of the following is the correct structure of adenosine ?

(1) 

(2) 

(3) 

(4) 

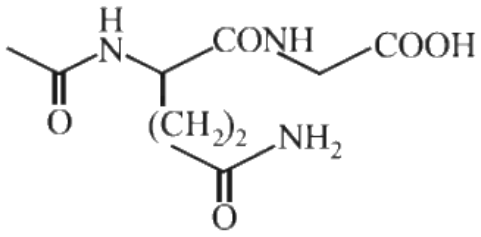
(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

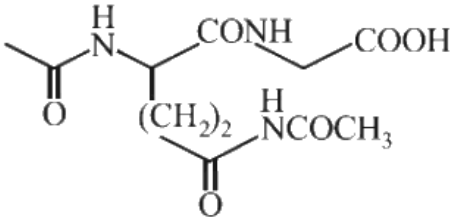
**Answer: (A)** · Key from source paper

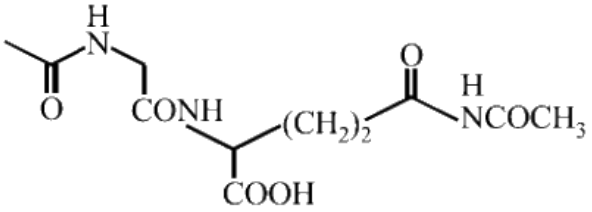
## Q166 JEE Main 2018 · 15 Apr · Shift 2 MCQ

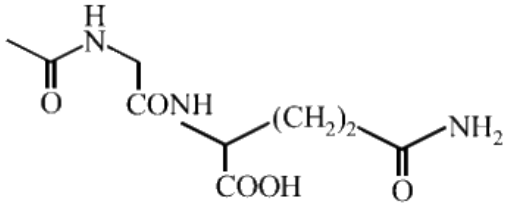
The dipeptide, Gln-Gly, on treatment with $CH_3COCl$ followed by aqueous work up gives.

**Q60.** The dipeptide, Gln-Gly, on treatment with $CH_3COCl$ followed by aqueous work up gives.

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

**Answer: (A)** · Key from source paper

## Q167 JEE Main 2018 · 8 Apr · Offline MCQ

Glucose on prolonged heating with HI gives

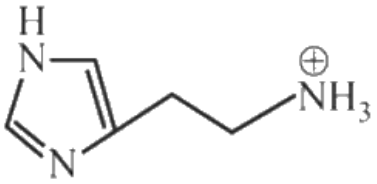
(A) 6−iodohexanal
(B) n−Hexane
(C) 1−Hexene
(D) Hexanoic acid

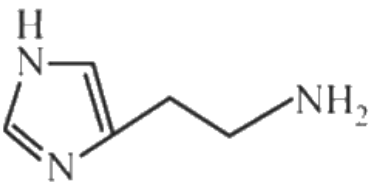
**Answer: (B) n−Hexane** · Key from source paper

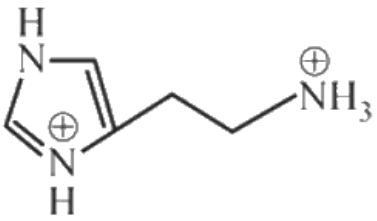
## Q168 JEE Main 2018 · 8 Apr · Offline MCQ

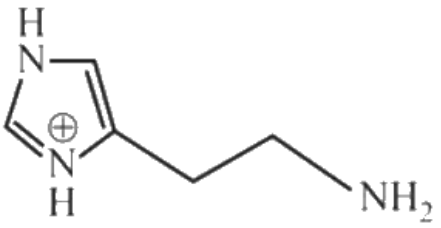
The predominant form of histamine present in human blood is ($pK_a$, Histidine = 60)
*(see the figure above)*

**Q60.** The predominant form of histamine present in human blood is ($pK_a$, Histidine = 60)

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

**Answer: (A)** · Key from source paper

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## Q169 JEE Main 2017 · 9 Apr · Online MCQ

The incorrect statement among the following is

(A) $\alpha - \mathrm{D}-$glucose and $\beta - \mathrm{D}-$ glucose are enantiomers.
(B) the penta acetate of glucose does not react with hydroxyl amine.
(C) $\alpha - \mathrm{D}-$glucose and $\beta - \mathrm{D}-$glucose are anomers.
(D) cellulose is a straight chain polysaccharide made up of only $\beta - \mathrm{D}-$glucose units.

**Answer: (A)** $\alpha - \mathrm{D}-$**glucose and** $\beta - \mathrm{D}-$ **glucose are enantiomers.** · Key from source paper

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## Q170 JEE Main 2017 · 8 Apr · Online MCQ

Among the following, the essential amino acid is:

(A) Valine
(B) Alanine
(C) Serine
(D) Aspartic acid

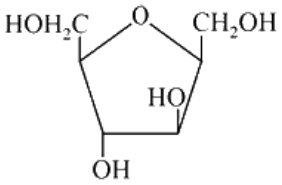
**Answer: (A)** Valine · Key from source paper

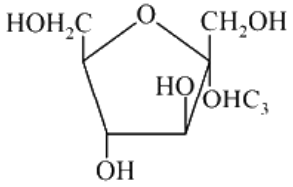
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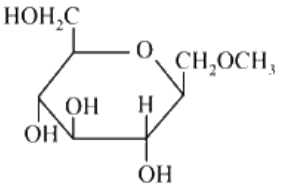
## Q171 JEE Main 2017 · 2 Apr · Offline MCQ

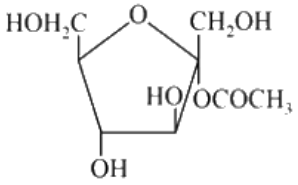
Which of the following compounds will behave as reducing sugar in an aqueous KOH solution?

**Q60.** Which of the following compounds will behave as reducing sugar in an aqueous KOH solution?

(1) 

(2) 

(3) 

(4) 

(A) *see figure*

(B) *see figure*

(C) *see figure*

(D) *see figure*

**Answer: (D)** · Key from source paper

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## Q172 JEE Main 2016 · 10 Apr · Online MCQ

Observation of "Rhumann's purple" is a confirmatory test for the presence of:

(A) Starch

(B) Reducing sugar

(C) Protein

(D) Cupric ion

**Answer: (C) Protein** · Key from source paper

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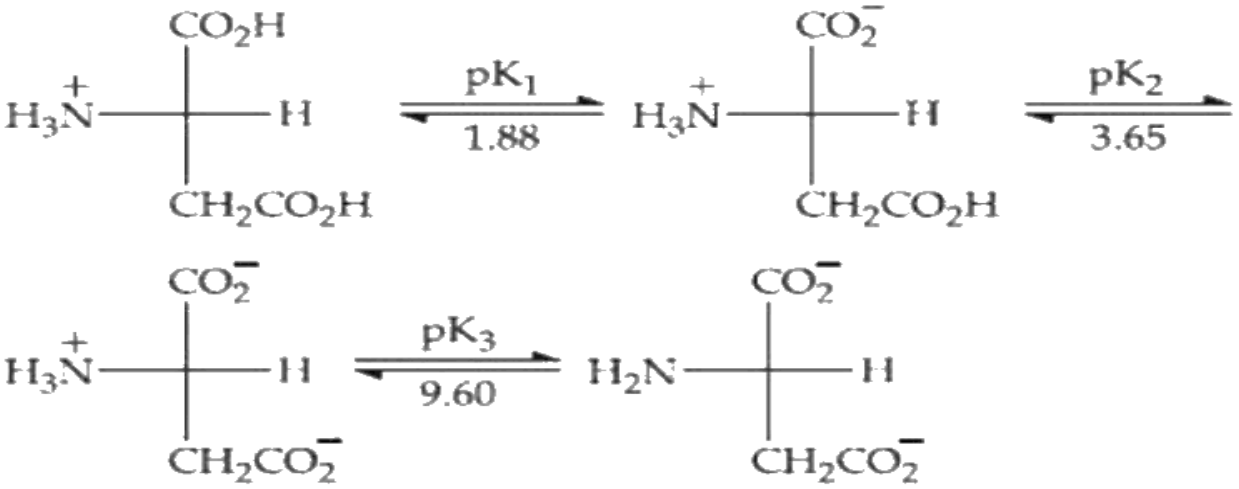
## Q173 JEE Main 2016 · 9 Apr · Online MCQ

Consider the following sequence for aspartic acid:

*(see the figure above)*

The pH (Isoelectric point) of aspartic acid is:

**Q60.** Consider the following sequence for aspartic acid:




The pH (Isoelectric point) of aspartic acid is:

(1) 3.65 (2) 2.77

(3) 5.74 (4) 1.88

(A) 3.65

(B) 2.77

(C) 5.74

(D) 1.88

**Answer: (B)** 2.77 · Key from source paper

## Q174 JEE Main 2016 · 3 Apr · Offline MCQ

Thiol group is present in:

(A) Cysteine

(B) Methionine

(C) Cytosine

(D) Cystine

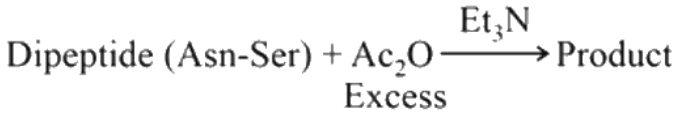
**Answer: (A)** Cysteine · Key from source paper

## Q175 JEE Main 2015 · 11 Apr · Online MCQ

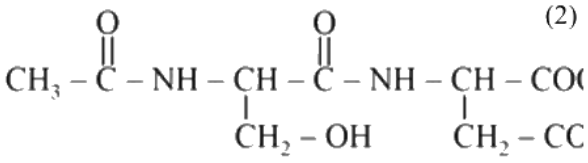
Dipeptide (Asn-Ser) + $Ac_2O$ (excess) $\xrightarrow{Et_3N}$ Product

*(see the figure above)*

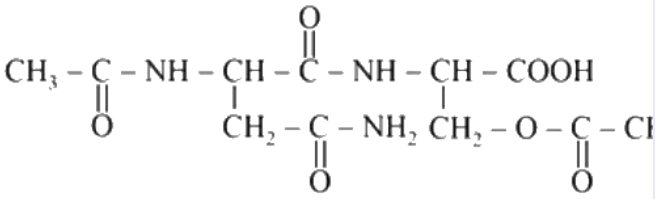
**Q61.**



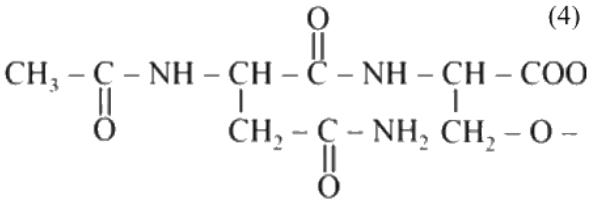

(1)



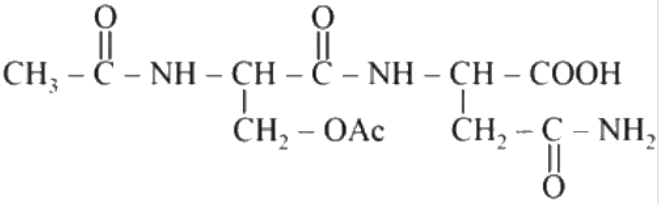
(2)



(3)



(4)



A *see figure*

B *see figure*

C *see figure*

D *see figure*

**Answer: (B)** · Key from source paper

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## Q176 JEE Main 2015 · 11 Apr · Online MCQ

Accumulation of which of the following molecules in the muscles occurs as a result of vigorous exercise?

A Glycogen

B Pyruvic acid

C Glucose

D L-lactic acid

**Answer: (D) L-lactic acid** · Key from source paper

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## Q177 JEE Main 2015 · 10 Apr · Online MCQ

Complete hydrolysis of starch gives:

A Galactose and fructose in equimolar amounts

B Glucose and galactose in equimolar amounts

C Glucose and fructose in equimolar amounts

D Glucose only

**Answer: (D) Glucose only** · Key from source paper

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## Q178 JEE Main 2015 · 4 Apr · Offline MCQ

Which of the vitamins given below is water soluble?

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

**Answer: (B) Vitamin C** · Key from source paper

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**Q179** JEE Main 2014 · 19 Apr · Online MCQ

The reason for double helical structure of DNA is the operation of :

(A) Van der Waals forces
(B) Electrostatic attractions
(C) Hydrogen bonding
(D) Dipole - Dipole interactions

**Answer: (C) Hydrogen bonding** · Key from source paper

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**Q180** JEE Main 2014 · 12 Apr · Online MCQ

Which of the following will not show mutarotation?

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

**Answer: (D) Sucrose** · Key from source paper

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**Q181** JEE Main 2014 · 6 Apr · Offline MCQ

Which one of the following bases is **not** present in DNA ?

(A) Quinoline
(B) Adenine
(C) Cytosine
(D) Thymine

**Answer: (A) Quinoline** · Key from source paper

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**Q182** JEE Main 2013 · 25 Apr · Online MCQ

Which of the following statement is not correct?

(A) Amylopectin is a branched polymer of $\alpha$ - glucose.
(B) Cellulose is a linear polymer of $\beta$-glucose.
(C) Glycogen is the food reserve of plants.
(D) All proteins are polymers of $\alpha$ - amino acids.

**Answer: (C) Glycogen is the food reserve of plants.** · Key from source paper

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**Q183** JEE Main 2013 · 25 Apr · Online MCQ

Among the following vitamins the one whose deficiency causes rickets (bone deficiency) is :

(A) Vitamin A
(B) Vitamin B
(C) Vitamin D
(D) Vitamin C

**Answer: (C) Vitamin D** · Key from source paper

---

**Q184** JEE Main 2013 · 23 Apr · Online MCQ

Glycosidic linkage is actually an :

(A) Carbonyl bond
(B) Ether bond
(C) Ester bond
(D) Amide bond

**Answer: (B) Ether bond** · Key from source paper

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**Q185** JEE Main 2013 · 23 Apr · Online MCQ

Natural glucose is termed D-glucose because :

(A) $-$OH on the second carbon is on the right side in Fischer projection
(B) $-$OH on the sixth carbon is on the right side in Fischer projection.
(C) $-$OH on the fifth carbon is on the right side in Fischer projection.
(D) It is dextrorotatory.

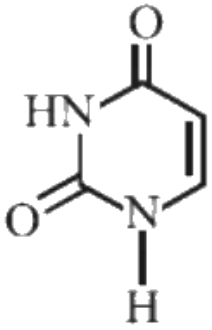
**Answer: (C) $-$OH on the fifth carbon is on the right side in Fischer projection.** · Key from source paper

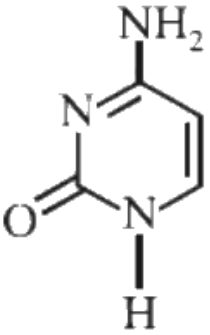
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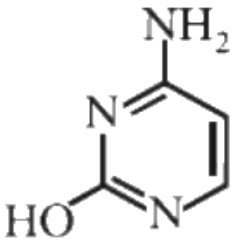
**Q186** JEE Main 2013 · 22 Apr · Online MCQ

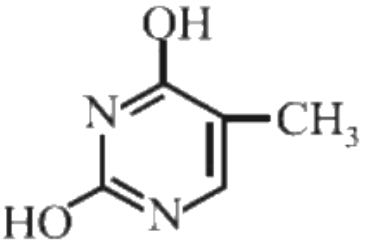
Which of the following structures represents thymine ?
*(see the figure above)*

**Q60.** Which of the following structures represents thymine ?

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

**Answer: (D)** · Key from source paper

## Q187 JEE Main 2013 · 9 Apr · Online MCQ

Which of the following enzyme converts starch into maltose?

(A) Diastase
(B) Maltase
(C) Zymase
(D) Invertase

**Answer: (A) Diastase** · Key from source paper

## Q188 JEE Main 2013 · 7 Apr · Offline MCQ

Synthesis of each molecule of glucose in photosynthesis involves

(A) 8 molecules of ATP
(B) 6 molecules of ATP
(C) 18 molecules of ATP
(D) 10 molecules of ATP

**Answer: (C) 18 molecules of ATP** · Key from source paper

**Q189** AIEEE 2012 · 26 May · Online MCQ

Which of the following statements is correct?

(A) RNA controls the synthesis of proteins.
(B) The sugar present in DNA is D-(-)-ribose.
(C) RNA has double stranded $\alpha$-helix structure.
(D) DNA mainly occurs in the cytoplasm of the cell.

**Answer: (A) RNA controls the synthesis of proteins.** · Checked by our team

**Q190** AIEEE 2012 · 19 May · Online MCQ

Which of the following is a non-reducing sugar?

(A) Lactose
(B) Fructose
(C) Sucrose
(D) Maltose

**Answer: (C) Sucrose** · Key from source paper

**Q191** AIEEE 2012 · 12 May · Online MCQ

Amylopectin is a polymer of

(A) $\alpha - D-$ glucose
(B) amino acid
(C) $\beta - D-$ glucose
(D) amylase.

**Answer: (A) $\alpha - D-$ glucose** · Key from source paper

**Q192** AIEEE 2012 · 7 May · Online MCQ

All of the following statements apply to proteins except

(A) Proteins generally have no definite melting point
(B) Proteins contain the grouping - CONH–
(C) Proteins have high molecular weight
(D) Proteins can only contain the elements C, H, O and N.

**Answer: (D) Proteins can only contain the elements C, H, O and N.** · Key from source paper

**Q193** AIEEE 2012 · Offline MCQ

Which of the following compounds can be detected by Molisch's test ?

(A) Nitro compounds
(B) Sugars
(C) Amines
(D) Primary alcohols

**Answer: (B) Sugars** · Key from source paper

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**Q194** AIEEE 2012 · Offline MCQ

Which one of the following statements is correct?

(A) All amino acids except lysine are optically active
(B) All amino acids are optically active
(C) All amino acids except glycine are optically active
(D) All amino acids except glutamic acid are optically active

**Answer: (C) All amino acids except glycine are optically active** · Key from source paper

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**Q195** AIEEE 2011 MCQ

The presence or absence of hydroxyl group on which carbon atom of sugar differentiates RNA and DNA ?

(A) $2^{nd}$
(B) $3^{rd}$
(C) $4^{th}$
(D) $1^{st}$

**Answer: (A)** $2^{nd}$ · Key from source paper

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**Q196** AIEEE 2010 MCQ

Biuret test is not given by

(A) carbohydrates
(B) polypeptides
(C) urea
(D) proteins

**Answer: (A) carbohydrates** · Key from source paper

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**Q197** AIEEE 2009 MCQ

The two functional groups present in a typical carbohydrate are :

(A) $-\mathrm{OH}$ and $-\mathrm{COOH}$
(B) $-\mathrm{CHO}$ and $-\mathrm{COOH}$
(C) $>\mathrm{C}=\mathrm{O}$ and $-\mathrm{OH}$
(D) $-\mathrm{OH}$ and $-\mathrm{CHO}$

**Answer: (C)** $>\mathrm{C}=\mathrm{O}$ **and** $-\mathrm{OH}$ · Key from source paper

## Q198 AIEEE 2008 MCQ

$\alpha-D-(+)$-glucose and $\beta-D-(+)-glucose$ are

(A) conformers
(B) epimers
(C) anomers
(D) enantiomers

**Answer: (C) anomers** · Key from source paper

## Q199 AIEEE 2006 MCQ

The term anomers of glucose refers to

(A) isomers of glucose that differ in configurations at carbons one and four ($C-1$ and $C-4$)
(B) a mixture of ($D$)-glucose and (L)-glucose
(C) enantiomers of glucose
(D) isomers of glucose that differ in configuration at carbon one (C - 1)

**Answer: (D) isomers of glucose that differ in configuration at carbon one (C - 1)** · Key from source paper

## Q200 AIEEE 2006 MCQ

The pyrimidine bases present in DNA are

(A) cytosine and adenine
(B) cytosine and guanine
(C) cytosine and thymine
(D) cytosine and uracil

**Answer: (C) cytosine and thymine** · Key from source paper

## Q201 AIEEE 2005 MCQ

In both DNA and RNA, heterocyclic base and phosphate ester linkages are at-

(A) $C_5'$ and $C_2'$ respectively of the sugar molecule
(B) $C_2'$ and $C_5'$ respectively of the sugar molecule
(C) $C_1'$ and $C_5'$ respectively of the sugar molecule
(D) $C_5'$ and $C_1'$ respectively of the sugar molecule

**Answer: (C) $C_1'$ and $C_5'$ respectively of the sugar molecule** · Key from source paper

## Q202 AIEEE 2004 MCQ

Insulin production and its action in human body are responsible for the level of diabetes. This compound belongs to which of the following categories?

(A) A co- enzyme
(B) An antibiotic
(C) An enzyme
(D) A hormone

**Answer: (D) A hormone** · Key from source paper

## Q203 AIEEE 2004 MCQ

Which base is present in RNA but not in DNA?

(A) Uracil
(B) Thymine
(C) Guanine
(D) Cytosine

**Answer: (A) Uracil** · Key from source paper

## Q204 AIEEE 2003 MCQ

Complete hydrolysis of cellulose gives

(A) D-ribose
(B) D-glucose
(C) L-glucose
(D) D-fructose

**Answer: (B) D-glucose** · Key from source paper

## Q205 AIEEE 2003 MCQ

The reason for double helical structure of DNA is operation of

(A) dipole-dipole interaction
(B) hydrogen bonding
(C) electrostatic attractions
(D) van der Waals' forces

**Answer: (B) hydrogen bonding** · Key from source paper

## Q206 AIEEE 2002 MCQ

RNA is different from DNA because RNA contains

(A) ribose sugar and thymine
(B) ribose sugar and uracil
(C) deoxyribose sugar and thymine
(D) deoxyribose sugar and uracil

**Answer: (B) ribose sugar and uracil** · Key from source paper

## Q207 AIEEE 2002 MCQ

The functional group, which is found in amino acid is

(A) $\mathrm{COOH}$ group
(B) $\mathrm{NH_2}$ group
(C) $\mathrm{CH_3}$ group
(D) both (a) and (b)

**Answer: (D) both (a) and (b)** · Key from source paper

EdLoop JEE