

**CAREERS 360**  
**PREPARATION** Series

**CUET 2025**

**Bioinformatics**  
**Question paper 2025**

# NTA CUET PG ENTRANCE EXAM\_13th March to 01st April 2025

Application No	
Candidate Name	
Roll No.	
Test Date	28/03/2025
Test Time	12:30 PM - 2:00 PM
Subject	Bioinformatics

## Section : Bioinformatics

**Q.1**

The equation of a straight line passes through the point (4, -5) and is perpendicular to the straight line  $3x + 4y + 5 = 0$ .

1.  $4x - 3y - 31 = 0$
2.  $4x - 3y - 1 = 0$
3.  $4x - 3y + 1 = 0$
4.  $4x - 3y + 31 = 0$

Options 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701486**

Option 1 ID : **1780705885**

Option 2 ID : **1780705886**

Option 3 ID : **1780705887**

Option 4 ID : **1780705888**

Status : **Answered**

Chosen Option : **3**

**Q.2**

Let  $f$  be a continuous real valued function, defined by,  $f(x) = \sin x$ , for all  $x \in \left[-\frac{\pi}{2}, \frac{\pi}{2}\right]$ . Then which of the following does not hold.

1.  $f'$  is continuous on  $\left(-\frac{\pi}{2}, \frac{\pi}{2}\right)$ .
2.  $f'$  is bounded on  $\left(-\frac{\pi}{2}, \frac{\pi}{2}\right)$ .
3.  $f'(x) = 0$  for some  $x \in \left(-\frac{\pi}{2}, \frac{\pi}{2}\right)$ .
4.  $f'(x) = 1$  for some  $x \in \left(-\frac{\pi}{2}, \frac{\pi}{2}\right)$ .

Options 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701483**

Option 1 ID : **1780705873**

Option 2 ID : **1780705874**

Option 3 ID : **1780705875**

Option 4 ID : **1780705876**

Status : **Not Answered**

Chosen Option : **--**

Q.3

Which of the following *in vitro* technique is used to find Protein-Protein Interaction

1. Yeast-two hybrid
2. In-situ hybridization
3. Fluorescent Radio-recovery after Photobleach (FRAP)
4. Western Blotting

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ

Question ID : 1780701458

Option 1 ID : 1780705773

Option 2 ID : 1780705774

Option 3 ID : 1780705775

Option 4 ID : 1780705776

Status : Answered

Chosen Option : 4

Q.4

Match List-I with List-II

List-I	List-II
<b>Type of Chromatography</b>	<b>Basis of Operation</b>
(A).Affinity Chromatography	(I). Phase
(B). Ion-Exchange Chromatography	(II). Shape and size
(C). Molecular sieve chromatography	(III). Chemical Structure
(D). Planar chromatography	(IV). Charge

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

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

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ

Question ID : 1780701491

Option 1 ID : 1780705905

Option 2 ID : 1780705906

Option 3 ID : 1780705907

Option 4 ID : 1780705908

Status : Answered

Chosen Option : 4

Q.5

Cosmids contain

- (A). Replication origin
- (B). Unique restriction sites
- (C). A selectable marker from a plasmid
- (D). Cos site from phage  $\lambda$  genome

Choose the correct answer from the options given below:

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

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **1780701462**

Option 1 ID : **1780705789**

Option 2 ID : **1780705790**

Option 3 ID : **1780705791**

Option 4 ID : **1780705792**

Status : **Answered**

Chosen Option : **2**

Q.6

The Michaelis constant ( $K_m$ ) in enzyme kinetics represents

- 1. The maximum reaction velocity
- 2. The substrate concentration at half of  $V_{max}$
- 3. The enzyme concentration
- 4. The reaction rate at time  $t=0$

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **1780701472**

Option 1 ID : **1780705829**

Option 2 ID : **1780705830**

Option 3 ID : **1780705831**

Option 4 ID : **1780705832**

Status : **Answered**

Chosen Option : **1**

**Q.7**

The presence and distribution of specific mRNAs within a cell can be detected by

1. Northern Blot analysis
2. Rnase protection assay
3. In situ hybridization
4. Real-time PCR

**Options** 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701459**

Option 1 ID : **1780705777**

Option 2 ID : **1780705778**

Option 3 ID : **1780705779**

Option 4 ID : **1780705780**

Status : **Answered**

Chosen Option : **1**

**Q.8**

SAKURA is a

1. Use of informatics for DNA databank manipulation
2. A standalone multiplatform sequence submission program available at EMBL
3. A standalone multiplatform sequence submission program available at NCBI
4. A nucleotide sequence data submission system of DDBJ

**Options** 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701512**

Option 1 ID : **1780705989**

Option 2 ID : **1780705990**

Option 3 ID : **1780705991**

Option 4 ID : **1780705992**

Status : **Not Answered**

Chosen Option : **--**

Q.9

Which of the following is typically considered part of the MSU?

- (A) Monitor
- (B) Keyboard
- (C) Motherboard
- (D) CPU

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

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

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **1780701497**

Option 1 ID : **1780705929**

Option 2 ID : **1780705930**

Option 3 ID : **1780705931**

Option 4 ID : **1780705932**

Status : **Answered**

Chosen Option : **1**

Q.10

What is the role of the p53 gene in cancer development.

1. Promoting cell division
2. Suppressing angiogenesis
3. Inducing cell cycle arrest and apoptosis
4. Enhancing DNA replication

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **1780701467**

Option 1 ID : **1780705809**

Option 2 ID : **1780705810**

Option 3 ID : **1780705811**

Option 4 ID : **1780705812**

Status : **Answered**

Chosen Option : **1**

Q.11

Match List-I with List-II

List-I	List-II
<b>Spectroscopic Technique</b>	<b>Application in Biophysics</b>
(A).UV-Visible Spectroscopy	(I). Concentration of a sample
(B).Fluorescence Spectroscopy	(II).Chemical Characteristics
(C). Infrared Spectroscopy	(III). Molecular conformation and dynamics
(D). Electron Spin Resonance	(IV). Fluidity of membranes and the dynamics of proteins

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

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

Options 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701448**

Option 1 ID : **1780705733**

Option 2 ID : **1780705734**

Option 3 ID : **1780705735**

Option 4 ID : **1780705736**

Status : **Answered**

Chosen Option : **3**

Q.12

The solution of  $y = xp + \frac{m}{p}$  where  $p = \frac{dy}{dx}$  is

1.  $y = \frac{m}{c}$

2.  $y = xc$

3.  $y = xc - \frac{m}{c}$

4.  $y = xc + \frac{m}{c}$

Options 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701482**

Option 1 ID : **1780705869**

Option 2 ID : **1780705870**

Option 3 ID : **1780705871**

Option 4 ID : **1780705872**

Status : **Answered**

Chosen Option : **1**

Q.13

Which of the following statement regarding Innate immunity is wrong.

- (A) The response time is minute to hours.
- (B) The specificity of innate immunity is highly diverse.
- (C) The major components of innate immunity are B cells and T cells.
- (D) The major components of innate immunity are phagocytes.

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

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **1780701455**

Option 1 ID : **1780705761**

Option 2 ID : **1780705762**

Option 3 ID : **1780705763**

Option 4 ID : **1780705764**

Status : **Answered**

Chosen Option : **2**

Q.14

In the enzyme-linked antibody used in ELISA, the interaction between the enzyme and antibody is stabilized by

- 1. Hydrogen bond
- 2. Ionic bond
- 3. Covalent bond
- 4. Van der waals interactions

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **1780701463**

Option 1 ID : **1780705793**

Option 2 ID : **1780705794**

Option 3 ID : **1780705795**

Option 4 ID : **1780705796**

Status : **Answered**

Chosen Option : **3**

Q.15

Let  $\langle G, * \rangle$  be a group. Then for all  $a, b, c \in G$

(A).  $(a * b) * c \in G$

(B).  $a * b = b * a$

(C).  $a * (b * c) = (a * b) * c$

(D).  $a * b = a * c$  implies  $b = c$ .

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

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

Options 1. 1

2. 2

3. 3

4. 4

Question Type : **MCQ**

Question ID : **1780701480**

Option 1 ID : **1780705861**

Option 2 ID : **1780705862**

Option 3 ID : **1780705863**

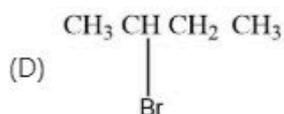
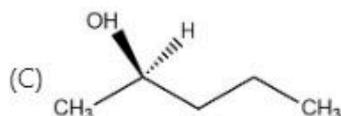
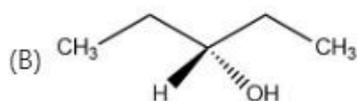
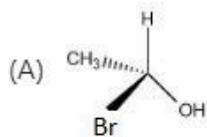
Option 4 ID : **1780705864**

Status : **Not Answered**

Chosen Option : --

Q.16

Which of the following are chiral molecules?



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

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

Options 1. 1

2. 2

3. 3

4. 4

Question Type : MCQ

Question ID : 1780701456

Option 1 ID : 1780705765

Option 2 ID : 1780705766

Option 3 ID : 1780705767

Option 4 ID : 1780705768

Status : Answered

Chosen Option : 2

**Q.17**

Which of the following microorganism plays an important role in the early stages of cheese production?

- (A). *Brevibacterium linens*
- (B). *Penicillium candidum*
- (C). *Lactococcus cremoris*
- (D). *Lactococcus lactis*

Choose the correct answer from the options given below:

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

**Options** 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **1780701457**

Option 1 ID : **1780705769**

Option 2 ID : **1780705770**

Option 3 ID : **1780705771**

Option 4 ID : **1780705772**

Status : **Answered**

Chosen Option : **4**

**Q.18**

Monoclonal antibodies can be employed for

- (A). Early detection of cancers
- (B). Clear detection of pathogens
- (C). Classification of blood group

Choose the correct answer from the options given below:

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

**Options** 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **1780701453**

Option 1 ID : **1780705753**

Option 2 ID : **1780705754**

Option 3 ID : **1780705755**

Option 4 ID : **1780705756**

Status : **Answered**

Chosen Option : **4**

**Q.19**

What is the fundamental assumption behind a Markov model?

1. The probability of transitioning from one state to another in a sequence depends only on the current state, not the past state.
2. The model is used to optimize decision-making processes under uncertainty.
3. The model represents a system as a series of interconnected states with defined transition probabilities.
4. The model uses statistical methods to predict future events based on observed patterns in data.

**Options** 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701504**

Option 1 ID : **1780705957**

Option 2 ID : **1780705958**

Option 3 ID : **1780705959**

Option 4 ID : **1780705960**

Status : **Answered**

Chosen Option : **4**

**Q.20**

Which of the following statements are correct about photosynthesis

- (A). Photosystem I has a greater number of a particular type of chlorophyll molecule called chlorophyll a
- (B). Photosystem II is maximally activated at wavelengths shorter than 680 nm
- (C). In photosystem I, NADPH is produced.
- (D). Photosystem II is maximally activated at wavelengths larger than 680 nm

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

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

**Options** 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701446**

Option 1 ID : **1780705725**

Option 2 ID : **1780705726**

Option 3 ID : **1780705727**

Option 4 ID : **1780705728**

Status : **Answered**

Chosen Option : **2**

**Q.21**

In Transcription, which among these Transcription factors have Helicase activity

1. TFIID
2. TFIIB
3. TFIIE
4. TFIIH

**Options** 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701492**

Option 1 ID : **1780705909**

Option 2 ID : **1780705910**

Option 3 ID : **1780705911**

Option 4 ID : **1780705912**

Status : **Answered**

Chosen Option : **4**

**Q.22**

What is the difference between one-dimensional and two-dimensional arrays in C++?

1. One-dimensional arrays store data in a single row, while two-dimensional arrays store data in rows and columns.
2. One-dimensional arrays can only hold integers, while two-dimensional arrays can hold any data type.
3. One-dimensional arrays are faster to access, while two-dimensional arrays are more flexible.
4. One-dimensional arrays are always statically allocated, while two-dimensional arrays can be dynamically allocated.

**Options** 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701501**

Option 1 ID : **1780705945**

Option 2 ID : **1780705946**

Option 3 ID : **1780705947**

Option 4 ID : **1780705948**

Status : **Answered**

Chosen Option : **1**

**Q.23**

The sequence of reactions catalyzed by pyruvate dehydrogenase complex are:

- (A). Decarboxylation of pyruvate
- (B). Formation of Acetyl-CoA
- (C). Formation of acetyl lipoamide
- (D). Oxidation of dihydrolipoamide

Choose the correct answer from the options given below

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

**Options** 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **1780701468**

Option 1 ID : **1780705813**

Option 2 ID : **1780705814**

Option 3 ID : **1780705815**

Option 4 ID : **1780705816**

Status : **Answered**

Chosen Option : **3**

**Q.24**

What is the most significant advantage of using Subroutines or Functions in computer programming?

- 1. Code reusability and modularity.
- 2. Improved memory allocation and efficiency.
- 3. Increased program complexity and reduce memory size.
- 4. Easier debugging and error handling

**Options** 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **1780701496**

Option 1 ID : **1780705925**

Option 2 ID : **1780705926**

Option 3 ID : **1780705927**

Option 4 ID : **1780705928**

Status : **Answered**

Chosen Option : **2**

Q.25

The series  $\sum_{n=1}^{\infty} \frac{1}{n}$

1. converges to 0.
2. converges to 1.
3. converges to both 0 and 1.
4. does not converge.

Options 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701488**

Option 1 ID : **1780705893**

Option 2 ID : **1780705894**

Option 3 ID : **1780705895**

Option 4 ID : **1780705896**

Status : **Not Answered**

Chosen Option : --

Q.26

Which of the following are the properties of a good cloning vector

- (A). Ideally should be less than 10 kb
- (B). Isolation and purification should be easy
- (C). Should contain a unique target site
- (D). Able to replicate autonomously

Choose the correct answer from the options given below:

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

Options 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701449**

Option 1 ID : **1780705737**

Option 2 ID : **1780705738**

Option 3 ID : **1780705739**

Option 4 ID : **1780705740**

Status : **Answered**

Chosen Option : **2**

Q.27

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

List-I	List-II
<b>Spectroscopy</b>	<b>Property</b>
(A). Raman	(I). Polarizability
(B). FTIR	(II). Dipole Moment
(C). UV-Visible	(III). Absorbance
(D). NMR	(IV). Spin

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

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

Options 1. 1

2. 2

3. 3

4. 4

Question Type : **MCQ**

Question ID : **1780701443**

Option 1 ID : **1780705713**

Option 2 ID : **1780705714**

Option 3 ID : **1780705715**

Option 4 ID : **1780705716**

Status : **Answered**

Chosen Option : **1**

**Q.28**

Match List-I with List-II

List-I	List-II
(A).BLASTN	(I). Uses protein sequences as queries to search against a protein sequence database
(B).BLASTP	(II). Queries nucleotide sequences with a nucleotide sequence database
(C).TBLASTX	(III). Uses nucleotide sequences as queries and translates,them in all six reading frames to produce translated protein sequences, which are used to query a protein sequence database.
(D).BLASTX	(IV). Uses nucleotide sequences, which are translated in all six frames, to search against a nucleotide sequence database that has all the sequences translated in six frames.

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

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

**Options 1. 1**

- 2
- 3
- 4

Question Type : **MCQ**Question ID : **1780701511**Option 1 ID : **1780705985**Option 2 ID : **1780705986**Option 3 ID : **1780705987**Option 4 ID : **1780705988**Status : **Not Answered**

Chosen Option : --

**Q.29**

A group of transposable elements described as retroelements encompass

- P elements in *Drosophila*; LINES but not SINES in humans
- Copia elements in *Drosophila*; SINES but not LINES in humans
- Copia element in *Drosophila*; LINES as well as SINES in humans
- P elements in *Drosophila*; LINES as well as SINES in humans

**Options 1. 1**

- 2
- 3
- 4

Question Type : **MCQ**Question ID : **1780701452**Option 1 ID : **1780705749**Option 2 ID : **1780705750**Option 3 ID : **1780705751**Option 4 ID : **1780705752**Status : **Answered**Chosen Option : **4**

Q.30

Eicosanoids are a type of polyenoic fatty acids that consist of

- (A). Leukotrienes
- (B). Prostaglandins
- (C). Lipoxins
- (D). Cholesterol

Choose the correct answer from the options given below:

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

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **1780701464**

Option 1 ID : **1780705797**

Option 2 ID : **1780705798**

Option 3 ID : **1780705799**

Option 4 ID : **1780705800**

Status : **Not Answered**

Chosen Option : --

Q.31

The shielding constant of a 2p electron (calculated using Slater's rules) is

- 1. 3.30
- 2. 3.45
- 3. 4.55
- 4. 2.45

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **1780701442**

Option 1 ID : **1780705709**

Option 2 ID : **1780705710**

Option 3 ID : **1780705711**

Option 4 ID : **1780705712**

Status : **Answered**

Chosen Option : **3**

Q.32

If a subset  $B$  is a basis of a vector space  $V$ , then

- (A).  $B$  generates  $V$ .
- (B).  $B$  contains zero vector.
- (C).  $B$  is linearly independent.
- (D).  $B$  is the only basis of  $V$ .

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

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

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 1780701489

Option 1 ID : 1780705897

Option 2 ID : 1780705898

Option 3 ID : 1780705899

Option 4 ID : 1780705900

Status : Answered

Chosen Option : 4

Q.33

In a chromatographic analysis of lemon oil a peak for limonene has a retention time of 8.36 min with a baseline width of 0.96 min.  $\gamma$ -Terpinene elutes at 9.54 min with a baseline width of 0.64 min. What is the resolution between the two peaks?

- 1. 1.48
- 2. 0.24
- 3. 3.16
- 4. 1.56

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : MCQ

Question ID : 1780701445

Option 1 ID : 1780705721

Option 2 ID : 1780705722

Option 3 ID : 1780705723

Option 4 ID : 1780705724

Status : Answered

Chosen Option : 2

Q.34

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

List-I	List-II
(A). WebMol	(I). PDB
(B). Cn3D	(II). NCBI
(C). DeepView	(III). ExPASy
(D). PROCHECK	(IV).EBI

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

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

Options 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701507**

Option 1 ID : **1780705969**

Option 2 ID : **1780705970**

Option 3 ID : **1780705971**

Option 4 ID : **1780705972**

Status : **Not Answered**

Chosen Option : --

Q.35

Amino acid that can form Di-sulfide linkage in protein

1. Leucine
2. Glycine
3. Serine
4. Cysteine

Options 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701494**

Option 1 ID : **1780705917**

Option 2 ID : **1780705918**

Option 3 ID : **1780705919**

Option 4 ID : **1780705920**

Status : **Answered**

Chosen Option : **4**

Q.36

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

List-I	List-II
<b>Electronic Configuration</b>	<b>First Ionisation energy (kJ mol<sup>-1</sup>)</b>
(A). $ns^2$	(I). 2100
(B). $ns^2np^1$	(II). 1400
(C). $ns^2np^3$	(III). 800
(D). $ns^2np^6$	(IV). 900

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

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

Options 1. 1

2. 2

3. 3

4. 4

Question Type : **MCQ**

Question ID : **1780701441**

Option 1 ID : **1780705705**

Option 2 ID : **1780705706**

Option 3 ID : **1780705707**

Option 4 ID : **1780705708**

Status : **Answered**

Chosen Option : **3**

Q.37

Which of the following relationships is/are **not true**?

(A). Most probable velocity =  $\sqrt{\frac{2RT}{M}}$

(B).  $pV = \frac{3}{2}kT$

(C). Compressibility factor  $Z = \frac{pV}{nRT}$

(D). Average kinetic energy of gas =  $\frac{1}{2}kT$

Choose the *correct* answer from the options given below

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

Options 1. 1

2. 2

3. 3

4. 4

Question Type : **MCQ**

Question ID : **1780701440**

Option 1 ID : **1780705701**

Option 2 ID : **1780705702**

Option 3 ID : **1780705703**

Option 4 ID : **1780705704**

Status : **Not Answered**

Chosen Option : --

Q.38

The amino acid Tryptophan exhibits maximum UV absorption at what approximate wavelength

1. 220 nm

2. 260 nm

3. 280 nm

4. 340 nm

Options 1. 1

2. 2

3. 3

4. 4

Question Type : **MCQ**

Question ID : **1780701476**

Option 1 ID : **1780705845**

Option 2 ID : **1780705846**

Option 3 ID : **1780705847**

Option 4 ID : **1780705848**

Status : **Answered**

Chosen Option : **2**

Q.39

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

List-I	List-II
Set	Property in $\mathbb{R}$
(A) Set of natural numbers, $\mathbb{N}$	(I) open
(B) Open interval $(a, b)$	(II) closed
(C) Set of rational numbers, $\mathbb{Q}$	(III) unbounded and uncountable
(D) Set of irrational numbers, $\mathbb{Q}^c$	(IV) unbounded below and countable

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

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

Options 1. 1

2. 2

3. 3

4. 4

Question Type : **MCQ**

Question ID : **1780701481**

Option 1 ID : **1780705865**

Option 2 ID : **1780705866**

Option 3 ID : **1780705867**

Option 4 ID : **1780705868**

Status : **Not Answered**

Chosen Option : --

Q.40

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

List-I	List-II
<b>Antibiotic</b>	<b>Microorganism</b>
(A). Penicillin G	(I). <i>Streptomyces griseus</i>
(B). Gentamycin	(II). <i>Bacillus subtilis</i>
(C). Bacitracin	(III). <i>Penicillium chrysogenum</i>
(D). Cycloheximide	(IV). <i>Micromonospora purpurea</i>

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

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

Options 1. 1

2. 2

3. 3

4. 4

Question Type : **MCQ**

Question ID : **1780701471**

Option 1 ID : **1780705825**

Option 2 ID : **1780705826**

Option 3 ID : **1780705827**

Option 4 ID : **1780705828**

Status : **Answered**

Chosen Option : **4**

Q.41

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

List-I	List-II
<b>Oxides of Nitrogen</b>	<b>Name</b>
(A) N <sub>2</sub> O	(I) Dinitrogen trioxide
(B) NO	(II) Nitrous oxide
(C) N <sub>2</sub> O <sub>3</sub>	(III) Nitric oxide
(D) N <sub>2</sub> O <sub>4</sub>	(IV) Dinitrogen tetroxide

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

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

Options 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701450**

Option 1 ID : **1780705741**

Option 2 ID : **1780705742**

Option 3 ID : **1780705743**

Option 4 ID : **1780705744**

Status : **Answered**

Chosen Option : **3**

Q.42

The first ever biological sequence database which was developed by Dayhoff and Eck's 1965 is

1. Atlas of Protein sequence and structure
2. Atlas of DNA sequence and structure
3. Atlas of RNA sequence and structure
4. Atlas of Protein and Nucleic acid sequence and structure

Options 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701506**

Option 1 ID : **1780705965**

Option 2 ID : **1780705966**

Option 3 ID : **1780705967**

Option 4 ID : **1780705968**

Status : **Answered**

Chosen Option : **2**

**Q.43**

What is the key principle behind Monte Carlo simulation?

1. Utilizing statistical analysis to identify patterns and trends within large datasets.
2. Performing repeated random trials to approximate solutions to complex problems where direct calculations are impractical.
3. Building and training artificial neural networks to learn from data and make predictions.
4. Formulating and solving mathematical equations to model real-world phenomena.

**Options**

1. 1
2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701505**

Option 1 ID : **1780705961**

Option 2 ID : **1780705962**

Option 3 ID : **1780705963**

Option 4 ID : **1780705964**

Status : **Answered**

Chosen Option : **3**

**Q.44**

Which are the correct statements regarding INSDC....

- (A). Promotion of Human Genome Project
- (B). It is collaboration of GenBank, EMBL and DDBJ databases.
- (C). Facilitating exchange of sequence data on daily basis
- (D). Validation of 3D model of protein with respect to structure solved by either X-ray crystallography or NMR spectroscopy

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

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

**Options**

1. 1
2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701510**

Option 1 ID : **1780705981**

Option 2 ID : **1780705982**

Option 3 ID : **1780705983**

Option 4 ID : **1780705984**

Status : **Not Answered**

Chosen Option : **--**

**Q.45**

*Agrobacterium tumefaciens* is frequently used as a vector to create transgenic plants. Under laboratory conditions *Agrobacterium* - mediated plant transformation does not require

1. Host plant genes
2. Bacterial type IV secretion system
3. vir genes
4. Opine catabolism genes

**Options 1. 1**

2. 2
3. 3
4. 4

Question Type : **MCQ**Question ID : **1780701460**Option 1 ID : **1780705781**Option 2 ID : **1780705782**Option 3 ID : **1780705783**Option 4 ID : **1780705784**Status : **Answered**Chosen Option : **2****Q.46**Match **List-I** with **List-II**

List-I	List-II
(A). Needleman and Wunsch	(I). BLOSUM
(B). Smith and Waterman	(II). Dynamic Programing in Global Alignment
(C). Margaret Dayhoff	(III). Dynamic Programing in Local Alignment
(D). Henikoff and Henikoff	(IV). PAM

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

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

**Options 1. 1**

2. 2
3. 3
4. 4

Question Type : **MCQ**Question ID : **1780701514**Option 1 ID : **1780705997**Option 2 ID : **1780705998**Option 3 ID : **1780705999**Option 4 ID : **1780706000**Status : **Not Answered**Chosen Option : **--**

**Q.47**

Bacteria have specialized Two component system for the signaling, which among these is the part or sensory domain

1. Histidine kinase
2. Aspartate kinase
3. Serine kinase
4. Tyrosine kinase

**Options 1. 1**

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701490**

Option 1 ID : **1780705901**

Option 2 ID : **1780705902**

Option 3 ID : **1780705903**

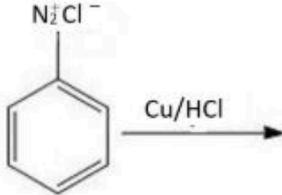
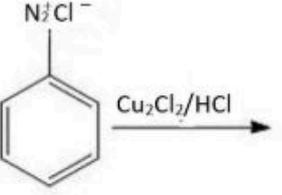
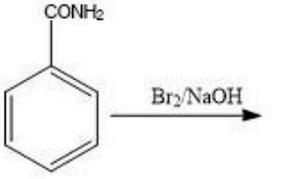
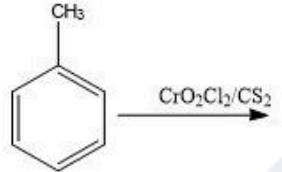
Option 4 ID : **1780705904**

Status : **Answered**

Chosen Option : **1**

CAREERS360

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

List-I	List-II
(A) 	(I) Etard reaction
(B) 	(II) Sandmeyer reaction
(C) 	(III) Gatterman reaction
(D) 	(IV) Hoffmann Bromamide reaction

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

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

Options 1. 1

2. 2

3. 3

4. 4

Question Type : **MCQ**Question ID : **1780701493**Option 1 ID : **1780705913**Option 2 ID : **1780705914**Option 3 ID : **1780705915**Option 4 ID : **1780705916**Status : **Answered**Chosen Option : **3**

**Q.49**

Let an unbiased die be thrown and the random variable  $X$  be the number appears on its top. Then the expectation of  $X$  is

1. 1
2.  $\frac{1}{6}$
3.  $\frac{11}{6}$
4.  $\frac{21}{6}$

**Options** 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701484**

Option 1 ID : **1780705877**

Option 2 ID : **1780705878**

Option 3 ID : **1780705879**

Option 4 ID : **1780705880**

Status : **Answered**

Chosen Option : **2**

**Q.50**

Siderophores are small polydentate ligands and have a high affinity for:

1. Fe
2. Fe (II)
3. Fe (III)
4. Free Fe

**Options** 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701451**

Option 1 ID : **1780705745**

Option 2 ID : **1780705746**

Option 3 ID : **1780705747**

Option 4 ID : **1780705748**

Status : **Answered**

Chosen Option : **2**

**Q.51**

Even at relatively high resolution, most of the peaks in a HNMR spectrum of a protein are broad, which makes it difficult to extract information about biological samples using NMR. This is because:

1. Presence of paramagnetic ions in biological molecules
2. Single monomer chain in biopolymers
3. Absence of paramagnetic ions in biopolymers
4. Absence of Chemical exchange of protons between different close-by sites

**Options** 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701447**

Option 1 ID : **1780705729**

Option 2 ID : **1780705730**

Option 3 ID : **1780705731**

Option 4 ID : **1780705732**

Status : **Not Answered**

Chosen Option : --

**Q.52**

What is the main difference between LCD and LED displays?

1. LCD displays require a backlight, while LED displays emit their own light.
2. LCD displays offer better color accuracy, while LED displays are brighter and more energy-efficient.
3. LCD displays are typically thinner and lighter, while LED displays offer faster refresh rates.
4. LCD displays has environmental impact, while LED displays are portable.

**Options** 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701503**

Option 1 ID : **1780705953**

Option 2 ID : **1780705954**

Option 3 ID : **1780705955**

Option 4 ID : **1780705956**

Status : **Answered**

Chosen Option : **3**

**Q.53**

*Readseq* one of the most popular computer programs written by Don Gilbert at Indiana University used for

1. Molecular viewer
2. Molecular file format conversion
3. Sequence format conversion
4. Fold and domain recognition

**Options** 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701509**

Option 1 ID : **1780705977**

Option 2 ID : **1780705978**

Option 3 ID : **1780705979**

Option 4 ID : **1780705980**

Status : **Not Answered**

Chosen Option : --

Q.54

Which bacteria is called the DNA repair champion

1. *Deinococcus radiodurans*
2. *Escherichia coli*
3. *Bacillus brevis*
4. *Streptomyces sp*

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ

Question ID : 1780701495

Option 1 ID : 1780705921

Option 2 ID : 1780705922

Option 3 ID : 1780705923

Option 4 ID : 1780705924

Status : Answered

Chosen Option : 1

Q.55

Every continuous real valued function on  $[a, b]$  is

- (A). Constant.
- (B). Bounded above.
- (C). Bounded below.
- (D). Unbounded.

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

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

Options 1. 1

2. 2
3. 3
4. 4

Question Type : MCQ

Question ID : 1780701479

Option 1 ID : 1780705857

Option 2 ID : 1780705858

Option 3 ID : 1780705859

Option 4 ID : 1780705860

Status : Not Answered

Chosen Option : --

**Q.56**

Which of the following statements regarding restriction enzymes used in recombinant DNA technology is correct

1. Type I restriction enzyme is a DNA restriction enzyme which cleaves DNA at defined positions close to or within the recognition site
2. Type II restriction enzyme is a DNA restriction enzyme which cleaves DNA at defined positions close to or within the recognition site.
3. Both cleaves DNA at defined positions close to or within the recognition site.
4. Both cleaves DNA at defined positions far from the recognition site

**Options** 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701478**

Option 1 ID : **1780705853**

Option 2 ID : **1780705854**

Option 3 ID : **1780705855**

Option 4 ID : **1780705856**

Status : **Answered**

Chosen Option : **4**

**Q.57**

$[\text{Co}(\text{NH}_3)_4(\text{NO}_2)_2]\text{Cl}$  exhibits.

- (A) Ionisation isomerism
- (B) Linkage isomerism
- (C) Geometrical isomerism
- (D) Coordination isomerism
- (E) Solvate isomerism

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

1. (A) and (B) only
2. (B) and (C) only
3. (A), (B) and (C) only
4. (B), (D) and (E) only

**Options** 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701473**

Option 1 ID : **1780705833**

Option 2 ID : **1780705834**

Option 3 ID : **1780705835**

Option 4 ID : **1780705836**

Status : **Not Answered**

Chosen Option : **--**

**Q.58**

What is the difference between clock speed and instruction cycle time?

1. Clock speed is faster than instruction cycle time.
2. Instruction cycle time is faster than clock speed.
3. They are the same thing.
4. Clock speed indicates the number of cycles per instruction.

**Options** 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701498**

Option 1 ID : **1780705933**

Option 2 ID : **1780705934**

Option 3 ID : **1780705935**

Option 4 ID : **1780705936**

Status : **Answered**

Chosen Option : **4**

**Q.59**

The urea cycle takes place in which of the following compartments of the cell

- (A). Cytosol
- (B). Endoplasmic reticulum
- (C). Mitochondrial matrix
- (D). Peroxisomes

Choose the correct answer from the options given below:

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

**Options** 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701469**

Option 1 ID : **1780705817**

Option 2 ID : **1780705818**

Option 3 ID : **1780705819**

Option 4 ID : **1780705820**

Status : **Answered**

Chosen Option : **1**

Q.60

Two-dimensional gel electrophoresis carries out protein based on

1. Mass and hydrophobicity
2. Mass
3. Charge and mass properties
4. Disulphide bonding

Options 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701461**

Option 1 ID : **1780705785**

Option 2 ID : **1780705786**

Option 3 ID : **1780705787**

Option 4 ID : **1780705788**

Status : **Answered**

Chosen Option : **2**

Q.61

RNA polymerase responsible for the synthesis of tRNA

1. RNA Pol 1
2. RNA Pol 2
3. RNA Pol 3
4. RNA Pol 1 and 2

Options 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701465**

Option 1 ID : **1780705801**

Option 2 ID : **1780705802**

Option 3 ID : **1780705803**

Option 4 ID : **1780705804**

Status : **Answered**

Chosen Option : **1**

**Q.62**

Arrange the following bacteriophages in the increasing order of size in terms of nucleotide base pairs

- (A). T4 phage
- (B).  $\lambda$  phage
- (C). T7 phage
- (D).  $\phi$ X174 phage

Choose the correct answer from the options given below:

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

**Options 1. 1**

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **1780701466**

Option 1 ID : **1780705805**

Option 2 ID : **1780705806**

Option 3 ID : **1780705807**

Option 4 ID : **1780705808**

Status : **Answered**

Chosen Option : **2**

**Q.63**

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

<b>List-I</b>	<b>List-II</b>
(A) if statement	(I) can have multiple conditions.
(B) switch statement	(II) can only have one condition.
(C) break statement	(III) skips the current iteration and continues with the next.
(D) continue statement	(IV) exits the entire loop.

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

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

**Options 1. 1**

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **1780701499**

Option 1 ID : **1780705937**

Option 2 ID : **1780705938**

Option 3 ID : **1780705939**

Option 4 ID : **1780705940**

Status : **Answered**

Chosen Option : **2**

Q.64

The structure of protein comprises of:

- (A). Primary structure of protein is associated with amino acids
- (B). Secondary structure of protein is associated to peptides
- (C). Tertiary structure of protein is associated with polypeptide chains
- (D). Quaternary structure of protein is associated with polypeptide chains

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

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

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **1780701444**

Option 1 ID : **1780705717**

Option 2 ID : **1780705718**

Option 3 ID : **1780705719**

Option 4 ID : **1780705720**

Status : **Answered**

Chosen Option : **3**

Q.65

Which of the following are components of lipid raft in plasma membrane

- 1. Cholesterol and sphingolipids
- 2. Cholesterol and glycolipids
- 3. Glycolipids and phospholipids
- 4. Sphingolipids and glycolipids

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **1780701475**

Option 1 ID : **1780705841**

Option 2 ID : **1780705842**

Option 3 ID : **1780705843**

Option 4 ID : **1780705844**

Status : **Answered**

Chosen Option : **1**

Q.66

Which of the following subsets form subgroups of the group  $\langle \mathbb{Z}, + \rangle$ ?

(A).  $H_1 = \{0\}$

(B).  $H_2 = \{n + 1 : n \in \mathbb{Z}\}$

(C).  $H_3 = \{2n : n \in \mathbb{Z}\}$

(D).  $H_4 = \{2n + 1 : n \in \mathbb{Z}\}$

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

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

Options 1. 1

2. 2

3. 3

4. 4

Question Type : **MCQ**

Question ID : **1780701487**

Option 1 ID : **1780705889**

Option 2 ID : **1780705890**

Option 3 ID : **1780705891**

Option 4 ID : **1780705892**

Status : **Not Answered**

Chosen Option : --

Q.67

Electronic Polymerase Chain Reaction (e-PCR) is a computational procedure that is used..

1. to identify STS site within DNA sequences
2. to identify EST site within DNA sequences
3. to identify non-coding sequence site within DNA sequences
4. to identify coding sequence site within DNA sequences

Options 1. 1

2. 2

3. 3

4. 4

Question Type : **MCQ**

Question ID : **1780701508**

Option 1 ID : **1780705973**

Option 2 ID : **1780705974**

Option 3 ID : **1780705975**

Option 4 ID : **1780705976**

Status : **Answered**

Chosen Option : **4**

**Q.68**

Ripening delayed tomatoes are produced by

1. Gene Subtraction Method
2. Gene Addition Method
3. Glyphosate resistant crops
4. Proteinase inhibitors

**Options** 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701454**

Option 1 ID : **1780705757**

Option 2 ID : **1780705758**

Option 3 ID : **1780705759**

Option 4 ID : **1780705760**

Status : **Answered**

Chosen Option : **3**

**Q.69**

Which one of the following regions of the target gene is NOT used for making an RNAi construct to knock down its expression

1. 5' UTR of the mature transcript
2. 3' UTR of the mature transcript
3. Exonic region
4. Intronic region

**Options** 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701477**

Option 1 ID : **1780705849**

Option 2 ID : **1780705850**

Option 3 ID : **1780705851**

Option 4 ID : **1780705852**

Status : **Answered**

Chosen Option : **3**

Q.70

An example of primary database is:

- (A). GenBank
- (B). EMBL
- (C). DDBJ
- (D). PDB

Choose the correct answer from the options given below:

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

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **1780701513**

Option 1 ID : **1780705993**

Option 2 ID : **1780705994**

Option 3 ID : **1780705995**

Option 4 ID : **1780705996**

Status : **Answered**

Chosen Option : **4**

Q.71

The integral  $\int_0^{\pi/2} \sin^5 x \cos^7 x dx =$

- 1.  $\pi$
- 2. 120
- 3.  $\frac{1}{120}$
- 4. 1

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **1780701485**

Option 1 ID : **1780705881**

Option 2 ID : **1780705882**

Option 3 ID : **1780705883**

Option 4 ID : **1780705884**

Status : **Not Answered**

Chosen Option : **--**

Q.72

Consider the following reactions in which all the reactants and products are in gaseous state.



The value of  $K_3$  for the equilibrium  $\frac{1}{2}P_2 + \frac{1}{2}Q_2 + \frac{1}{2}R_2 \rightleftharpoons PQR$  is

1.  $2.5 \times 10^{-1}$
2.  $2.5 \times 10^{-5}$
3.  $1.25 \times 10^{-5}$
4.  $1.25 \times 10^{-2}$

Options 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701470**

Option 1 ID : **1780705821**

Option 2 ID : **1780705822**

Option 3 ID : **1780705823**

Option 4 ID : **1780705824**

Status : **Not Answered**

Chosen Option : --

Q.73

What are the risks of using pointers without proper care?

1. Memory leaks and dangling pointers can lead to crashes and security vulnerabilities.
2. Pointers can be slow and inefficient compared to direct access methods.
3. Pointers are only useful for advanced programming tasks.
4. Pointers make code difficult to understand and maintain.

Options 1. 1

2. 2
3. 3
4. 4

Question Type : **MCQ**

Question ID : **1780701502**

Option 1 ID : **1780705949**

Option 2 ID : **1780705950**

Option 3 ID : **1780705951**

Option 4 ID : **1780705952**

Status : **Answered**

Chosen Option : **1**

Q.74

Which of the following is not the benefit of using an inline function in C++?

- (A).It can improve code readability and reduce function call overhead.
- (B).It can make the code more modular and easier to maintain.
- (C).It allows for dynamic function calls at runtime.
- (D).It can be used to define recursive functions.

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

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

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **1780701500**

Option 1 ID : **1780705941**

Option 2 ID : **1780705942**

Option 3 ID : **1780705943**

Option 4 ID : **1780705944**

Status : **Not Answered**

Chosen Option : --

Q.75

The alpha particles are

- 1. high energy electrons
- 2. positively charged hydrogen ions
- 3. high energy X-ray radiations
- 4. double positively charged helium nuclei

Options 1. 1

- 2. 2
- 3. 3
- 4. 4

Question Type : **MCQ**

Question ID : **1780701474**

Option 1 ID : **1780705837**

Option 2 ID : **1780705838**

Option 3 ID : **1780705839**

Option 4 ID : **1780705840**

Status : **Answered**

Chosen Option : **3**