

# National Testing Agency

**Question Paper Name :** Biochemistry Eng 07th June 2023 Shift 3  
**Subject Name :** Biochemistry Eng  
**Creation Date :** 2023-06-07 23:22:39  
**Duration :** 120  
**Total Marks :** 400  
**Display Marks:** Yes

## Biochemistry

**Group Number :** 1  
**Group Id :** 68634089  
**Group Maximum Duration :** 0  
**Group Minimum Duration :** 120  
**Show Attended Group? :** No  
**Edit Attended Group? :** No  
**Break time :** 0  
**Group Marks :** 400  
**Is this Group for Examiner? :** No  
**Examiner permission :** Cant View  
**Show Progress Bar? :** No

## Part A

**Section Id :** 686340177  
**Section Number :** 1  
**Section type :** Online  
**Mandatory or Optional :** Mandatory  
**Number of Questions :** 21  
**Number of Questions to be attempted :** 21  
**Section Marks :** 100  
**Enable Mark as Answered Mark for Review and Clear Response :** Yes  
**Maximum Instruction Time :** 0  
**Sub-Section Number :** 1  
**Sub-Section Id :** 686340289  
**Question Shuffling Allowed :** No  
**Is Section Default? :** null

**Question Id : 6863408907 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group  
Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time  
: N.A Minimum Instruction Time : 0  
Question Numbers : (1 to 5)  
Question Label : Comprehension**

Read the following passage and answer the next five questions by choosing the correct options:

Multicultural emphasises the importance of cultural diversity. It recognises the dignity and importance of cultural distinctiveness. It reiterates that cultural differences are natural phenomena. Cultural diversity, diverse ideas, perspectives and beliefs enhance our vision of a better society. Multiculturalism stands for heterogeneity and diversity. It is an inclusive process in which all cultures are valued.

In India, immigration and multiculturalism are as old as recorded history. Since time immemorial, wave after wave of ethnically and culturally diverse people have poured into India, settled here, and assimilated into its mosaic. Each community, while interacting and being influenced by the others, retained its own identity, customs, beliefs and ways of life. It has truly been said that Indian culture is a 'culture of cultures', like a beehive of interlocking cells.

Hinduism has played a seminal role in shaping the Indian mind and character. It has dogma, no prophet, no single sacred book. It believes in freedom of thought and expression. It encompasses different forms of belief: monotheism, polytheism, agnosticism as well as atheism. Hinduism is also the foundation of a general spirit of tolerance and acceptance of the 'other', the belief that different paths can lead to the same goal. Hinduism's flexibility has endowed Indian civilisation with a unique resilience and power of absorptive survival.

The 700 years of Muslim rule from the 11-12th century bequeathed a mixed legacy. Politically, Islam in India represented subjugation. But culturally, it generated outstanding creative achievement and synthesis. The centuries of Muslim rule impacted all aspects of Indian life producing a composite Indi-Islamic culture.

British colonial rule replaced Muslim rule, adding one more layer to India's plural personality. India's exposure to the West was both debilitating and nourishing. On the one hand, colonial rule devalued Indian civilisation by claiming and justifying 'civilising mission' of British. On the other hand, the work of great European Ideologists helped India rediscover her classical literature, her forgotten wisdom and values.

It is striking how the intellectual journey of the leaders of the Indian renaissance went from India to the the West, before returning to India with a new-found sense of Indianness. All of them represented a mingling of East and West, a synthesis of European and Indian thought.

This was the background to the emergence of an independent, democratic India in 1947, after the bloodbath of Partition. We are the most complex and diverse society on earth. Today's India has over a billion Hindus, 150 million Muslims, 24 million Christians and 24 million Sikhs, apart from several smaller but important denominations. In addition to English and Hindi, we speak more than 20 major languages and some 22,000 dialects. Each religion is further sliced and diced by caste, sub-caste and region. There are also thousands of tribal groups with distinct ethnic and cultural identities. Each of India's states has its own centuries-old flourishing culture, with further internal diversions.

### Sub questions

Question Number : 1 Question Id : 6863408908 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1

Match List I with List II to explain the terms in List II

LIST I		LIST II	
A.	Monotheism	I.	An absence of belief in the existence of deities.
B.	Polytheism	II.	The belief that the existence of God is unknown or unknowable.
C.	Agnosticism	III.	A doctrine or belief that there is only one God.
D.	Atheism	IV.	A belief in the worship of more than one God.

Choose the correct answer from the options given below:

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

**Options :**

- 68634035201. 1
- 68634035202. 2
- 68634035203. 3
- 68634035204. 4

**Question Number : 2 Question Id : 6863408909 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Which of the following is not a feature of multiculturalism?

1. It reiterates that cultural differences are a natural phenomena.
2. It stands for the intermixture and diversity of cultures.
3. It is an inclusive process in which all cultures are valued.
4. It recognizes the decorum and significance of cultural similarities.

**Options :**

- 68634035205. 1
- 68634035206. 2
- 68634035207. 3
- 68634035208. 4

**Question Number : 3 Question Id : 6863408910 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

The writer says that Indian "culture is a culture of cultures like a beehive of interlocking cells." By this he means.

1. Each culture is affected by the other cultures that it comes into contact with and so is Indian culture.
2. Indian culture is very intricate and obscure like a beehive.
3. Diverse cultures and ethnicities are woven into the fabric of Indian culture, each retaining their individual identity.
4. Indian culture is the outcome of immigration by different people from time immemorial.

**Options :**

- 68634035209. 1
- 68634035210. 2
- 68634035211. 3
- 68634035212. 4

**Question Number : 4 Question Id : 6863408911 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

The colonial rule in India, while justifying its "Civilising mission" also helped India rediscover her literature, wisdom and values. The statement affirms that:

1. India stood to advantage as she was duly civilized by the west.
2. The colonial influence only added another layer to India's already plural personality.
3. The West exposed India's inequality to hold on to its heritage of literature, wisdom and values.
4. India's exposure to the West was progressive in one way.

**Options :**

- 68634035213. 1
- 68634035214. 2
- 68634035215. 3
- 68634035216. 4

**Question Number : 5 Question Id : 6863408912 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Match List I with List II

LIST I		LIST II	
A.	Hinduism	I.	Aided the rediscovery of classical literature, forgotten wisdom and values.
B.	Leaders of Indian Renaissance	II.	Led to outstanding creative achievement and synthesis.
C.	European Endologists	III.	Played a seminal role in shaping Indian mind and character.
D.	Mixed legacy of Muslim rule	IV.	Represented a synthesis of European and Indian thought.

Choose the correct answer from the options given below:

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

**Options :**

68634035217. 1  
68634035218. 2  
68634035219. 3  
68634035220. 4

**Question Id : 6863408907 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Question Numbers : (1 to 5)**

Question Label : Comprehension

Read the following passage and answer the next five questions by choosing the correct options:

Multicultural emphasises the importance of cultural diversity. It recognises the dignity and importance of cultural distinctiveness. It reiterates that cultural differences are natural phenomena. Cultural diversity, diverse ideas, perspectives and beliefs enhance our vision of a better society. Multiculturalism stands for heterogeneity and diversity. It is an inclusive process in which all cultures are valued.

In India, immigration and multiculturalism are as old as recorded history. Since time immemorial, wave after wave of ethnically and culturally diverse people have poured into India, settled here, and assimilated into its mosaic. Each community, while interacting and being influenced by the others, retained its own identity, customs, beliefs and ways of life. It has truly been said that Indian culture is a 'culture of cultures', like a beehive of interlocking cells.

Hinduism has played a seminal role in shaping the Indian mind and character. It has dogma, no prophet, no single sacred book. It believes in freedom of thought and expression. It encompasses different forms of belief: monotheism, polytheism, agnosticism as well as atheism. Hinduism is also the foundation of a general spirit of tolerance and acceptance of the 'other', the belief that different paths can lead to the same goal. Hinduism's flexibility has endowed Indian civilisation with a unique resilience and power of absorptive survival.

The 700 years of Muslim rule from the 11-12th century bequeathed a mixed legacy. Politically, Islam in India represented subjugation. But culturally, it generated outstanding creative achievement and synthesis. The centuries of Muslim rule impacted all aspects of Indian life producing a composite Indi-Islamic culture.

British colonial rule replaced Muslim rule, adding one more layer to India's plural personality. India's exposure to the West was both debilitating and nourishing. On the one hand, colonial rule devalued Indian civilisation by claiming and justifying 'civilising mission' of British. On the other hand, the work of great European Ideologists helped India rediscover her classical literature, her forgotten wisdom and values.

It is striking how the intellectual journey of the leaders of the Indian renaissance went from India to the the West, before returning to India with a new-found sense of Indianness. All of them represented a mingling of East and West, a synthesis of European and Indian thought.

This was the background to the emergence of an independent, democratic India in 1947, after the bloodbath of Partition. We are the most complex and diverse society on earth. Today's India has over a billion Hindus, 150 million Muslims, 24 million Christians and 24 million Sikhs, apart from several smaller but important denominations. In addition to English and Hindi, we speak more than 20 major languages and some 22,000 dialects. Each religion is further sliced and diced by caste, sub-caste and region. There are also thousands of tribal groups with distinct ethnic and cultural identities. Each of India's states has its own centuries-old flourishing culture, with further internal diversions.

### Sub questions

Question Number : 1 Question Id : 6863408908 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1

Match List I with List II to explain the terms in List II

LIST I		LIST II	
A.	Monotheism	I.	An absence of belief in the existence of deities.
B.	Polytheism	II.	The belief that the existence of God is unknown or unknowable.
C.	Agnosticism	III.	A doctrine or belief that there is only one God.
D.	Atheism	IV.	A belief in the worship of more than one God.

Choose the correct answer from the options given below:

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

**Options :**

- 68634035201. 1
- 68634035202. 2
- 68634035203. 3
- 68634035204. 4

**Question Number : 2 Question Id : 6863408909 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Which of the following is not a feature of multiculturalism?

1. It reiterates that cultural differences are a natural phenomena.
2. It stands for the intermixture and diversity of cultures.
3. It is an inclusive process in which all cultures are valued.
4. It recognizes the decorum and significance of cultural similarities.

**Options :**

- 68634035205. 1
- 68634035206. 2
- 68634035207. 3
- 68634035208. 4

**Question Number : 3 Question Id : 6863408910 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

The writer says that Indian "culture is a culture of cultures like a beehive of interlocking cells." By this he means.

1. Each culture is affected by the other cultures that it comes into contact with and so is Indian culture.
2. Indian culture is very intricate and obscure like a beehive.
3. Diverse cultures and ethnicities are woven into the fabric of Indian culture, each retaining their individual identity.
4. Indian culture is the outcome of immigration by different people from time immemorial.

**Options :**

- 68634035209. 1
- 68634035210. 2
- 68634035211. 3
- 68634035212. 4

**Question Number : 4 Question Id : 6863408911 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

The colonial rule in India, while justifying its "Civilising mission" also helped India rediscover her literature, wisdom and values. The statement affirms that:

1. India stood to advantage as she was duly civilized by the west.
2. The colonial influence only added another layer to India's already plural personality.
3. The West exposed India's inequality to hold on to its heritage of literature, wisdom and values.
4. India's exposure to the West was progressive in one way.

**Options :**

- 68634035213. 1
- 68634035214. 2
- 68634035215. 3
- 68634035216. 4

**Question Number : 5 Question Id : 6863408912 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Match List I with List II

LIST I		LIST II	
A.	Hinduism	I.	Aided the rediscovery of classical literature, forgotten wisdom and values.
B.	Leaders of Indian Renaissance	II.	Led to outstanding creative achievement and synthesis.
C.	European Endologists	III.	Played a seminal role in shaping Indian mind and character.
D.	Mixed legacy of Muslim rule	IV.	Represented a synthesis of European and Indian thought.

Choose the correct answer from the options given below:

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

**Options :**

68634035217. 1  
68634035218. 2  
68634035219. 3  
68634035220. 4

**Sub-Section Number :**

2

**Sub-Section Id :**

686340290

**Question Shuffling Allowed :**

Yes

**Is Section Default? :**

null

**Question Number : 6 Question Id : 6863408913 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Choose the correct option which improves the sentence grammatically.

He saw looking through the window, the beggar standing right there.

1. He saw the beggar looking through the window, standing right there.
2. He looking through the window saw the beggar standing right there.
3. Looking through the window, he saw the beggar standing right there.
4. No improvement.

**Options :**

68634035221. 1  
68634035222. 2  
68634035223. 3  
68634035224. 4

**Question Number : 6 Question Id : 6863408913 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Choose the correct option which improves the sentence grammatically.

He saw looking through the window, the beggar standing right there.

1. He saw the beggar looking through the window, standing right there.
2. He looking through the window saw the beggar standing right there.
3. Looking through the window, he saw the beggar standing right there.
4. No improvement.

**Options :**

- 68634035221. 1
- 68634035222. 2
- 68634035223. 3
- 68634035224. 4

**Question Number : 7 Question Id : 6863408914 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Prachi knows all the most recent facts about politics. The suitable phrasal verbs for underlined part is:

1. keeps abreast of
2. settles an account
3. runs amok
4. makes amends

**Options :**

- 68634035225. 1
- 68634035226. 2
- 68634035227. 3
- 68634035228. 4

**Question Number : 7 Question Id : 6863408914 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Prachi knows all the most recent facts about politics. The suitable phrasal verbs for underlined part is:

1. keeps abreast of
2. settles an account
3. runs amok
4. makes amends

**Options :**

68634035225. 1  
68634035226. 2  
68634035227. 3  
68634035228. 4

**Question Number : 8 Question Id : 6863408915 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Match List I with List II MATCH the classes used in list I with their type in list II.

LIST I		LIST II	
A.	The students who misbehaved in class were suspended.	I.	Adverb clause of time
B.	Because she was in an irritable mood, I left her alone.	II.	Adverb clause of reason
C.	He has been jobless since he left Delhi.	III.	Noun clause
D.	The gardener said that all the plants had been pruned.	IV.	Adjective clause

Choose the correct answer from the options given below:

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

**Options :**

68634035229. 1  
68634035230. 2  
68634035231. 3  
68634035232. 4

**Question Number : 8 Question Id : 6863408915 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Match List I with List II MATCH the classes used in list I with their type in list II.

LIST I		LIST II	
A.	The students who misbehaved in class were suspended.	I.	Adverb clause of time
B.	Because she was in an irritable mood, I left her alone.	II.	Adverb clause of reason
C.	He has been jobless since he left Delhi.	III.	Noun clause
D.	The gardener said that all the plants had been pruned.	IV.	Adjective clause

Choose the correct answer from the options given below:

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

**Options :**

68634035229. 1  
68634035230. 2  
68634035231. 3  
68634035232. 4

**Question Number : 9 Question Id : 6863408916 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Out of the following options choose the correct sentence:

1. Background music, such as Mozart's Symphony positively effects the cognitive abilities of many students while it has a contrary affect on some others.
2. Background music, such as Mozort's symphony positively effects the cognitive abilities of many students while it has a contrary effect on many others.
3. Background music, such as Mozort's symphony positively affects cognitive abilities of many students while it has a contrary effect on many others.
4. Background music, such as Mozort's symphony positively affects cognitive abilities of many students while it has a contrary effect on many others.

**Options :**

68634035233. 1  
68634035234. 2  
68634035235. 3  
68634035236. 4

**Question Number : 9 Question Id : 6863408916 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Out of the following options choose the correct sentence:

1. Background music, such as Mozart's Symphony positively effects the cognitive abilities of many students while it has a contrary affect on some others.
2. Background music, such as Mozort's symphony positively effects the cognitive abilities of many students while it has a contrary effect on many others.
3. Background music, such as Mozort's symphony positively affects cognitive abilities of many students while it has a contrary effect on many others.
4. Background music, such as Mozort's symphony positively affects cognitive abilities of many students while it has a contrary effect on many others.

**Options :**

- 68634035233. 1
- 68634035234. 2
- 68634035235. 3
- 68634035236. 4

**Question Number : 10 Question Id : 6863408917 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Choose the correctly spelt word the given options:-

1. SPECOLATE
2. SPAECULATE
3. SPECULATE
4. SPEACULATE

**Options :**

- 68634035237. 1
- 68634035238. 2
- 68634035239. 3
- 68634035240. 4

**Question Number : 10 Question Id : 6863408917 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Choose the correctly spelt word the given options:-

1. SPECOLATE
2. SPAECULATE
3. SPECULATE
4. SPEACULATE

**Options :**

68634035237. 1  
68634035238. 2  
68634035239. 3  
68634035240. 4

**Question Number : 11 Question Id : 6863408918 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

Evaluate

$$\frac{\tan 55^\circ}{\cot 35^\circ} + \frac{\sin 33^\circ}{\cos 57^\circ} + \frac{\sec 49^\circ}{\operatorname{cosec} 41^\circ}$$

1. 2
2. 1
3. 3
4. 0

**Options :**

68634035241. 1  
68634035242. 2  
68634035243. 3  
68634035244. 4

**Question Number : 11 Question Id : 6863408918 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

Evaluate

$$\frac{\tan 55^\circ}{\cot 35^\circ} + \frac{\sin 33^\circ}{\cos 57^\circ} + \frac{\sec 49^\circ}{\operatorname{cosec} 41^\circ}$$

1. 2

2. 1

3. 3

4. 0

**Options :**

68634035241. 1

68634035242. 2

68634035243. 3

68634035244. 4

**Question Number : 12 Question Id : 6863408919 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

A man covers a distance of 12km by walking at a speed of 4km/h. How much distance (in km) would he cover in the same time, if he walks at a speed of 6 km/h ?

1. 20

2. 18

3. 16

4. 15

**Options :**

68634035245. 1

68634035246. 2

68634035247. 3

68634035248. 4

**Question Number : 12 Question Id : 6863408919 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

A man covers a distance of 12km by walking at a speed of 4km/h. How much distance (in km) would he cover in the same time, if he walks at a speed of 6 km/h ?

1. 20

2. 18

3. 16

4. 15

**Options :**

68634035245. 1

68634035246. 2

68634035247. 3

68634035248. 4

**Question Number : 13 Question Id : 6863408920 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

A sum becomes 5 times of itself at 10% per annum simple interest. At what rate of simple interest will it becomes 10 times during the same period?

1. 18.5%

2. 22.5%

3. 20%

4. 19%

**Options :**

68634035249. 1

68634035250. 2

68634035251. 3

68634035252. 4

**Question Number : 13 Question Id : 6863408920 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

A sum becomes 5 times of itself at 10% per annum simple interest. At what rate of simple interest will it becomes 10 times during the same period?

1. 18.5%
2. 22.5%
3. 20%
4. 19%

**Options :**

68634035249. 1  
68634035250. 2  
68634035251. 3  
68634035252. 4

**Question Number : 14 Question Id : 6863408921 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

If the side of a cube is increased by 25% then volume of the cube will increase by (correct to one decimal place):

1. 25.5%
2. 90.2%
3. 95.3%
4. 125.9%

**Options :**

68634035253. 1  
68634035254. 2  
68634035255. 3  
68634035256. 4

**Question Number : 14 Question Id : 6863408921 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

If the side of a cube is increased by 25% then volume of the cube will increase by (correct to one decimal place):

1. 25.5%
2. 90.2%
3. 95.3%
4. 125.9%

**Options :**

- 68634035253. 1
- 68634035254. 2
- 68634035255. 3
- 68634035256. 4

**Question Number : 15 Question Id : 6863408922 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

A man buys two watches for Rs1750. He sells the first one at a loss of 10% while on the second he earns a profit of 15%. If one the whole he gets no profit no loss then what is the cost of cheaper watch?

- 1. ₹750
- 2. ₹700
- 3. ₹800
- 4. ₹550

**Options :**

- 68634035257. 1
- 68634035258. 2
- 68634035259. 3
- 68634035260. 4

**Question Number : 15 Question Id : 6863408922 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

A man buys two watches for Rs1750. He sells the first one at a loss of 10% while on the second he earns a profit of 15%. If one the whole he gets no profit no loss then what is the cost of cheaper watch?

- 1. ₹750
- 2. ₹700
- 3. ₹800
- 4. ₹550

**Options :**

- 68634035257. 1
- 68634035258. 2
- 68634035259. 3
- 68634035260. 4

**Question Number : 16 Question Id : 6863408923 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

In a certain code language, HEAT is written as SVZG, then what will be the code of WILD?

1. DMOW
2. DROW
3. RDOW
4. KPOW

**Options :**

- 68634035261. 1
- 68634035262. 2
- 68634035263. 3
- 68634035264. 4

**Question Number : 16 Question Id : 6863408923 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

In a certain code language, HEAT is written as SVZG, then what will be the code of WILD?

1. DMOW
2. DROW
3. RDOW
4. KPOW

**Options :**

- 68634035261. 1
- 68634035262. 2
- 68634035263. 3
- 68634035264. 4

**Question Number : 17 Question Id : 6863408924 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

S, the son-in-law of Q, is the brother-in-law of P who is the brother of R. How is P related to Q?

1. Brother
2. Son
3. Father
4. Sister

**Options :**

- 68634035265. 1
- 68634035266. 2

68634035267. 3

68634035268. 4

**Question Number : 17 Question Id : 6863408924 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

S, the son-in-law of Q, is the brother-in-law of P who is the brother of R. How is P related to Q?

1. Brother

2. Son

3. Father

4. Sister

**Options :**

68634035265. 1

68634035266. 2

68634035267. 3

68634035268. 4

**Question Number : 18 Question Id : 6863408925 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Which of these conclusion definitely follows from the given statement.

Statement: In a test cricket match, the total runs made by a team were 500. Out of those 380 runs made by spinners.

Conclusion:

I. 60% of the team consists of spinners.

II. The opening batsmen were spinners.

1. Only conclusion I follows

2. Only Conclusion II follows

3. Either I or II follows

4. Neither I nor II Follows

**Options :**

68634035269. 1

68634035270. 2

68634035271. 3

68634035272. 4

**Question Number : 18 Question Id : 6863408925 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Which of these conclusion definitely follows from the given statement.

Statement: In a test cricket match, the total runs made by a team were 500. Out of those 380 runs made by spinners.

Conclusion:

- I. 60% of the team consists of spinners.
- II. The opening batsmen were spinners.

- 1. Only conclusion I follows
- 2. Only Conclusion II follows
- 3. Either I or II follows
- 4. Neither I nor II Follows

**Options :**

- 68634035269. 1
- 68634035270. 2
- 68634035271. 3
- 68634035272. 4

**Question Number : 19 Question Id : 6863408926 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Choose the number which is different from others in the group.

523,734,981,853,648

- 1. 734
- 2. 981
- 3. 853
- 4. 648

**Options :**

- 68634035273. 1
- 68634035274. 2
- 68634035275. 3
- 68634035276. 4

**Question Number : 19 Question Id : 6863408926 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Choose the number which is different from others in the group.

523,734,981,853,648

1. 734

2. 981

3. 853

4. 648

**Options :**

68634035273. 1

68634035274. 2

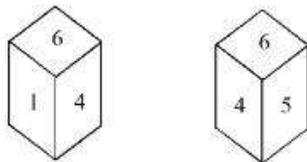
68634035275. 3

68634035276. 4

**Question Number : 20 Question Id : 6863408927 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Two positions of a dice are shown below. When number 1 is on the top, what number will be at the bottom?



1. 2

2. 3

3. 5

4. 6

**Options :**

68634035277. 1

68634035278. 2

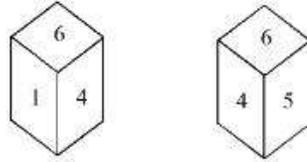
68634035279. 3

68634035280. 4

**Question Number : 20 Question Id : 6863408927 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Two positions of a dice are shown below. When number 1 is on the top, what number will be at the bottom?



1. 2

2. 3

3. 5

4. 6

**Options :**

68634035277. 1

68634035278. 2

68634035279. 3

68634035280. 4

**Question Number : 21 Question Id : 6863408928 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Through which of these straits the International Date Line passes?

1. Malacca straits

2. Strait of Hormuz

3. Bering strait

4. Torres strait

**Options :**

68634035281. 1

68634035282. 2

68634035283. 3

68634035284. 4

**Question Number : 21 Question Id : 6863408928 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Through which of these straits the International Date Line passes?

1. Malacca straits
2. Strait of Hormuz
3. Bering strait
4. Torres strait

**Options :**

68634035281. 1  
68634035282. 2  
68634035283. 3  
68634035284. 4

**Question Number : 22 Question Id : 6863408929 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Match List I with List II

LIST I (Army Institution)		LIST II (Place)	
A.	National Defence Academy(NDA)	I.	Dehradun
B.	Indian Military Academy (IMA)	II.	Secunderabad
C.	National Defence college (NDC)	III.	Pune
D.	College of defence management (CDM)	IV.	New Delhi

Choose the correct answer from the options given below:

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

**Options :**

68634035285. 1  
68634035286. 2  
68634035287. 3  
68634035288. 4

**Question Number : 22 Question Id : 6863408929 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Match List I with List II

LIST I (Army Institution)		LIST II (Place)	
A.	National Defence Academy(NDA)	I.	Dehradun
B.	Indian Military Academy (IMA)	II.	Secunderabad
C.	National Defence college (NDC)	III.	Pune
D.	College of defence management (CDM)	IV.	New Delhi

Choose the correct answer from the options given below:

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

**Options :**

68634035285. 1  
68634035286. 2  
68634035287. 3  
68634035288. 4

**Question Number : 23 Question Id : 6863408930 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Who among the following has been honored with Major Dhyan Chand Khel Ratna Award 2022?

1. Sharath Kamal Achanta
2. Kashinath Singh
3. Ramchandra Shukla
4. Amarkant

**Options :**

68634035289. 1  
68634035290. 2  
68634035291. 3  
68634035292. 4

**Question Number : 23 Question Id : 6863408930 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Who among the following has been honored with Major Dhyan Chand Khel Ratna Award 2022?

1. Sharath Kamal Achanta
2. Kashinath Singh
3. Ramchandra Shukla
4. Amarkant

**Options :**

- 68634035289. 1
- 68634035290. 2
- 68634035291. 3
- 68634035292. 4

**Question Number : 24 Question Id : 6863408931 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Given below are two statements:

**Statement I:** The fuse wire in an electric circuit saves the circuit from getting overheated.

**Statement II:** A fuse is a wire whose resistance is low and melting point is high.

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

1. Both Statement I and Statement II are correct
2. Both Statement I and Statement II are incorrect
3. Statement I is correct but Statement II is incorrect
4. Statement I is incorrect but Statement II is correct

**Options :**

- 68634035293. 1
- 68634035294. 2
- 68634035295. 3
- 68634035296. 4

**Question Number : 24 Question Id : 6863408931 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Given below are two statements:

**Statement I:** The fuse wire in an electric circuit saves the circuit from getting overheated.

**Statement II:** A fuse is a wire whose resistance is low and melting point is high.

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

1. Both Statement I and Statement II are correct
2. Both Statement I and Statement II are incorrect
3. Statement I is correct but Statement II is incorrect
4. Statement I is incorrect but Statement II is correct

**Options :**

- 68634035293. 1
- 68634035294. 2
- 68634035295. 3
- 68634035296. 4

**Question Number : 25 Question Id : 6863408932 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Choose the correct statements.

- A. The president is the ex-officio chairman of National development council (NDC)
- B. The NDC was formed in 1952.
- C. The NDC was formed to associate the states in the formulations of the plan.
- D. Function of NDC was also to review security of borders of India.

Choose the correct answer from the options given below:

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

**Options :**

- 68634035297. 1
- 68634035298. 2
- 68634035299. 3
- 68634035300. 4

**Question Number : 25 Question Id : 6863408932 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Choose the correct statements.

- A. The president is the ex-officio chairman of National development council (NDC)
- B. The NDC was formed in 1952.
- C. The NDC was formed to associate the states in the formulations of the plan.
- D. Function of NDC was also to review security of borders of India.

Choose the correct answer from the options given below:

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

**Options :**

- 68634035297. 1
- 68634035298. 2
- 68634035299. 3
- 68634035300. 4

## **Part B: Biochemistry**

<b>Section Id :</b>	686340178
<b>Section Number :</b>	2
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	75
<b>Number of Questions to be attempted :</b>	75
<b>Section Marks :</b>	300
<b>Enable Mark as Answered Mark for Review and Clear Response :</b>	Yes
<b>Maximum Instruction Time :</b>	0
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	686340291
<b>Question Shuffling Allowed :</b>	Yes
<b>Is Section Default? :</b>	null

**Question Number : 26 Question Id : 6863408933 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

The largest membranous cellular organelle is :

1. Mitochondria
2. Peroxisomes
3. Nucleus
4. Endoplasmic reticulum

**Options :**

68634035301. 1  
68634035302. 2  
68634035303. 3  
68634035304. 4

**Question Number : 26 Question Id : 6863408933 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

सबसे बडा झिल्लीयुक्त कोशिका अंग है:

1. माइटोकॉन्ड्रिया
2. परऑक्सीसोम्स
3. केन्द्रक
4. अन्तर्द्रव्यी जालिका

**Options :**

68634035301. 1  
68634035302. 2  
68634035303. 3  
68634035304. 4

**Question Number : 27 Question Id : 6863408934 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following cellular organelle is called as digestive tract of the cell ?

1. Golgi apparatus
2. Peroxisomes
3. Nucleus
4. Lysosomes

**Options :**

68634035305. 1

68634035306. 2  
68634035307. 3  
68634035308. 4

**Question Number : 27 Question Id : 6863408934 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

निम्नलिखित में से कौन सा कोशिकांग, कोशिका का पाचन क्षेत्र कहलाता है?

1. गॉल्जी उपकरण
2. परऑक्सीसोम्स
3. केन्द्रक
4. लाइसोसोम्स

**Options :**

68634035305. 1  
68634035306. 2  
68634035307. 3  
68634035308. 4

**Question Number : 28 Question Id : 6863408935 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

Mitochondria is involved in -

1. Oxidative phosphorylation and Beta oxidation
2. Independent protein synthesis
3. Both (1) and (2)
4. Digestion of lipids and proteins

**Options :**

68634035309. 1  
68634035310. 2  
68634035311. 3  
68634035312. 4

**Question Number : 28 Question Id : 6863408935 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

माइटोकॉन्ड्रिया सम्मिलित होते हैं:

1. ऑक्सीडेटिव फॉस्फोराइलेशन और बीटा ऑक्सीडेशन में
2. स्वतन्त्र प्रोटीन संश्लेषण में
3. 1 और 2 दोनों में
4. लिपिड और प्रोटीन के पाचन में

**Options :**

- 68634035309. 1
- 68634035310. 2
- 68634035311. 3
- 68634035312. 4

**Question Number : 29 Question Id : 6863408936 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Size exclusion chromatography or gel filtration chromatography separates proteins based on :

1. Stokes radii
2. Molecular weight and shape
3. Both 1 and 2
4. Colour

**Options :**

- 68634035313. 1
- 68634035314. 2
- 68634035315. 3
- 68634035316. 4

**Question Number : 29 Question Id : 6863408936 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

साईज एक्सक्लूशन क्रोमेटोग्राफी या जेल निस्यंदन (फिल्ट्रेशन) क्रोमेटोग्राफी, प्रोटीन को इस आधार पर पृथक्कृत करती है:

1. स्टॉक्स त्रिज्या
2. आण्विक भार और आकार
3. 1 और 2 दोनों
4. वर्ण (रंग)

**Options :**

- 68634035313. 1
- 68634035314. 2
- 68634035315. 3
- 68634035316. 4

**Question Number : 30 Question Id : 6863408937 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

In spectrophotometric measurement of proteins, which of the following amino acids contribute the maximum?

- 1. Tyrosine, Phenylalanine, Tryptophan
- 2. Tyrosine, Serine, Threonine
- 3. Phenylalanine, Alanine, Leucine
- 4. Histidine, Proline, Tryptophan

**Options :**

- 68634035317. 1
- 68634035318. 2
- 68634035319. 3
- 68634035320. 4

**Question Number : 30 Question Id : 6863408937 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

प्रोटीन के स्पेक्ट्रोफोटोमीट्रिक मापन में निम्नलिखित में से कौन से ऐमीनो अम्ल सर्वाधिक योगदान देते हैं ?

- 1. टाइरोसीन, फेनिलऐलानिन, ट्रिप्टोफान
- 2. टाइरोसीन, सीरीन, थ्रेओनीन
- 3. फेनिलऐलानिन, ऐलानिन, ल्यूसीन
- 4. हिस्टीडीन, प्रोलीन, ट्रिप्टोफान

**Options :**

- 68634035317. 1
- 68634035318. 2
- 68634035319. 3
- 68634035320. 4

**Question Number : 31 Question Id : 6863408938 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

One of the following is not related to enzyme linked immunosorbent assay (ELISA)

1. Monoclonal and Polyclonal antibodies
2. Antigen and Coupling enzyme
3. Electrophoresis
4. Secondary antibody

**Options :**

68634035321. 1
68634035322. 2
68634035323. 3
68634035324. 4

**Question Number : 31 Question Id : 6863408938 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

निम्नलिखित में से कौन-सा एक एंजाइम सहलग्न प्रतिरक्षा शोषक आमामन (एलाइजा) से संबंधित नहीं है?

1. मोनोक्लोनल और पॉलीक्लोनल प्रतिरक्षी
2. प्रतिजन और युग्मन (कपलिंग) एंजाइम
3. इलैक्ट्रोफोरेसिस (वैद्युत कण-संचलन)
4. द्वितीयक प्रतिरक्षी

**Options :**

68634035321. 1
68634035322. 2
68634035323. 3
68634035324. 4

**Question Number : 32 Question Id : 6863408939 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

If molecular weight of a protein is 2,20,000 gm per mole, what would be the number of amino acids in the protein, assuming mean molecular weight of an amino acid to be 110 gm per mole ?

1. 2200
2. 2000
3. 3300
4. 200

**Options :**

68634035325. 1  
68634035326. 2  
68634035327. 3  
68634035328. 4

**Question Number : 32 Question Id : 6863408939 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

यदि एक ऐमीनो अम्ल का औसत अणु भार 110 ग्राम प्रतिमोल है तो एक प्रोटीन जिसका अणु भार 220,000 में ऐमीनो है तो इसमें अमीनो अम्लों की संख्या क्या होगी ?

1. 2200
2. 2000
3. 3300
4. 200

**Options :**

68634035325. 1  
68634035326. 2  
68634035327. 3  
68634035328. 4

**Question Number : 33 Question Id : 6863408940 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

Which of the following statement is incorrect ?

1. Ramachandran plot is related to protein structure.
2. Watson and Crick discovered the structure of DNA, proteins and RNA.
3. Calvin cycle incorporates all the carbon backbone of biomolecules.
4. Both 2 and 3

**Options :**

68634035329. 1  
68634035330. 2  
68634035331. 3  
68634035332. 4

**Question Number : 33 Question Id : 6863408940 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

निम्नलिखित कथनों में से कौन सा कथन असत्य है ?

1. रामचन्द्रन प्लॉट प्रोटीन संरचना से संबंधित है।
2. वाटसन और क्रिक ने डी.एन.ए., प्रोटीन और आर.एन.ए. की संरचना की खोज की थी।
3. कैल्विन चक्र में सभी जैव अणुओं का कार्बन आधार सम्मिलित है
4. 2 और 3 दोनों।

**Options :**

68634035329. 1  
68634035330. 2  
68634035331. 3  
68634035332. 4

**Question Number : 34 Question Id : 6863408941 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Find the wrong one out -

1. Nucleotide minus phosphoryl group is nucleoside
2. Purines and pyrimidines are double and single ring compounds, respectively.
3. Purines and pyrimidines are linked to sugars by a peptidoglycan bond.
4. Adenosine and Uridine are ribonucleosides.

**Options :**

68634035333. 1  
68634035334. 2  
68634035335. 3  
68634035336. 4

**Question Number : 34 Question Id : 6863408941 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

निम्नलिखित में से गलत कथन का चयन कीजिए:

1. फॉस्फोरिल समूह रहित न्यूक्लियोटाइड, न्यूक्लियोसाइड होता है
2. प्यूरीन और पिरिमिडीन क्रमशः द्वि वलय (डबल रिंग) और एकल वलय (सिंगल रिंग) वाले यौगिक हैं।
3. प्यूरीन और पिरिमिडीन, शर्करा से पेप्टिडोग्लाइकन आबंध द्वारा संलग्न होते हैं
4. ऐडेनोसीन और यूरिडीन, राइबोन्यूक्लियोसाइड हैं

**Options :**

68634035333. 1  
68634035334. 2  
68634035335. 3  
68634035336. 4

**Question Number : 35 Question Id : 6863408942 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

A phosphodiester bond forms :

1. Polypeptides
2. Polynucleotides
3. Lipoproteins
4. Oligomers of carbohydrates and lipids

**Options :**

68634035337. 1  
68634035338. 2  
68634035339. 3  
68634035340. 4

**Question Number : 35 Question Id : 6863408942 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

फॉस्फोडाइएस्टर बंध बनाता है:

1. पॉलीपेप्टाइड्स
2. पॉलीन्यूक्लियोटाइड्स
3. लाइपोप्रोटीन्स (वसाप्रोटीन्स)
4. कार्बोहाइड्रेट्स और लिपिड्स (वसा) के ऑलीगोमर्स (स्वल्पलक)

**Options :**

68634035337. 1  
68634035338. 2  
68634035339. 3  
68634035340. 4

**Question Number : 36 Question Id : 6863408943 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

Watson and Crick base pairing is ?

1. Hydrogen bonding in a single DNA strand.
2. Non-covalent hydrogen bonding between two DNA strands.
3. Van der Waal's forces between bases.
4. Phosphodiester bonds between nitrogenous bases of opposite strands

**Options :**

- 68634035341. 1
- 68634035342. 2
- 68634035343. 3
- 68634035344. 4

**Question Number : 36 Question Id : 6863408943 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

वाटसन और क्रिक का क्षारक युग्मन (बेस पेयरिंग) है:

1. एकल डी.एन.ए रज्जुक में हाइड्रोजन आबन्ध
2. दो डी.एन.ए रज्जुक के बीच अ-सहसंयोजी हाइड्रोजन आबन्ध
3. क्षारकों (बेसों) के बीच वान्डर ल्स बल
4. विपरीत रज्जुकों के दो नाइट्रोजनी क्षारकों (बेसों) के बीच फॉस्फोडाईएस्टर आबन्ध

**Options :**

- 68634035341. 1
- 68634035342. 2
- 68634035343. 3
- 68634035344. 4

**Question Number : 37 Question Id : 6863408944 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

The complementary sequence for the DNA stretch 'GATCAATCGAACT', would be

1. CTAGTTAGCTTGA
2. CTAGUUTC GUUCT
3. AGTTCGATTGATC
4. AGUUCGAUUGAUC

**Options :**

- 68634035345. 1

68634035346. 2  
68634035347. 3  
68634035348. 4

**Question Number : 37 Question Id : 6863408944 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

डी.एन.ए. पट्टी GATCAATCGAACT का पूरक अनुक्रम होगा:

1. CTAGTTAGCTTGA
2. CTAGUUTC GUUCT
3. AGTTCGATTGATC
4. AGUUCGAUUGAUC

**Options :**

68634035345. 1  
68634035346. 2  
68634035347. 3  
68634035348. 4

**Question Number : 38 Question Id : 6863408945 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

The two common antioxidants that also act as pro-oxidants in biological systems are

1. Ascorbate and Uric acid
2. Ascorbate and Polyphenols
3. Beta carotene and Uric acid
4. Ascorbate and Beta carotene

**Options :**

68634035349. 1  
68634035350. 2  
68634035351. 3  
68634035352. 4

**Question Number : 38 Question Id : 6863408945 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

जैविक तंत्रों में दो सामान्य प्रति ऑक्सीकारक जो अनुऑक्सीकारक का कार्य भी करते हैं, वे हैं -

1. एस्कॉर्बेट और यूरिक अम्ल
2. एस्कॉर्बेट और पॉलीफिनोल्स
3. बीटा कैरोटीन और यूरिक अम्ल
4. एस्कॉर्बेट और बीटा कैरोटीन

**Options :**

68634035349. 1  
68634035350. 2  
68634035351. 3  
68634035352. 4

**Question Number : 39 Question Id : 6863408946 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Diabetes is a :

1. Genetic disorder
2. Metabolic disorder
3. Genetic and metabolic disorder
4. Chromosomal disorder and digestive disorder

**Options :**

68634035353. 1  
68634035354. 2  
68634035355. 3  
68634035356. 4

**Question Number : 39 Question Id : 6863408946 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

मधुमेह है एक:

1. आनुवंशिक विकार
2. उपापचयी विकार
3. आनुवंशिक और उपापचयी विकार दोनों
4. गुणसूत्रीय विकार और पाचनसंबंधी विकार

**Options :**

68634035353. 1  
68634035354. 2  
68634035355. 3  
68634035356. 4

**Question Number : 40 Question Id : 6863408947 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

An oxyhemoglobin molecule contains ?

1. Protein + heme with iron + CO<sub>2</sub>
2. Protein + Chlorophyll with magnesium + O<sub>2</sub>
3. Lipid + Sugar + O<sub>2</sub>
4. Heme with iron + O<sub>2</sub> + Protein

**Options :**

68634035357. 1  
68634035358. 2  
68634035359. 3  
68634035360. 4

**Question Number : 40 Question Id : 6863408947 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

एक ऑक्सीहीमोग्लोबिन अणु में होता है:

1. प्रोटीन + लौह युक्त हीम + CO<sub>2</sub>
2. प्रोटीन + मैग्नीशियम युक्त क्लोरोफिल + O<sub>2</sub>
3. वसा (लिपिड) + शर्करा + O<sub>2</sub>
4. लौह युक्त हीम + O<sub>2</sub> + प्रोटीन

**Options :**

68634035357. 1  
68634035358. 2  
68634035359. 3  
68634035360. 4

**Question Number : 41 Question Id : 6863408948 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

Which of the following mutations is least deleterious in a genome :

1. Missense mutation
2. Non-sense mutation
3. Silent mutation
4. Violent mutations

**Options :**

68634035361. 1  
68634035362. 2  
68634035363. 3  
68634035364. 4

**Question Number : 41 Question Id : 6863408948 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

जीनोम में निम्नलिखित उत्परिवर्तनों में से कौन-सा न्यूनतम हानिकारक (प्रणाशी) है?

1. मिससेन्स उत्परिवर्तन
2. नॉन-सेंस उत्परिवर्तन
3. साइलेंट उत्परिवर्तन
4. उग्र (वाइलेंट) उत्परिवर्तन

**Options :**

68634035361. 1  
68634035362. 2  
68634035363. 3  
68634035364. 4

**Question Number : 42 Question Id : 6863408949 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Given below is the triple nature of codon, the possible permutation of four bases (A, G, T, C) is :

1.  $4^3$
2.  $4 \times 3$
3.  $3^4$
4.  $4^4$

**Options :**

68634035365. 1

68634035366. 2  
68634035367. 3  
68634035368. 4

**Question Number : 42 Question Id : 6863408949 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

नीचे एक प्रकृत (कोडोन) की त्रिआयामी प्रकृति दी गई है। चार बेसों (क्षारों) (A, G, T, C) का सम्भव क्रमचय होगा :

1.  $4^3$

2.  $4 \times 3$

3.  $3^4$

4.  $4^4$

**Options :**

68634035365. 1  
68634035366. 2  
68634035367. 3  
68634035368. 4

**Question Number : 43 Question Id : 6863408950 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

DNA photolyases are the enzymes that convert :

1. Pyrimidine dimers to monomers with  $FADH_2$  as cofactor.

2. Pyrimidine monomers to dimers with  $FADH_2$  as cofactor.

3. Pyrimidine monomers to dimers with  $NADH_2$  as cofactor.

4. Pyrimidine monomers to trimers.

**Options :**

68634035369. 1  
68634035370. 2  
68634035371. 3  
68634035372. 4

**Question Number : 43 Question Id : 6863408950 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

डी.एन.ए. फोटोलाएज वे एंजाइम हैं जो परिवर्तित करते हैं :

1.  $FADH_2$  कोफैक्टर के साथ पिरीमिडीन डाइमर्स को मोनोमर्स में
2.  $FADH_2$  कोफैक्टर के साथ पिरीमिडीन मोनोमर्स को डाइमर्स में
3.  $NADH_2$  कोफैक्टर के साथ पिरीमिडीन मोनोमर्स को डाइमर्स में
4. पिरीमिडीन मोनोमर्स को ट्राइमर्स में

**Options :**

- 68634035369. 1
- 68634035370. 2
- 68634035371. 3
- 68634035372. 4

**Question Number : 44 Question Id : 6863408951 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

What are the possible number of reading frames in any given double stranded DNA sequence :

1. 6
2. 3
3. 9
4. 2

**Options :**

- 68634035373. 1
- 68634035374. 2
- 68634035375. 3
- 68634035376. 4

**Question Number : 44 Question Id : 6863408951 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

किसी दिए गए द्विरज्जुक डी.एन.ए. अनुक्रम में रीडिंग फ्रेम्स (पढ़ने के प्राधार) की संभव संख्या होगी:

1. 6
2. 3
3. 9
4. 2

**Options :**

- 68634035373. 1

68634035374. 2  
68634035375. 3  
68634035376. 4

**Question Number : 45 Question Id : 6863408952 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

During translation, the directionality of polypeptide synthesis is ?

1. C-terminal to N-terminal direction.
2. N-terminal to 3' direction.
3. 5' to C-terminal direction.
4. N-terminal to C-terminal direction.

**Options :**

68634035377. 1  
68634035378. 2  
68634035379. 3  
68634035380. 4

**Question Number : 45 Question Id : 6863408952 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

रूपांतरण के दौरान, पॉलीपेटाइड संश्लेषण की दिशा होगी -

1. C-सिरे (टर्मिनल) से N-सिरे की दिशा में
2. N-सिरे से 3' की दिशा में
3. 5' से C-सिरे की दिशा में
4. N-सिरे से C-सिरे की दिशा में

**Options :**

68634035377. 1  
68634035378. 2  
68634035379. 3  
68634035380. 4

**Question Number : 46 Question Id : 6863408953 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Find the odd one among the following :

1. James Sumner → Urease
2. Holoenzyme → functional enzyme plus coenzyme and/or metal ion.
3. Apoenzyme → Enzyme + prosthetic group.
4. Hexokinase →  $Mg^{2+}$  dependent.

**Options :**

68634035381. 1  
68634035382. 2  
68634035383. 3  
68634035384. 4

**Question Number : 46 Question Id : 6863408953 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

निम्नलिखित में से विषम की पहचान कीजिए:

1. जेम्स समनर → यूरिएज
2. होलोएन्जाइम → क्रियाशील एंजाइम + को-एंजाइम और/अथवा धातु आयन
3. एपोएंजाइम → एंजाइम + प्रोस्थेटिक समूह
4. हैक्सोकाइनेज →  $Mg^{2+}$  निर्भर

**Options :**

68634035381. 1  
68634035382. 2  
68634035383. 3  
68634035384. 4

**Question Number : 47 Question Id : 6863408954 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

The catalytic efficiency of an enzyme refers to

1.  $K_{cat}$
2.  $K_m$
3.  $K_{cat}/K_m$
4.  $K_m/K_{cat}$

**Options :**

68634035385. 1  
68634035386. 2  
68634035387. 3  
68634035388. 4

**Question Number : 47 Question Id : 6863408954 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

एक एंजाइम की उत्प्रेरकी दक्षता से अभिप्राय है :

1.  $K_{cat}$
2.  $K_m$
3.  $K_{cat}K_m$
4.  $K_m/K_{cat}$

**Options :**

68634035385. 1  
68634035386. 2  
68634035387. 3  
68634035388. 4

**Question Number : 48 Question Id : 6863408955 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

$K_m$  of an enzyme - catalysed reaction is :

1. Substrate concentration at which reaction rate is half of the maximum.
2. Product concentration at which reaction rate is half of the maximum.
3. Substrate concentration at which reaction rate is double of the maximum.
4. Maximum kinetic constant

**Options :**

68634035389. 1  
68634035390. 2  
68634035391. 3  
68634035392. 4

**Question Number : 48 Question Id : 6863408955 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

एक एंजाइम उत्प्रेरित अभिक्रिया का  $K_m$  होता है :

1. क्रियाधार की सांद्रता, जिस पर अभिक्रिया दर अधिकतम की आधी होती है
2. उत्पाद की सांद्रता, जिस पर अभिक्रिया दर अधिकतम की आधी होती है
3. क्रियाधार की सांद्रता, जिस पर अभिक्रिया दर, अधिकतम की दोगुनी होती है
4. अधिकतम गतिज स्थिरांक

**Options :**

- 68634035389. 1
- 68634035390. 2
- 68634035391. 3
- 68634035392. 4

**Question Number : 49 Question Id : 6863408956 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Identify the wrong statement about Penicillin.

1. It is an irreversible inhibitor
2. It targets glycopeptide transpeptidase
3. It consists of a beta-lactam ring plus proline
4. It forms covalent bond with active site serine

**Options :**

- 68634035393. 1
- 68634035394. 2
- 68634035395. 3
- 68634035396. 4

**Question Number : 49 Question Id : 6863408956 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

पेनिसिलिन के बारे में गलत कथन की पहचान कीजिए:

1. पेनिसिलिन एक अनुक्रमणीय अवरोधक है।
2. पेनिसिलिन, ग्लाइकोपेप्टाइड ट्रॉंसपैप्टाइडेज को टारगेट (लक्षित) करता है।
3. पेनिसिलिन में एक बीटा-लेक्टम वलय + प्रोलीन होता है
4. पेनिसिलिन, सीरीन के सक्रिय स्थल पर सहसंयोजी आबन्ध बनाता है।

**Options :**

68634035393. 1  
68634035394. 2  
68634035395. 3  
68634035396. 4

**Question Number : 50 Question Id : 6863408957 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

The most abundant enzyme on Earth is

1. Carbonic anhydrase
2. Ribulose 1, 5-bisphosphate carboxylase/oxygenase.
3. Acetylcholine esterase
4. Urease

**Options :**

68634035397. 1  
68634035398. 2  
68634035399. 3  
68634035400. 4

**Question Number : 50 Question Id : 6863408957 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

पृथ्वी पर सबसे अधिक पाया जाने वाला एंजाइम है -

1. कार्बोनिक एनहाइड्रेज
2. राइबुलोज 1,5 - बिसफॉस्फेट कार्बोक्सीलेज/ऑक्सीजेनेज
3. एसीटाइलकोलीन एस्टरेज
4. यूरिएज

**Options :**

68634035397. 1  
68634035398. 2  
68634035399. 3  
68634035400. 4

**Question Number : 51 Question Id : 6863408958 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

Gmelin's test and Van den Bergh reaction are used for :

1. identification of bilirubin in serum and urine, respectively.
2. identification of bilirubin in serum only.
3. identification of bilirubin in urine only.
4. identification of bilirubin in urine and serum, respectively.

**Options :**

- 68634035401. 1
- 68634035402. 2
- 68634035403. 3
- 68634035404. 4

**Question Number : 51 Question Id : 6863408958 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

मेलिन परीक्षण और वान डेन बर्ग अभिक्रिया का प्रयोग होता है:

1. बिलिरुबिन की क्रमशः सीरम और मूत्र में पहचान करने के लिए
2. बिलिरुबिन की केवल सीरम में पहचान करने के लिए
3. बिलिरुबिन की केवल मूत्र में पहचान करने के लिए
4. बिलिरुबिन की क्रमशः मूत्र और सीरम में पहचान करने के लिए

**Options :**

- 68634035401. 1
- 68634035402. 2
- 68634035403. 3
- 68634035404. 4

**Question Number : 52 Question Id : 6863408959 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Which of the following are involved in buffering our blood system ?

1. Bicarbonate / Phosphate buffers
2. Tris : HCl buffer
3. MOPS buffer
4. Calcium/ Magnesium buffers

**Options :**

- 68634035405. 1

68634035406. 2

68634035407. 3

68634035408. 4

**Question Number : 52 Question Id : 6863408959 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

निम्नलिखित में से कौन हमारे रक्त तंत्र के उभय प्रतिरोधन (बफरिंग) में सम्मिलित है?

1. बाईकार्बोनेट / फॉस्फेट बफर्स

2. Tris : HCl बफर

3. MOPs बफर

4. कैल्सियम/ मैग्नीशियम बफर्स

**Options :**

68634035405. 1

68634035406. 2

68634035407. 3

68634035408. 4

**Question Number : 53 Question Id : 6863408960 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

The amino acid in renal tubular cells that forms ammonia, which is finally excreted as  $\text{NH}_4^+$  is :

1. Aspartate

2. Glutamate

3. Asparagine

4. Glutamine

**Options :**

68634035409. 1

68634035410. 2

68634035411. 3

68634035412. 4

**Question Number : 53 Question Id : 6863408960 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

वृक्कीय नलिका कोशिकाओं में वह अमीनो अम्ल जो अमोनिया बनाता है, जो अंततः  $\text{NH}_4^+$  के रूप में उत्सर्जित होता है, वह है :

1. एस्पार्टेट
2. ग्लूटेमेट
3. ऐस्पेराजीन
4. ग्लूटेमीन

**Options :**

68634035409. 1  
68634035410. 2  
68634035411. 3  
68634035412. 4

**Question Number : 54 Question Id : 6863408961 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Rifampicin inhibits :

1. Beta subunit of prokaryotic RNA polymerase
2. Beta subunit of prokaryotic DNA polymerase
3. All eukaryotic and prokaryotic polymerases
4. RNA dependent DNA polymerase

**Options :**

68634035413. 1  
68634035414. 2  
68634035415. 3  
68634035416. 4

**Question Number : 54 Question Id : 6863408961 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

रिफेम्पिसिन अवरुद्ध करता है:

1. प्रोकैरेयोटिक आर एन ए पॉलीमरेज की बीटा उप-इकाई को
2. प्रोकैरेयोटिक डी.एन.ए. पॉलीमरेज की बीटा उप-इकाई को
3. सभी यूकैरियोटिक और प्रोकैरेयोटिक पॉलीमरेजों को
4. आर.एन.ए. निर्भर डी.एन.ए. पॉलीमरेज को

**Options :**

- 68634035413. 1
- 68634035414. 2
- 68634035415. 3
- 68634035416. 4

**Question Number : 55 Question Id : 6863408962 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

The acid - fastness of mycobacteria is due to :

1. Presence of mycolic acids in cell wall
2. Presence of peptidoglycan in the cell wall
3. Presence of glycoproteins in cell wall
4. Presence of glycolipids in cell wall

**Options :**

- 68634035417. 1
- 68634035418. 2
- 68634035419. 3
- 68634035420. 4

**Question Number : 55 Question Id : 6863408962 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

माइकोबैक्टीरिया की अम्लीय-फास्टनेस का कारण है:

1. कोशिका भित्ति में माइकोलिक अम्लों की उपस्थिति
2. कोशिका भित्ति में पैप्टाइडोग्लाइकेन की उपस्थिति
3. कोशिका भित्ति में ग्लाइकोप्रोटीन की उपस्थिति
4. कोशिका भित्ति में ग्लाइकोलिपिड की उपस्थिति

**Options :**

- 68634035417. 1
- 68634035418. 2
- 68634035419. 3
- 68634035420. 4

**Question Number : 56 Question Id : 6863408963 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

The branch of biology that involves creation of small living organisms like mycoplasma etc. is called as :

1. Biotechnology
2. Systems biology
3. Chemical biology
4. Synthetic biology

**Options :**

- 68634035421. 1
- 68634035422. 2
- 68634035423. 3
- 68634035424. 4

**Question Number : 56 Question Id : 6863408963 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

जीवविज्ञान की वह शाखा जिसमें माइकोप्लाज्मा जैसे अति सूक्ष्म सजीवों का सृजन सम्मिलित है, कहलाती है:

1. जैव प्रौद्योगिकी
2. सिस्टमस जीव विज्ञान
3. रासायनिक जीवविज्ञान
4. कृत्रिम (सिन्थेटिक) जीव विज्ञान

**Options :**

- 68634035421. 1
- 68634035422. 2
- 68634035423. 3
- 68634035424. 4

**Question Number : 57 Question Id : 6863408964 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Which group of the antibiotics inhibit translation by binding to the 50s ribosomal subunit?

1. Erythromycin, Chloramphenicol
2. Kanamycin, Neomycin
3. Vancomycin, Cycloserine
4. Kanamycin, Vancomycin

**Options :**

- 68634035425. 1

68634035426. 2  
68634035427. 3  
68634035428. 4

**Question Number : 57 Question Id : 6863408964 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

प्रतिजैविकों (एन्टीबायोटिक्स) का कौन सा समूह राइबोसोम की 50S उप-इकाई के साथ आबंधन करके रूपांतरण को रोकता है ?

1. एरिथ्रोमाइसिन, क्लोरेम्फेनीकोल
2. कैनामाइसिन, नियोमाइसिन
3. वेन्कोमाइसिन, साइक्लोसीरीन
4. केनामाइसिन, वेन्कोमाइसिन

**Options :**

68634035425. 1  
68634035426. 2  
68634035427. 3  
68634035428. 4

**Question Number : 58 Question Id : 6863408965 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Given that  $\Delta G = \Delta H = T\Delta S$ , with reference to it, identify the wrong statement :

1. In exergonic reaction,  $\Delta G$  is negative.
2. When  $\Delta G$  is zero, the system is at equilibrium
3.  $\Delta G$  must be positive for the reaction to be spontaneous.
4. In exergonic reaction  $\Delta G$  is always equals to 1.

**Options :**

68634035429. 1  
68634035430. 2  
68634035431. 3  
68634035432. 4

**Question Number : 58 Question Id : 6863408965 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

यदि :  $\Delta G = \Delta H = T\Delta S$  है, तो इसके सन्दर्भ में गलत कथन की पहचान कीजिए:

1. ऊर्जाक्षेपी (एक्सर्गोनिक) अभिक्रिया में,  $\Delta G$  ऋणात्मक होता है।
2. जब  $\Delta G$  शून्य है, तो तंत्र (सिस्टम) साम्यता में है।
3. स्वतः प्रवर्तित(स्पोन्टेनियस) अभिक्रिया के लिए  $\Delta G$  धनात्मक होना चाहिए।
4. ऊष्माक्षेपी (एक्सर्गोनिक) अभिक्रिया में  $\Delta G$  सदैव 1 होता है।

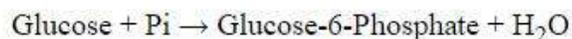
**Options :**

68634035429. 1  
68634035430. 2  
68634035431. 3  
68634035432. 4

**Question Number : 59 Question Id : 6863408966 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

The

Reaction 1 :



can only occur when the

Reaction 2 :



occurs. This is because :

1. The  $\Delta G_0'$  of the reaction 1 is negative.
2. The  $\Delta G_0'$  of the reaction 2 is positive.
3. The  $\Delta G_0'$  of reaction 1 is positive and reaction 2 is negative.
4. The  $\Delta G_0'$  of both reactions 1 and 2 are negative

**Options :**

68634035433. 1  
68634035434. 2  
68634035435. 3  
68634035436. 4

**Question Number : 59 Question Id : 6863408966 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

अभिक्रिया 1 :

ग्लूकोज + P<sub>i</sub> → ग्लूकोज - 6 फॉस्फेट + H<sub>2</sub>O केवल तभी हो सकती है जब

अभिक्रिया - 2 :

ATP → ADP + P<sub>i</sub> होती है।

ऐसा इसलिए है क्योंकि:

1. अभिक्रिया 1 का  $\Delta G_0'$  ऋणात्मक है।
2. अभिक्रिया 1 का  $\Delta G_0'$  धनात्मक है।
3. अभिक्रिया 1 का  $\Delta G_0'$  धनात्मक है और अभिक्रिया 2 का  $\Delta G_0'$  ऋणात्मक है।
4. अभिक्रिया 1 का  $\Delta G_0'$  और अभिक्रिया 2 का  $\Delta G_0'$  दोनों ऋणात्मक हैं।

**Options :**

68634035433. 1  
68634035434. 2  
68634035435. 3  
68634035436. 4

**Question Number : 60 Question Id : 6863408967 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Oxidation of one molecule of FADH<sub>2</sub> in the respiratory chain, forms how many molecules of ATP ?

1. 1 through complex I
2. 2.5 through complexes I and IV
3. 1.5 through complexes II and IV
4. 2 through complexes I and III.

**Options :**

68634035437. 1  
68634035438. 2  
68634035439. 3  
68634035440. 4

**Question Number : 60 Question Id : 6863408967 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

श्वसन शृंखला में  $FADH_2$  के एक अणु के आक्सीकरण से ATP के कितने अणु बनते हैं?

1. कॉम्प्लैक्स (सम्मिश्र) I से एक
2. कॉम्प्लैक्स (सम्मिश्र) I और IV से 2.5
3. कॉम्प्लैक्स (सम्मिश्र) II और IV से 1.5
4. कॉम्प्लैक्स (सम्मिश्र) I और III से 2

**Options :**

- 68634035437. 1
- 68634035438. 2
- 68634035439. 3
- 68634035440. 4

**Question Number : 61 Question Id : 6863408968 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

The breakdown of the long chain fatty acids to acetyl CoA via  $\beta$ -oxidation takes place in :

1. The mitochondrial matrix
2. The endoplasmic reticulum
3. The mitochondrial inner membrane space
4. The cytosol

**Options :**

- 68634035441. 1
- 68634035442. 2
- 68634035443. 3
- 68634035444. 4

**Question Number : 61 Question Id : 6863408968 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

लम्बी शृंखला के वसीय अम्लों का  $\beta$ -आक्सीकरण द्वारा एसिटाइल CoA में विखंडन होता है:

1. माइटोकॉन्ड्रिया की आधात्री (मैट्रिक्स) में
2. अन्तर्द्रव्यी जालिका में
3. माइटोकॉन्ड्रिया की अन्तः झिल्ली के रिक्त स्थान में
4. साइटोसोल में

**Options :**

68634035441. 1  
68634035442. 2  
68634035443. 3  
68634035444. 4

**Question Number : 62 Question Id : 6863408969 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**  
**Correct Marks : 4 Wrong Marks : 1**

During glycolysis, conversion of 1 mole of fructose 1, 6 - bisphosphate to 2 moles of pyruvate, leads to the formation of :

1. 2 moles of NADH and 4 moles of ATP
2. 1 mole of NADH and 1 mole of ATP
3. 2 moles of NADH and 2 moles of ATP
4. 2 moles of NADH and 2.5 moles of ATP

**Options :**

68634035445. 1  
68634035446. 2  
68634035447. 3  
68634035448. 4

**Question Number : 62 Question Id : 6863408969 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**  
**Correct Marks : 4 Wrong Marks : 1**

ग्लाइकोलाइसिस में 1 मोल फ्रक्टोज 1, 6 - बिस्फास्फेट के 2 मोल पायरूवेट में परिवर्तन के दौरान उत्पन्न होते हैं :

1. NADH के 2 मोल और ATP के 4 मोल
2. NADH का 1 मोल और ATP का 1 मोल
3. NADH के 2 मोल और ATP के 2 मोल
4. NADH के 2 मोल और ATP के 2.5 मोल

**Options :**

68634035445. 1  
68634035446. 2  
68634035447. 3  
68634035448. 4

**Question Number : 63 Question Id : 6863408970 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**  
**Correct Marks : 4 Wrong Marks : 1**

The concentration of  $\text{OH}^-$  in a solution with  $\text{H}^+$  concentration of  $1.3 \times 10^{-4}$  M is :

1.  $7.7 \times 10^{-22}$  M
2.  $7.0 \times 10^{-12}$  M
3.  $7.7 \times 10^{-11}$  M
4.  $1 \times 10^{-14}$  M

**Options :**

68634035449. 1  
68634035450. 2  
68634035451. 3  
68634035452. 4

**Question Number : 63 Question Id : 6863408970 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

एक विलयन जिसमें  $\text{H}^+$  की सांद्रता  $1.3 \times 10^{-4}$  M है तो इसमें  $\text{OH}^-$  की सांद्रता होगी:

1.  $7.7 \times 10^{-22}$  M
2.  $7.0 \times 10^{-12}$  M
3.  $7.7 \times 10^{-11}$  M
4.  $1 \times 10^{-14}$  M

**Options :**

68634035449. 1  
68634035450. 2  
68634035451. 3  
68634035452. 4

**Question Number : 64 Question Id : 6863408971 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

IgM is a pentamer. Upon visualisation of a pure IgM by electrophoresis on a reducing polyacrylamide gel, the number of protein bands to be visible on the gel would be :

1. 5
2. 10
3. 2
4. 4

**Options :**

- 68634035453. 1
- 68634035454. 2
- 68634035455. 3
- 68634035456. 4

**Question Number : 64 Question Id : 6863408971 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

IgM एक पंचलक (पेन्टामर) है। अपचायी (रिड्यूसिंग) पॉलीएक्राइलेमाइड जैल पर इलेक्ट्रोफोरेसिस द्वारा, एक विशुद्ध IgM के जैल में दृश्य प्रोटीन पट्टिकाओं की संख्या होगी :

- 1. 5
- 2. 10
- 3. 2
- 4. 4

**Options :**

- 68634035453. 1
- 68634035454. 2
- 68634035455. 3
- 68634035456. 4

**Question Number : 65 Question Id : 6863408972 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

A plot between the  $\Phi$  and  $\psi$  dihedral angles of a peptide bond is called as :

- 1. Hydropathy Plot
- 2. Ramachandran Plot
- 3. Volcano Plot
- 4. Both Hydropathy and Ramchandran Plot

**Options :**

- 68634035457. 1
- 68634035458. 2
- 68634035459. 3
- 68634035460. 4

**Question Number : 65 Question Id : 6863408972 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

एक पेष्टाइड आबन्ध की  $\phi$  और  $\psi$  द्वितल कोणों के बीच की रचना को कहते हैं:

1. हाइड्रोपैथी रचना (प्लॉट)
2. रामचन्द्रन प्लॉट
3. ज्वालामुखी (वॉल्केनो) प्लॉट
4. हाइड्रोपैथी और रामचन्द्रन प्लॉट दोनों

**Options :**

68634035457. 1
68634035458. 2
68634035459. 3
68634035460. 4

**Question Number : 66 Question Id : 6863408973 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Give below are two statements : one is labelled as **Assertion A** and the other is labelled as **Reason R**

**Assertion A :** Protein folding is essential for structure and function is still an unresolved problem in biology, Protein folding problems lead to aggregation and is a cause for many diseases :

**Reason R :** Levinthal's paradox is a theoretical calculation of the time needed for a protein to fold. Accordingly, a polypeptide may take billions of years to fold if all the possible conformations are exercised during protein folding.

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

1. Both A and R are correct and R is the correct explanation A
2. Both A and R are correct but R is NOT the correct explanation of A
3. A is correct but R is not correct
4. A is not correct but R is correct

**Options :**

68634035461. 1
68634035462. 2
68634035463. 3
68634035464. 4

**Question Number : 66 Question Id : 6863408973 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

नीचे दो कथन दिए गए हैं, एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में:

**अभिकथन A:** संरचन और कार्यों के लिए प्रोटीन का वलन आवश्यक है, फिर भी यह अभी तक जीव विज्ञान की अनसुलझी समस्या है। प्रोटीन वलन के कारण संग्रहण की समस्या उत्पन्न होती है और इसके कारण अनेक रोग होते हैं।

**कारण R:** लेविन्थल विरोधाभास प्रोटीन वलन के लिए आवश्यक समय की सैद्धान्तिक गणना है। प्रोटीन वलय के दौरान यदि सभी संभव संरूपणों को प्रयोग में लाया जाये तो एक पॉलीपेटाइड के विलय में बिलियन वर्ष लग सकते हैं।

उपरोक्त कथन के आलोकमें, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए:

1. A और R दोनों सही हैं और R, A की सही व्याख्या है
2. A और R दोनों सही हैं और R, A की सही व्याख्या नहीं है
3. A सही है लेकिन R सही नहीं है
4. A सही नहीं है लेकिन R सही है

**Options :**

68634035461. 1
68634035462. 2
68634035463. 3
68634035464. 4

**Question Number : 67 Question Id : 6863408974 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

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

**Assertion A :** Prokaryotes have three RNA polymerases. Prokaryotic RNA pol II synthesizes ribosomal RNAs.

**Reasons R :** In Eukaryotes RNA Polymerase II synthesizes mRNA and is sensitive to low concentration of  $\alpha$ -amanitin.

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

1. Both A and R are correct and R is the correct explanation of A
2. Both a and R are correct but R is NOT the correct explanation of A.
3. A is correct but R is not correct.
4. A is not correct but R is correct.

**Options :**

68634035465. 1
68634035466. 2
68634035467. 3
68634035468. 4

Question Number : 67 Question Id : 6863408974 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं, एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में:

**अभिकथन A:** प्रोकैरियोट्स में तीन आर.एन.ए. पॉलीमरेज होते हैं। प्रोकैरियोटिक आर.एन.ए. पॉलीमरेज II, राइबोसोमीय आर.एन.ए. संश्लेषित करता है।

**कारण R:** यूकैरियोट्स में आर.एन.ए. पॉलीमरेज II mRNA संश्लेषित करता, और  $\alpha$ -एमेनिटिन की अल्प सांद्रता के प्रति संवेदी होता है।

उपरोक्त कथन के आलोकमें, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए:

1. A और R दोनों सही हैं और R, A की सही व्याख्या है
2. A और R दोनों सही हैं और R, A की सही व्याख्या नहीं है
3. A सही है लेकिन R सही नहीं है
4. A सही नहीं है लेकिन R सही है

**Options :**

68634035465. 1
68634035466. 2
68634035467. 3
68634035468. 4

Question Number : 68 Question Id : 6863408975 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Give below are two statements : One is labelled as **Assertion A** and the other is labelled as **Reason R**

**Assertion A :** Klinefelter's syndrome have minor phenotypic anomalies with small testis and enlarged breasts. These individuals have 47 chromosomes with 44 autosomes plus XXY.

**Reason R :** Males with XYY syndrome have two Y chromosomes. Such individuals have anti social behavior and aggression. Their frequency is approximately 1 to 650.

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

1. Both A and R are correct and R is the correct explanation of A
2. Both A and R are correct but R is NOT the correct explanation of A
3. A is correct but R is not correct
4. A is not correct but R is correct.

**Options :**

68634035469. 1  
68634035470. 2  
68634035471. 3  
68634035472. 4

**Question Number : 68 Question Id : 6863408975 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

नीचे दो कथन दिए गए हैं, एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में:

**अभिकथन A:** क्लाइनफेल्टर सिंड्रोम में, अल्प लक्षण प्ररूपी (फीनोटिपिक) विषमताएं होती हैं जैसे छोटे वृषण और बढ़ा हुआ वक्षस्थल। इन व्यक्तियों में 47 गुण-सूत्र होते हैं, जिनमें 44 अलिंगी गुणसूत्र और XXY होते हैं।

**कारण R:** XYY वाले नर में दो Y गुणसूत्र होते हैं। ऐसे व्यक्तियों में असामाजिक व्यवहार और उग्रता पाई जाती है। इनकी आवृत्ति 650 में से 1 की होती है।

उपरोक्त कथन के आलोकमें, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए:

1. A और R दोनों सही हैं और R, A की सही व्याख्या है
2. A और R दोनों सही हैं और R, A की सही व्याख्या नहीं है
3. A सही है लेकिन R सही नहीं है
4. A सही नहीं है लेकिन R सही है

**Options :**

68634035469. 1  
68634035470. 2  
68634035471. 3  
68634035472. 4

**Question Number : 69 Question Id : 6863408976 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

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

**Assertions A** : Protein kinases catalyze the transfer of gamma ( $\gamma$ ) - phosphoryl group of ATP to proteins. Serine, threonine or tyrosine are the general amino acids that are phosphorylated.

**Reason R** : Phosphorylation of proteins by protein kinases makes them aggregated and non-functional with subsequent degradation.

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

1. Both **A** and **R** are correct and **R** is the correct explanation of **A**
2. Both **A** and **R** are correct but **R** is NOT the correct explanation of **A**
3. **A** is correct but **R** is not correct
4. **A** is not correct but **R** is correct

**Options :**

68634035473. 1

68634035474. 2

68634035475. 3

68634035476. 4

**Question Number : 69 Question Id : 6863408976 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

नीचे दो कथन दिए गए हैं, एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में:

**अभिकथन A:** प्रोटीन काइनेज, ATP के गामा  $\gamma$ -फॉस्फोराइल समूह के स्थानांतरण को प्रोटीन में उत्प्रेरित करता है। सीरीन, थ्रेओनीन या टायरोसीन सामान्यतः फॉस्फोराइलेट होने वाले अमीनो अम्ल हैं।

**कारण R:** प्रोटीन काइनेज द्वारा प्रोटीन का फॉस्फोराइलिकरण होने पर वह समूहित और अक्रियाशील हो जाते हैं, और बाद में उसका निम्नीकरण हो जाता है।

उपरोक्त कथन के आलोकमें, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए:

1. A और R दोनों सही हैं और R, A की सही व्याख्या है
2. A और R दोनों सही हैं लेकिन R, A की सही व्याख्या नहीं है
3. A सही है लेकिन R सही नहीं है
4. A सही नहीं है लेकिन R सही है

**Options :**

68634035473. 1

68634035474. 2

68634035475. 3

**Question Number : 70 Question Id : 6863408977 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

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

**Assertion A** : While the  $pK_a$  of a free lysine is 10.5, the  $pK_a$  of lysine decreases to 6.6 when present in the active site of Acetoacetate decarboxylase.

**Reason R** : The decreased  $pK_a$  of lysine in the active site is due to the electrostatic effect of nearby positive charges.

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

1. Both **A** and **R** are correct and **R** is the correct explanation of **A**
2. Both **A** and **R** are correct but **R** is NOT the correct explanation of **A**
3. **A** is correct but **R** is not correct
4. **A** is not correct but **R** is correct

**Options :**

68634035477. 1  
68634035478. 2  
68634035479. 3  
68634035480. 4

**Question Number : 70 Question Id : 6863408977 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

नीचे दो कथन दिए गए हैं, एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में:

**अभिकथन A:** मुक्त लाइसीन का  $pK_a$  10.5 है, यदि यह एसीटो एसीटेट डीकार्बोक्सीलेज के सक्रिय स्थल पर हो तो इसका मान घटकर 6.6 रह जाता है।

**कारण R:** सक्रिय स्थल पर लाइसीन का घटा हुआ  $pK_a$ , समीपस्थ धनात्मक आवेश के इलैक्ट्रोस्टैटिक प्रभाव के कारण होता है।

उपरोक्त कथन के आलोकमें, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए:

1. A और R दोनों सही हैं और R, A की सही व्याख्या है
2. A और R दोनों सही हैं और R, A की सही व्याख्या नहीं है
3. A सही है लेकिन R सही नहीं है
4. A सही नहीं है लेकिन R सही है

**Options :**

- 68634035477. 1
- 68634035478. 2
- 68634035479. 3
- 68634035480. 4

**Question Number : 71 Question Id : 6863408978 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Give below are two statements : One is labelled as **Assertion A** and the other is labelled as **Reason R** :

**Assertion A** : Sum of all the proteins functioning in a given cell is called the proteome : Proteomics is the systematic characterization of this proteome under a given condition.

**Reason R** : Expression of genome under a particular condition and its translation is the basis of cell's proteome.

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

1. Both **A** and **R** are correct and **R** is the correct explanation of **A**
2. Both **A** and **R** are correct but **R** is NOT the correct explanation of **A**
3. **A** is correct but **R** is not correct
4. **A** is not correct but **R** is correct

**Options :**

- 68634035481. 1
- 68634035482. 2
- 68634035483. 3
- 68634035484. 4

**Question Number : 71 Question Id : 6863408978 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

नीचे दो कथन दिए गए हैं, एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में:

**अभिकथन A:** दी गई कोशिका में सभी प्रोटीनों की क्रियाविधियों का योग प्रोटियोम कहलाता है। दी गई परिस्थिति में इस प्रोटियोम का क्रमिक लाक्षणिक वर्णन प्रोटियोमिक्स है।

**कारण R:** विशेष परिस्थिति में जीनोम की अभिव्यक्ति और इसका रूपान्तरण कोशिका के प्रोटियोम का आधार होता है।

उपरोक्त कथन के आलोकमें, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए:

1. A और R दोनों सही हैं और R, A की सही व्याख्या है
2. A और R दोनों सही हैं और R, A की सही व्याख्या नहीं है
3. A सही है लेकिन R सही नहीं है
4. A सही नहीं है लेकिन R सही है

**Options :**

68634035481. 1
68634035482. 2
68634035483. 3
68634035484. 4

**Question Number : 72 Question Id : 6863408979 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Give below are two statements : One is labelled as **Assertion A** and the other is labelled as **Reason R**:

**Assertion A :** Treatment of monosaccharides with sodium amalgam reduces their aldehyde and keto groups to corresponding acid :

**Reason R :** D-Dulcitol and D-Sorbitol are the corresponding alcohols of D-galactose and D-glucose, respectively.

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

1. Both **A** and **R** are correct and **R** is the correct explanation of **A**
2. Both **A** and **R** are correct but **R** is NOT the correct explanation of **A**
3. **A** is correct but **R** is not correct
4. **A** is not correct but **R** is correct

**Options :**

68634035485. 1
68634035486. 2
68634035487. 3

**Question Number : 72 Question Id : 6863408979 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

नीचे दो कथन दिए गए हैं, एक अभिकथन (Assertion A) के रूप में लिखित है तो दूसरा उसके कारण (Reason R) के रूप में:

**अभिकथन A:** मोनोसैकेराइड्स का सोडियम अम्लम (मिश्रण) के साथ उपचार संगत अम्ल में उनके एल्डिहाइड और कीटो समूहों कम करता है।

**कारण R:** D-ड्रूल्सिटोल और D-सोर्बिट्रोल के तो क्रमशः D-ग्लेक्टोज और D-ग्लूकोज के संगत एल्कोहल हैं।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए:

1. A और R दोनों सही हैं और R, A की सही व्याख्या है
2. A और R दोनों सही हैं और R, A की सही व्याख्या नहीं है
3. A सही है लेकिन R सही नहीं है
4. A सही नहीं है लेकिन R सही है

**Options :**

68634035485. 1  
68634035486. 2  
68634035487. 3  
68634035488. 4

**Question Number : 73 Question Id : 6863408980 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Malate, Fumarate and succinate precede the formation of oxaloacetate in the citric acid cycle. Find the option which shows correct order of their formation in the citric acid cycle.

- A. Malate
- B. Fumarate
- C. Oxaloacetate
- D. Succinate

Choose the correct answer from the options given below :

1. D, B, A, C
2. D, B, C, A
3. B, D, C, A
4. B, D, A, C

**Options :**

68634035489. 1  
68634035490. 2  
68634035491. 3  
68634035492. 4

**Question Number : 73 Question Id : 6863408980 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

साइट्रिक अम्ल चक्र में मेलेट, फ्यूमरेट और सक्सिनेट, ऑक्सेलो एसिटेट से पूर्व बनते हैं। दिए गए विकल्पों में से उस विकल्प का चयन कीजिए जिसमें साइट्रिक अम्ल चक्र में इनके बनने का सही क्रम दिया गया है।

- A. मेलेट
- B. फ्यूमरेट
- C. ऑक्सेलोएसिटेट
- D. सक्सिनेट

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

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

**Options :**

68634035489. 1  
68634035490. 2  
68634035491. 3  
68634035492. 4

**Question Number : 74 Question Id : 6863408981 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

Phosphoryl transfer reactions are essential for the energy content of a cell. Find the correct answer in which the following phosphorylated molecules have been arranged in a decreasing order of their phosphoryl transfer potentials :

- A. Adenosine triphosphate
- B. 1, 3-bisphosphate glycerate
- C. Phosphoenol pyruvate
- D. Glucose - 6 - phosphate
- E. Glucose - 3 - phosphate

Choose the correct answer from the options given below :

- 1. C, B, A, D, E
- 2. B, C, A, D, E
- 3. B, C, D, A, E
- 4. C, B, D, A, E

**Options :**

- 68634035493. 1
- 68634035494. 2
- 68634035495. 3
- 68634035496. 4

**Question Number : 74 Question Id : 6863408981 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

कोशिका की ऊर्जा संतुष्टि के लिए फॉस्फोरिल स्थानांतरण अभिक्रियाएं आवश्यक है। निम्नलिखित फॉस्फोरिलकृत अणुओं को उनके फॉस्फोरिल स्थानांतरण क्षमता के घटते क्रम के अनुसार व्यवस्थित कीजिए:

- A. एडिनोसीन ट्राई फॉस्फेट
- B. 1, 3- बिसफॉस्फेट ग्लिसरेट
- C. फॉस्फोइनोल पाइरूवेट
- D. ग्लूकोज - 6 - फॉस्फेट
- E. ग्लूकोज - 3 - फॉस्फेट

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- 1. C, B, A, D, E
- 2. B, C, A, D, E
- 3. B, C, D, A, E
- 4. C, B, D, A, E

**Options :**

- 68634035493. 1
- 68634035494. 2

68634035495. 3

68634035496. 4

**Question Number : 75 Question Id : 6863408982 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

In analogy with central dogma of biology, how will you arrange the following omics in a correct sequence :

- A. Metabolomics
- B. Proteomics
- C. Genomics
- D. Transcriptomics
- E. Phenotype or phenomics

Choose the correct answer from the options given below :

- 1. B, C, D, E, A
- 2. C, B, D, A, E
- 3. C, D, B, A, E
- 4. C, E, B, A, D

**Options :**

68634035497. 1

68634035498. 2

68634035499. 3

68634035500. 4

**Question Number : 75 Question Id : 6863408982 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

जीव विज्ञान के मूल सिद्धान्त (सेंट्रल डोग्मा) से के अनुरूप निम्नलिखित ऑमीक्स शब्दों को क्रमानुसार व्यवस्थित कीजिए:

- A. मेटाबोलोमिक्स
- B. प्रोटियोमिक्स
- C. जीनोमिक्स
- D. ट्रांस्क्रिप्टोमिक्स
- E. फीनोटाइप या फीनोमिक्स

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- 1. B, C, D, E, A
- 2. C, B, D, A, E
- 3. C, D, B, A, E
- 4. C, E, B, A, D

**Options :**

- 68634035497. 1
- 68634035498. 2
- 68634035499. 3
- 68634035500. 4

**Question Number : 76 Question Id : 6863408983 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Nucleotides, Nucleosides, purines and pyrimidines are the building blocks of DNA and RNA. Based on their molecular weight, arrange these molecules in an ascending order.

- A. Purine
- B. Nucleotide
- C. Pyrimidine
- D. Nucleoside
- E. Phosphate

Choose the correct answer from the options given below :

- 1. A, C, D, B, E
- 2. A, B, C, D, E
- 3. E, A, D, B, C
- 4. E, C, A, D, B

**Options :**

- 68634035501. 1
- 68634035502. 2
- 68634035503. 3
- 68634035504. 4

**Question Number : 76 Question Id : 6863408983 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

न्यूक्लिओटाईड्स, न्यूक्लिओसाईड्स, प्यूरीन्स और पिरेमिडीन्स डी.एन.ए और आर.एन.ए. के आधार स्तम्भ है। अणुभार के बढ़ते क्रम में इन रासायनिक अणुओं को क्रमबद्ध कीजिए:

- A. प्यूरीन
- B. न्यूक्लिओटाईड
- C. पिरेमिडीन्स
- D. न्यूक्लिओसाईड
- E. फॉस्फेट

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- 1. A, C, D, B, E
- 2. A, B, C, D, E
- 3. E, A, D, B, C
- 4. E, C, A, D, B

**Options :**

- 68634035501. 1
- 68634035502. 2
- 68634035503. 3
- 68634035504. 4

**Question Number : 77 Question Id : 6863408984 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Reverse transcriptase is used for synthesizing cDNA from RNA. Which of the following option represents the correct order of the given steps?

- A. Annealing of the oligo dT primer to mRNA
- B. DNA polymerase I and dNTPs form ds DNA
- C. Reverse transcriptase forms the complementary single stranded DNA
- D. mRNA is degraded with alkali
- E. Downstream analysis of dsDNA

Choose the correct answer from the options given below :

- 1. A, C, D, B, E
- 2. A, E, D, B, C
- 3. D, A, C, B, E
- 4. B, C, A, E, D

**Options :**

- 68634035505. 1
- 68634035506. 2
- 68634035507. 3

68634035508. 4

**Question Number : 77 Question Id : 6863408984 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

cDNA से RNA संश्लेषण में विलोम अनुलेखक (रिवर्स ट्रांसक्रिप्टेस) का प्रयोग किया जाता है। नीचे दी गई क्रियाओं को सही अनुक्रम में व्यवस्थित कीजिए:

- A. ऑलिगो dT उपक्रमकों (प्राइमर) का mRNA में तापानुशीलन (अनीलिंग)
- B. DNA पॉलीमरेज I और dNTPs से ds DNA का बनना
- C. विलोम अनुलेखक (रिवर्स ट्रांसक्रिप्टेस) से पूरक एकल रज्जुक DNA का बनना
- D. क्षारक द्वारा mRNA का अपघटन
- E. dsDNA का अनुप्रवाह विश्लेषण

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- 1. A, C, D, B, E
- 2. A, E, D, B, C
- 3. D, A, C, B, E
- 4. B, C, A, E, D

**Options :**

- 68634035505. 1
- 68634035506. 2
- 68634035507. 3
- 68634035508. 4

**Question Number : 78 Question Id : 6863408985 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

DNA cloning is an essential tool in recombinant DNA technology. Arrange the different steps of DNA cloning in proper sequential order.

- A. Restriction digestion of the insert and plasmid.
- B. Selection of the host cells or transformants having the recombinant DNA
- C. *in vitro* DNA ligation
- D. Transformation of the ligated DNA.
- E. Confirmation of recombinant DNA by sequencing.

Choose the correct answer from the options given below :

1. B, C, D, A, E
2. A, D, C, E, B
3. A, C, D, B, E
4. B, A, D, C, E

**Options :**

68634035509. 1  
68634035510. 2  
68634035511. 3  
68634035512. 4

**Question Number : 78 Question Id : 6863408985 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

DNA पुनर्योगज तकनीक में DNA क्लोनिंग एक आवश्यक साधन है। DNA क्लोनिंग के निम्नलिखित चरणों को उचित अनुक्रम में व्यवस्थित कीजिए।

- A. सन्निवेश (इन्सर्ट) और प्लाज्मिड का प्रतिबंधन पाचन
- B. पुनर्योगज डी.एन.ए. वाले रूपांतरजों या पोषी कोशिकाओं का चयन
- C. डी.एन.ए. का पात्र (इन-विट्रो) में जुड़ना
- D. जुड़ने वाले DNA का रूपांतरण
- E. अनुक्रमण द्वारा पुनर्योगज डी.एन.ए. की पुष्टि

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

1. B, C, D, A, E
2. A, D, C, E, B
3. A, C, D, B, E
4. B, A, D, C, E

**Options :**

68634035509. 1  
68634035510. 2  
68634035511. 3

68634035512. 4

**Question Number : 79 Question Id : 6863408986 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Hydrophobic nature of amino acids affects the tertiary structure of proteins. Which of the following option shows the given amino acids in decreasing order of their hydrophobic character ?

- A. Leucine
- B. Phenylalanine
- C. Glycine
- D. Histidine
- E. Lysine

Choose the correct answer from the options given below :

- 1. A, C, E, D, B
- 2. B, A, C, D, E
- 3. B, E, D, C, A
- 4. A, B, D, C, E

**Options :**

- 68634035513. 1
- 68634035514. 2
- 68634035515. 3
- 68634035516. 4

**Question Number : 79 Question Id : 6863408986 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

प्रोटीन की तृतीयक संरचना को अमीनो अम्लों की जलभीरु प्रकृति प्रभावित करती है। निम्नलिखित अमीनो अम्लों को उनकी जलविरोधी प्रकृति के घटते क्रम में व्यवस्थित कीजिए:

- A. ल्यूसीन
- B. फिनाइल एलेनीन
- C. ग्लाइसीन
- D. हिस्टीडीन
- E. लाइसीन

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- 1. A, C, B, D, E
- 2. B, A, C, D, E
- 3. B, A, D, C, E
- 4. A, B, D, C, E

**Options :**

- 68634035513. 1
- 68634035514. 2
- 68634035515. 3
- 68634035516. 4

**Question Number : 80 Question Id : 6863408987 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

**Statement I :** Cooperativity in receptor - ligand interaction causes large change in receptor activation with small change in ligand concentration.

**Statement II :** In amplification, the enzyme associated with signal receptor is activated which in turn activates many downstream enzymes in a so called enzyme cascade.

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

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

**Options :**

- 68634035517. 1
- 68634035518. 2
- 68634035519. 3
- 68634035520. 4

Question Number : 80 Question Id : 6863408987 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1

नीचे दो कथन दिए गए हैं:

**कथन I:** ग्राही-लिगेण्ड पारस्परिक क्रिया में सहकारिता, लिगेण्ड सांद्रता में छोटे परिवर्तन के साथ ग्राही सक्रियण में बड़े परिवर्तन का कारण बनती हैं।

**कथन II:** प्रवर्धन में, संकेत ग्राही से जुड़ा एंजाइम सक्रिय होता है, जो बदले में एक तथाकथित एंजाइम कैस्केड में कई डाउनस्ट्रीम (अनुप्रवाह) एंजाइमों को सक्रिय करता है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

1. कथन I और II दोनों सत्य हैं
2. कथन I और II दोनों असत्य हैं
3. कथन I सत्य है, लेकिन कथन II असत्य है
4. कथन I असत्य है, लेकिन कथन II सत्य है

**Options :**

68634035517. 1
68634035518. 2
68634035519. 3
68634035520. 4

Question Number : 81 Question Id : 6863408988 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1

Given below are two statements :

**Statement I :** Phototrophs and chemotrophs derive their energy from sunlight and chemical fuels, respectively.

**Statement II :** Phototrophs and chemotrophs cannot be autotrophs but only heterotrophs.

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

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

**Options :**

- 68634035521. 1
- 68634035522. 2
- 68634035523. 3
- 68634035524. 4

**Question Number : 81 Question Id : 6863408988 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

नीचे दो कथन दिए गए हैं:

**कथन I:** प्रकाशपोषी और रसोपोषी अपनी ऊर्जा क्रमशः सूर्य के प्रकाश और रासायनिक ईंधन से ग्रहण करते हैं।

**कथन II:** प्रकाशपोषी और रसोपोषी कभी स्वपोषी नहीं हो सकते और केवल विषमपोषी होते हैं।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

1. कथन I और II दोनों सत्य हैं
2. कथन I और II दोनों असत्य हैं
3. कथन I सत्य है, लेकिन कथन II असत्य है
4. कथन I असत्य है, लेकिन कथन II सत्य है

**Options :**

- 68634035521. 1
- 68634035522. 2
- 68634035523. 3
- 68634035524. 4

**Question Number : 82 Question Id : 6863408989 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

**Statement I :** In all naturally occurring 20 amino acids, both carboxyl and amino groups are bonded to the  $\alpha$ -carbon.

**Statement II :** According to organic chemistry IUPAC nomenclature,  $\alpha$ -carbon is also the C-1 carbon of an amino acid.

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

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

**Options :**

68634035525. 1  
68634035526. 2  
68634035527. 3  
68634035528. 4

**Question Number : 82 Question Id : 6863408989 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

नीचे दो कथन दिए गए हैं:

**कथन I:** प्राकृतिक रूप से पाए जाने वाले सभी 20 अमीनो अम्लों में कार्बोक्सिल और अमीनो समूह, दोनों  $\alpha$ -कार्बन से आबंध बनाते हैं।

**कथन II:** कार्बनिक रसायन की IUPAC नामकरण पद्धति के अनुसार एक अमीनो अम्ल का  $\alpha$ -कार्बन C-1 कार्बन भी होता है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

1. कथन I और II दोनों सत्य हैं
2. कथन I और II दोनों असत्य हैं
3. कथन I सत्य है, लेकिन कथन II असत्य है
4. कथन I असत्य है, लेकिन कथन II सत्य है

**Options :**

68634035525. 1

68634035526. 2  
68634035527. 3  
68634035528. 4

**Question Number : 83 Question Id : 6863408990 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

**Statement I :** The peptide bond  $C\alpha-C-N-C\alpha$  present in proteins is rigid and planar.

**Statement II :** Proteins are highly dynamic and undergo large conformational changes.

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

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

**Options :**

68634035529. 1  
68634035530. 2  
68634035531. 3  
68634035532. 4

**Question Number : 83 Question Id : 6863408990 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

नीचे दो कथन दिए गए हैं:

**कथन I:** प्रोटीन में उपस्थित पेट्टाईड आबंध  $C\alpha-C-N-C\alpha$  दृढ़ और प्लानर आबंध हैं।

**कथन II:** प्रोटीन अत्यधिक गतिशील होते हैं और इनमें बड़े संरूपणात्मक परिवर्तन होते रहते हैं।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

1. कथन I और II दोनों सत्य हैं
2. कथन I और II दोनों असत्य हैं
3. कथन I सत्य है, लेकिन कथन II असत्य है
4. कथन I असत्य है, लेकिन कथन II सत्य है

**Options :**

68634035529. 1  
68634035530. 2

68634035531. 3

68634035532. 4

**Question Number : 84 Question Id : 6863408991 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

**Statement I** : Major Histocompatibility Complex (MHC) is present on the cell surface of T-cells for antigen recognition.

**Statement II** : During organ transplantation, the major Histocompatibility Complex (MHC) is involved in allograft rejection.

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

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

**Options :**

68634035533. 1

68634035534. 2

68634035535. 3

68634035536. 4

**Question Number : 84 Question Id : 6863408991 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

नीचे दो कथन दिए गए हैं:

**कथन I:** मुख्य ऊतक संयोजता कॉम्प्लेक्स (MHC), प्रतिजन की पहचान के लिए T-कोशिकाओं की कोशिका सतह में उपस्थित होता है।

**कथन II:** अंग प्रत्यारोपण के दौरान, अपरनिरोप (एलोग्राफ्ट) अस्वीकृति में मुख्य ऊतक संयोजता कॉम्प्लेक्स सम्मिलित होता है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

1. कथन I और II दोनों सत्य हैं
2. कथन I और II दोनों असत्य हैं
3. कथन I सत्य है, लेकिन कथन II असत्य है
4. कथन I असत्य है, लेकिन कथन II सत्य है

**Options :**

68634035533. 1
68634035534. 2
68634035535. 3
68634035536. 4

**Question Number : 85 Question Id : 6863408992 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

**Statement I :** Chymotrypsin hydrolyzes peptide bond through the formation of a transient covalent acyl-enzyme intermediate.

**Statement II :** This type of mechanism in enzyme catalysis is operative in all the enzymes in biology.

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

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

**Options :**

68634035537. 1
68634035538. 2
68634035539. 3

68634035540. 4

**Question Number : 85 Question Id : 6863408992 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

नीचे दो कथन दिए गए हैं:

**कथन I:** काइमोट्रिप्सिन, पेप्टाइड बंध का अपघटन एक अस्थिर मध्यवर्ती सह-संयोजक एंजाइम एंजाइम के गठन के माध्यम से करता है।

**कथन II:** जीवविज्ञान में एंजाइम उत्प्रेरण में इस प्रकार की क्रियाविधि सभी एंजाइमों में सक्रिय होता है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

1. कथन I और II दोनों सत्य हैं
2. कथन I और II दोनों असत्य हैं
3. कथन I सत्य है, लेकिन कथन II असत्य है
4. कथन I असत्य है, लेकिन कथन II सत्य है

**Options :**

- 68634035537. 1
- 68634035538. 2
- 68634035539. 3
- 68634035540. 4

**Question Number : 86 Question Id : 6863408993 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

**Statement I** : Sanger's chain termination method is used for sequencing of a single stranded DNA by using nucleotides and short DNA stretches.

**Statement II** : Sanger's protein sequencing method uses 1-fluoro-2, 4-dinitrobenzene, dansyl chloride and nucleosides for protein sequencing.

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

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

**Options :**

68634035541. 1  
68634035542. 2  
68634035543. 3  
68634035544. 4

**Question Number : 86 Question Id : 6863408993 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

नीचे दो कथन दिए गए हैं:

**कथन I:** न्यूक्लिओटाइड्स और लघु DNA खण्डों के द्वारा सेंगर की श्रृंखला समापन विधि का प्रयोग एकल रज्जुक डी.एन.ए. में अनुक्रमण के लिए किया जाता है।

**कथन II:** प्रोटीन के अनुक्रमण के लिए, सेंगर की प्रोटीन अनुक्रमण विधि में 1-फ्लोरो, 2,4 डाइनाइट्रोबेन्जीन, डेन्साइल क्लोराइड और न्यूक्लिओसाइड का प्रयोग किया जाता है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए :

1. कथन I और II दोनों सत्य हैं
2. कथन I और II दोनों असत्य हैं
3. कथन I सत्य है, लेकिन कथन II असत्य है
4. कथन I असत्य है, लेकिन कथन II सत्य है

**Options :**

68634035541. 1  
68634035542. 2

68634035543. 3

68634035544. 4

**Question Number : 87 Question Id : 6863408994 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

What is true about bacterial DNA-dependent RNA Polymerase.

- A. It is an oligomer of approximately 400KDa.
- B. Its beta( $\beta$ ) subunit together with  $Mg^{2+}$  converts ribonucleotides into RNA.
- C.  $\alpha$ -amanitin strongly inhibits the enzyme.
- D. The enzyme can also form DNA from RNA.

Choose the most appropriate answer from the options given below :

- 1. B and C Only
- 2. C and D Only
- 3. A and B Only
- 4. A, B, and D Only

**Options :**

68634035545. 1

68634035546. 2

68634035547. 3

68634035548. 4

**Question Number : 87 Question Id : 6863408994 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

जीवाणवीय डी एन ए आधारित आर एन ए पॉलीमरेज के बारे में क्या सही है?

- A. यह अनुमानतः 400KDa का एक ऑलिगोमर है।
- B. इसकी बीटा ( $\beta$ ) उप इकाई  $Mg^{2+}$  के साथ बीटा ( $\beta$ ) राइबोन्यूक्लिओटाइड्स को RNA में परिवर्तित करती है।
- C.  $\alpha$ -एमेनिटीन दृढ़ता से एंजाइम का निरोध करता है।
- D. यह एंजाइम RNA से DNA भी बना सकता है।

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- 1. केवल B और C
- 2. केवल C और D
- 3. केवल A और B
- 4. केवल A, B और D

**Options :**

68634035545. 1

68634035546. 2  
68634035547. 3  
68634035548. 4

**Question Number : 88 Question Id : 6863408995 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

For the respiration of two proteins with same molecular weight, which of the following techniques could be used :

- A. SDS-PAGE
- B. 2D-SDS-PAGE
- C. Mass spectrometry with liquid chromatography.
- D. Gel filtration.
- E. Gel filtration and SDS-PAGE.

Choose the correct answer from the options given below :

- 1. E, A Only
- 2. A, D Only
- 3. A, B Only
- 4. B and C Only

**Options :**

68634035549. 1  
68634035550. 2  
68634035551. 3  
68634035552. 4

**Question Number : 88 Question Id : 6863408995 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

समान अणुभार वाली दो प्रोटीनों के पृथक्करण के लिए निम्नलिखित में से कौनसी तकनीक अपनाई जाती है:

- A. SDS-PAGE
- B. 2D-SDS-PAGE
- C. द्रव क्रोमेटोग्राफी के साथ द्रव्यमान स्पैक्ट्रममिति
- D. जैल निस्पंदन
- E. जैल निस्पंदन और SDS-PAGE

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- 1. केवल E और A
- 2. केवल A और D
- 3. केवल A और B
- 4. केवल B और C

**Options :**

- 68634035549. 1
- 68634035550. 2
- 68634035551. 3
- 68634035552. 4

**Question Number : 89 Question Id : 6863408996 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Hydrophobic effect has a major role in the stabilization of three dimensional structure of proteins. Which of the following amino acids form part of this effect :

- A. Glycine, Alanine, leucine
- B. Valine, Methionine, Isoleucine
- C. Tryptophan, Tyrosine, Phenylalanine
- D. Tryptophan, Proline, Phenylalanine
- E. Tyrosine, Serine, lysine

Choose the correct answer from the options given below :

- 1. A, B, D Only
- 2. A, B Only
- 3. C, E Only
- 4. E, B Only

**Options :**

- 68634035553. 1
- 68634035554. 2
- 68634035555. 3
- 68634035556. 4

**Question Number : 89 Question Id : 6863408996 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

प्रोटीन की त्रिआयामी संरचना के स्थिरकरण में जलभीरू प्रभाव की महती भूमिका है, निम्नलिखित में से कौन-कौन से अमीनो अम्ल इस प्रभाव का भाग बनते हैं :

- A. ग्लाइसीन, एलेनीन, ल्यूसीन
- B. वैलीन, मीथियोनीन, आइसोल्यूसीन
- C. ट्रिप्रोफेन, टायरोसीन, फिनाइलएलेनीन
- D. ट्रिप्रोफेन, प्रोलीन, फिनाइलएलेनीन
- E. टायरोसीन, सीरीन, लाइसीन

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- 1. केवल A, B और D
- 2. केवल A और B
- 3. केवल C और E
- 4. केवल E और B

**Options :**

- 68634035553. 1
- 68634035554. 2
- 68634035555. 3
- 68634035556. 4

**Question Number : 90 Question Id : 6863408997 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Sickle cell anemia causes sickling of the RBCs. Which of the following is not correct for the disease ?

- A. Haemoglobin forms large aggregates.
- B. Disease does not affect the oxyhaemoglobin but decreases solubility of deoxyhaemoglobin.
- C. The enhanced aggregation propensity is due to the hydrophobic effect of the underlying mutation.
- D. The patients are more prone to malaria.
- E. The disease is not curable

Choose the correct answer from the options given below :

- 1. A, B, C Only
- 2. C, D, E Only
- 3. D, E Only
- 4. B, C Only

**Options :**

68634035557. 1  
68634035558. 2  
68634035559. 3  
68634035560. 4

**Question Number : 90 Question Id : 6863408997 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

दात्र कोशिका अरक्तता में आर.बी.सी. की आकृति हांसियाकार हो जाती है। इस रोग के बारे में निम्नलिखित में से कौन-कौन सही नहीं है?

- A. हीमोग्लोबिन बड़े समुच्चय बनाता है।
- B. इस रोग में ऑक्सीहीमोग्लोबिन पर कोई प्रभाव नहीं होता, परन्तु डी-ऑक्सीहीमोग्लोबिन की घुलनशीलता कम हो जाती है।
- C. बढ़ी हुई समुच्चय प्रवृत्ति का कारण, उत्परिवर्तन के द्वारा जलभीरु प्रभाव का होना है।
- D. रोगी को मलेरिया होने की संभावना अधिक होती है।
- E. इस रोग का उपचार नहीं हो पाता है।

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- 1. केवल A, B और C
- 2. केवल C, D और E
- 3. केवल D और E
- 4. केवल B और C

**Options :**

68634035557. 1  
68634035558. 2  
68634035559. 3  
68634035560. 4

**Question Number : 91 Question Id : 6863408998 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

Which of the following statements together describe the integral membrane proteins :

- A. Form main component of the biological membranes
- B. Are soluble in aqueous solutions
- C. Mostly composed of polar amino acids and are lysine rich.
- D. Are soluble in sodium dodecyl sulphate (SDS)
- E. Form aggregates in aqueous solutions.

Choose the correct answer from the option given below :

- 1. A, D, E Only
- 2. C, D, E Only
- 3. B, C, D Only
- 4. A, D, E Only

**Options :**

- 68634035561. 1
- 68634035562. 2
- 68634035563. 3
- 68634035564. 4

**Question Number : 91 Question Id : 6863408998 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

निम्नलिखित में से कौन-से कथन संयुक्त रूप से आन्तरिक(समग्र) झिल्ली प्रोटीन को अभिव्यक्त करते हैं ?

- A. जैविक झिल्लियों का मुख्य अनुभाग बनाते हैं।
- B. जलीय विलयनों में घुलनशील होते हैं।
- C. अधिकांशतः लाइसीन समृद्ध होते हैं और ध्रुवीय अमीनो अम्लों से बने होते हैं।
- D. सोडियम डोडेसाइल सल्फेट (SDS) में घुलनशील होते हैं।
- E. जलीय विलयनों में समुच्चय बनाते हैं।

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- 1. केवल A, D और E
- 2. केवल D, E और C
- 3. केवल B, C और D
- 4. केवल A, D और E

**Options :**

- 68634035561. 1
- 68634035562. 2
- 68634035563. 3
- 68634035564. 4

Question Number : 92 Question Id : 6863408999 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following are true for Nucleosomes ?

- A. Protein bodies
- B. Protein - DNA complexes
- C. Nucleic acids are covalently linked to proteins
- D. Protein octamers are wrapped with approximately 200bp of DNA.
- E. 10 nm fibers for DNA packing

Choose the correct answer from the options given below :

- 1. A, B, D Only
- 2. B, D, E Only
- 3. C, D, E Only
- 4. A, C, B Only

Options :

- 68634035565. 1
- 68634035566. 2
- 68634035567. 3
- 68634035568. 4

Question Number : 92 Question Id : 6863408999 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्नलिखित में से कौन-कौन से विकल्प न्यूक्लियोसोम के बारे में सही हैं ?

- A. प्रोटीन पिंड (प्रोटीन बॉडी)
- B. प्रोटीन डी.एन.ए. कॉम्प्लेक्स
- C. प्रोटीन से सह-संयोजी रूप में जुड़े हुए न्यूक्लिक अम्ल
- D. डी.एन.ए. के लगभग 200 बीपी से लिपटे हुए प्रोटीन अष्टलक
- E. डी.एन.ए. पैकिंग के लिए 10nm रेशे (फाइबर)

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए :

- 1. केवल A, B और D
- 2. केवल B, D और E
- 3. केवल C, D और E
- 4. केवल A, C और B

Options :

- 68634035565. 1
- 68634035566. 2

68634035567. 3

68634035568. 4

**Question Number : 93 Question Id : 6863409000 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Restriction enzymes are the enzymes that :

- A. catalyze restricted reactions in DNA replication.
- B. are essential tools in biotechnology
- C. were discovered by Sanger and Pauling
- D. Cut DNA specifically
- E. are the immune defense mechanism in bacteria.

Choose the correct answer from the options given below :

- 1. B, D, E Only
- 2. C, D, E Only
- 3. A, B Only
- 4. C, D Only

**Options :**

68634035569. 1

68634035570. 2

68634035571. 3

68634035572. 4

**Question Number : 93 Question Id : 6863409000 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

प्रतिबंधन एंजाइम वे एंजाइम हैं जो:

- A. डी.एन.ए. प्रतिकृतियन में प्रतिबंधन अभिक्रियाओं को उत्प्रेरित करते हैं।
- B. जैव प्रौद्योगिकी में आवश्यक साधन हैं।
- C. इनकी खोज सैंगर और पॉलिंग द्वारा की गई थी।
- D. डी.एन.ए. को विशिष्ट रूप से काटते हैं।
- E. जीवाणुओं में प्रतिरक्षा सुरक्षा साधन हैं।

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

- 1. केवल B, D और E
- 2. केवल C, D, E
- 3. केवल A और B
- 4. केवल C और D

**Options :**

- 68634035569. 1
- 68634035570. 2
- 68634035571. 3
- 68634035572. 4

**Question Number : 94 Question Id : 6863409001 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Match List I with List II

LIST I		LIST II	
A.	Aversion to water	I.	DNA content of cells
B.	Levinthal paradox	II.	Hydrophobic effect
C.	C-value paradox	III.	Protein conformations
D.	Ramachandran plot	IV.	Protein folding

Choose the correct answer from the options given below:

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

**Options :**

- 68634035573. 1
- 68634035574. 2
- 68634035575. 3
- 68634035576. 4

**Question Number : 94 Question Id : 6863409001 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

सूची I का सूची II से मिलान कीजिए

सूची I		सूची II	
A.	जल से विरक्ति	I.	कोशिका में डी.एन.ए. की मात्रा
B.	लेविथल विरोधाभास	II.	जलभीरु प्रभाव
C.	C-मान विरोधाभास	III.	प्रोटीन संरूपण
D.	रामचंद्रन प्लॉट	IV.	प्रोटीन वलन

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

1. A-I, B-IV, C-II, D-III

2. A-II, B-IV, C-I, D-III

3. A-I, B-III, C-II, D-IV

4. A-III, B-II, C-I, D-IV

**Options :**

68634035573. 1

68634035574. 2

68634035575. 3

68634035576. 4

**Question Number : 95 Question Id : 6863409002 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Match List I with List II

LIST I		LIST II	
A.	Histidine	I.	$pK_a$ 6.0
B.	Lysine	II.	$pK_a$ 10.6
C.	Tyrosine	III.	$pK_a$ 4.1
D.	Aspartic acid	IV.	$pK_a$ 10.9

Choose the correct answer from the options given below:

1. A-I, B-II, C-IV, D-III

2. A-II, B-IV, C-III, D-I

3. A-III, B-II, C-IV, D-I

4. A-I, B-II, C-III, D-IV

**Options :**

68634035577. 1

68634035578. 2

68634035579. 3

68634035580. 4

Question Number : 95 Question Id : 6863409002 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

सूची I का सूची II से मिलान कीजिए

सूची I		सूची II	
A.	हिस्टीडीन	I.	$pK_a$ 6.0
B.	लाइसीन	II.	$pK_a$ 10.6
C.	टाइरोसीन	III.	$pK_a$ 4.1
D.	एस्पार्टिक अम्ल	IV.	$pK_a$ 10.9

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

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

Options :

68634035577. 1  
68634035578. 2  
68634035579. 3  
68634035580. 4

Question Number : 96 Question Id : 6863409003 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match List I with List II

LIST I		LIST II	
A.	X-ray crystallography	I.	Molecular weight determination
B.	Mass spectrometry	II.	Protein detection
C.	Gel filtration	III.	Protein structure
D.	Western blotting	IV.	Protein purification

Choose the correct answer from the options given below:

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

Options :

68634035581. 1  
68634035582. 2  
68634035583. 3

68634035584. 4

Question Number : 96 Question Id : 6863409003 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1

सूची I का सूची II से मिलान कीजिए

सूची I		सूची II	
A.	X-किरण क्रिस्टलोग्राफी	I.	अणुभार का निर्धारण
B.	द्रव्यमान (मास) स्पेक्ट्रमिति	II.	प्रोटीन की जांच करना
C.	जेल निस्यंदन (फिल्ट्रेशन)	III.	प्रोटीन संरचना
D.	वेस्टर्न ब्लॉटिंग	IV.	प्रोटीन शोधन

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

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

Options :

68634035581. 1  
68634035582. 2  
68634035583. 3  
68634035584. 4

Question Number : 97 Question Id : 6863409004 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1

Match List I with List II

LIST I		LIST II	
A.	Caspases	I.	Degradation
B.	Proteases	II.	Replication
C.	Polymerases	III.	Signalling
D.	Kinases	IV.	Apoptosis

Choose the correct answer from the options given below:

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

Options :

68634035585. 1

68634035586. 2  
68634035587. 3  
68634035588. 4

**Question Number : 97 Question Id : 6863409004 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

सूची I का सूची II से मिलान कीजिए

सूची I		सूची II	
A.	केस्पेज	I.	अपघटन
B.	प्रोटिएज	II.	प्रतिकृतियन
C.	पॉलिमरेज	III.	संकेतन
D.	काइनेज	IV.	एपोटोसिस

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

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

**Options :**

68634035585. 1  
68634035586. 2  
68634035587. 3  
68634035588. 4

**Question Number : 98 Question Id : 6863409005 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

Match List I with List II

LIST I		LIST II	
A.	Thiamine pyrophosphate	I.	Glycogen phosphorylase
B.	Pyridoxal phosphate	II.	Pyruvate carboxylase
C.	Biotin	III.	Lactate dehydrogenase
D.	Nicotinamide adenine dinucleotide	IV.	Pyruvate dehydrogenase

Choose the correct answer from the options given below:

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

**Options :**

68634035589. 1  
68634035590. 2  
68634035591. 3  
68634035592. 4

**Question Number : 98 Question Id : 6863409005 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

सूची I का सूची II से मिलान कीजिए

सूची I		सूची II	
A.	थायामीन पाइरोफॉस्फेट	I.	ग्लाइकोजन फॉस्फोरइलेज
B.	पाइरीडोक्सल फॉस्फेट	II.	पाइरूवेट कार्बोक्सीलेज
C.	बायोटिन	III.	लैक्टेट डिहाइड्रोजिनेज
D.	निकोटिनेमाइड एडिनीन डाइन्यूक्लियोटाइड	IV.	पाइरूवेट डिहाइड्रोजिनेज

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

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

**Options :**

68634035589. 1  
68634035590. 2  
68634035591. 3  
68634035592. 4

**Question Number : 99 Question Id : 6863409006 Question Type : MCQ Option Shuffling : No Is Question Mandatory :  
No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0  
Correct Marks : 4 Wrong Marks : 1**

Match List I with List II

LIST I		LIST II	
A.	Fatty acids	I.	Tetracycline, Aflatoxin B <sub>1</sub>
B.	Glycerolipids	II.	Oleate, Stearoyl-CoA
C.	Saccharolipids	III.	Triacylglycerols
D.	Polyketides	IV.	Lipopolysaccharide

Choose the correct answer from the options given below:

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

**Options :**

68634035593. 1  
68634035594. 2  
68634035595. 3  
68634035596. 4

**Question Number : 99 Question Id : 6863409006 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 4 Wrong Marks : 1**

सूची I का सूची II से मिलान कीजिए

सूची I		सूची II	
A.	वसीय अम्ल	I.	टेट्रासाइक्लिन, एफ्लाटोक्सिन B <sub>1</sub>
B.	ग्लिसरोलिपिड्स	II.	ऑलिएट, स्टीरोएल- CoA
C.	सैकेरोलिपिड्स	III.	ट्राईएसाइलग्लिसरोल्स
D.	पॉलीकीटाइड्स	IV.	लिपोपॉलीसैकेराइड

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

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

**Options :**

68634035593. 1  
68634035594. 2  
68634035595. 3  
68634035596. 4

**Question Number : 100 Question Id : 6863409007 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

Match List I with List II

LIST I		LIST II	
A.	Type II restriction endonuclease	I.	Removes nucleotides from 5' ends of duplex DNA
B.	DNA ligase	II.	Removes nucleotides from the 3' ends of a DNA strand
C.	Exonuclease III	III.	Cleaves DNA at specific base sequences
D.	Bacteriophage $\lambda$ exonuclease	IV.	Joins two DNA molecules

Choose the correct answer from the options given below:

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

**Options :**

- 68634035597. 1
- 68634035598. 2
- 68634035599. 3
- 68634035600. 4

**Question Number : 100 Question Id : 6863409007 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 4 Wrong Marks : 1**

सूची I का सूची II से मिलान कीजिए

सूची I		सूची II	
A.	टाईप II, प्रतिबंधन एंडोन्यूक्लिएज	I.	डुप्लेक्स डी.एन.ए. के 5' सिरे से न्यूक्लियोटाइड्स हटाना
B.	डी.एन.ए. लाइगेज	II.	डी.एन.ए. रज्जुक के 3' सिरे से न्यूक्लियोटाइड्स हटाना
C.	एक्सोन्यूक्लिएज	III.	विशिष्ट क्षार अनुक्रम में डी.एन.ए. का विदलन
D.	जीवाणुभोजी (बैक्टीरियोफेज) $\lambda$ एक्सोन्यूक्लिएज	IV.	दो डी.एन.ए. अणुओं को जोड़ना

निम्नलिखित विकल्पों में से सही उत्तर का चयन कीजिए :

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

**Options :**

68634035597. 1
68634035598. 2
68634035599. 3
68634035600. 4