CSIR NET

Previous Year Paper

17/07/2026

NTA Joint CSIR UGC NET JUNE 2026_ 17th and 18th July

Application No	
Test Date	17/07/2026
Test Time	9:00 AM - 12:00 PM
Subject	Life Sciences

Section : **PART A**

Q.1 From the following statement decide which of the arguments is a 'strong' argument and which is a 'weak' argument.

Statement I : Should taxes on colour television be increased further?

Argument I : Yes. Colour television is a luxury item and only rich people buy it.

Argument II : No. Televisions are bought by the poor too.

1. If only argument (I) is strong
2. If only argument (II) is strong
3. If neither (I) nor (II) is strong
4. If both (I) and (II) is strong

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

Question Type : **MCQ**
Question ID : **458908856**
Option 1 ID : **4589083421**
Option 2 ID : **4589083422**
Option 3 ID : **4589083423**
Option 4 ID : **4589083424**
Status : **Answered**
Chosen Option : **2**

Q.2

In an election between 2 candidates, Baljit gets 60% of the total valid votes. If the total votes were 15,000, what is the number of valid votes that the other candidate Vicky gets if 10% of the total votes were declared invalid?

1. 5000
2. 5400
3. 5500
4. 5800

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

Question Type :	**MCQ**
Question ID :	**458908863**
Option 1 ID :	**4589083449**
Option 2 ID :	**4589083450**
Option 3 ID :	**4589083451**
Option 4 ID :	**4589083452**
Status :	**Not Answered**
Chosen Option :	**--**

Q.3

Consider the following conditions for two numbers

(A) their sum is 24

(B) the sum of 7 times of one number and 5 times of other number is 146.

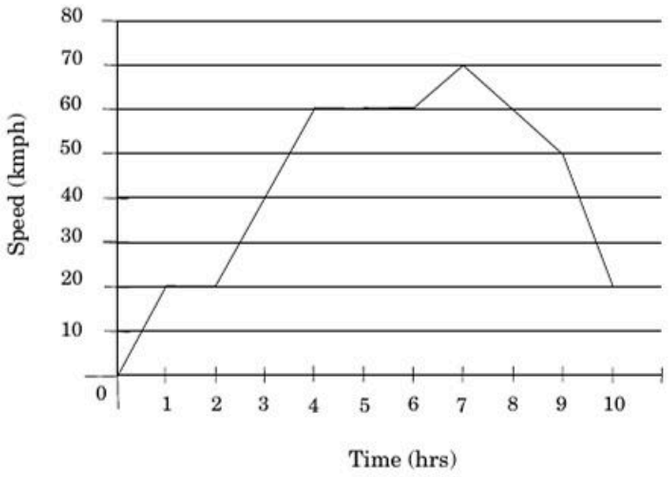
Find the bigger number from the two.

1. 10
2. 11
3. 14
4. 13

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

Question Type :	**MCQ**
Question ID :	**458908869**
Option 1 ID :	**4589083473**
Option 2 ID :	**4589083474**
Option 3 ID :	**4589083475**
Option 4 ID :	**4589083476**
Status :	**Answered**
Chosen Option :	**4**

Q.4 This graph shows the speed of a car in its journey of 10 hours. Which of the following statements is correct for the journey shown by the graph?



1. The average speed of the car is 40 kmph
2. Distance covered in 4–6 hrs slot is 80 km
3. Distance covered in 6–8 hrs slot is 120 km
4. The highest acceleration rate achieved during the journey is 20 kmph

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

Question Type :	**MCQ**
Question ID :	**458908855**
Option 1 ID :	**4589083417**
Option 2 ID :	**4589083418**
Option 3 ID :	**4589083419**
Option 4 ID :	**4589083420**
Status :	**Answered**
Chosen Option :	**4**

Q.5

A circular dart board consist of three lines passing through the centre such that the circular region is divided into six equal parts. If the area of the circular board is 144π square cm then find the perimeter of the any one region.

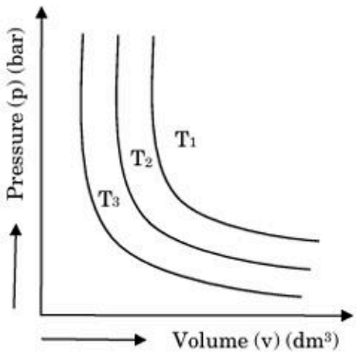
1. $4(\pi+4)$
2. $4(\pi+6)$
3. $4(\pi+3)$
4. $4(\pi+2)$

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

Question Type :	**MCQ**
Question ID :	**458908867**
Option 1 ID :	**4589083465**
Option 2 ID :	**4589083466**
Option 3 ID :	**4589083467**
Option 4 ID :	**4589083468**
Status :	**Not Answered**
Chosen Option :	**--**

Q.6

Following given graph is from Boyle's Law, representating graph of pressure, p vs volume v, of a gas at different temperatures. Identify the correct relationship between T_1, T_2 and T_3.



1. $T_1 < T_2 < T_3$
2. $T_1 > T_2 > T_3$
3. $T_1 = T_2 = T_3$
4. $T_1 > T_2 < T_3$

Options 1. 1

2. 2

3. 3

4. 4

Question Type :	**MCQ**
Question ID :	**458908851**
Option 1 ID :	**4589083401**
Option 2 ID :	**4589083402**
Option 3 ID :	**4589083403**
Option 4 ID :	**4589083404**
Status :	**Answered**
Chosen Option :	**3**

Q.7

Which of the following options does not correctly match with given statement?

For body moving in a circular path it is observed that a larger force is needed if:

1. the speed v of the body is increased
2. the radius r of the circle is decreased
3. the mass m of the body is increased
4. the mass m of the body is decreased

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

Question Type : **MCQ**
Question ID : **458908854**
Option 1 ID : **4589083413**
Option 2 ID : **4589083414**
Option 3 ID : **4589083415**
Option 4 ID : **4589083416**
Status : **Answered**
Chosen Option : **4**

Q.8

Read the information given below:

(i) In a family of six persons A, B, C, D, E and F, there are two married couples

(ii) D is grandmother of A and mother of B

(iii) C is wife of B and mother of F

(iv) F is the granddaughter of E

Who among the following is one of the couples

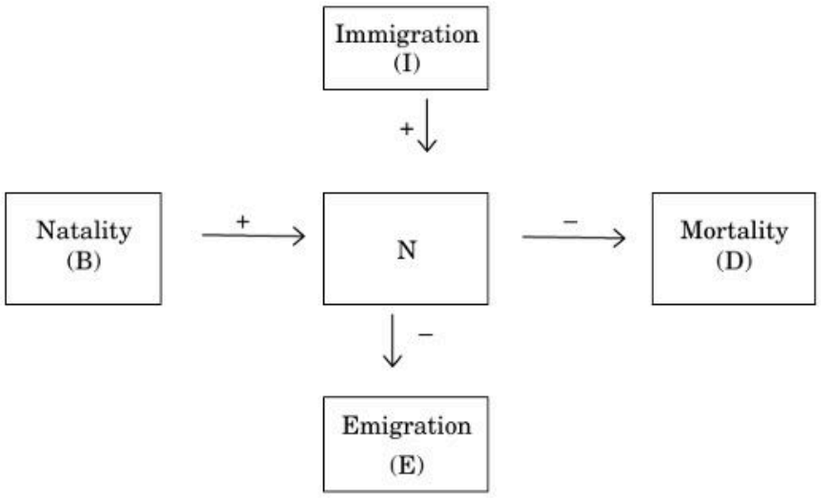
1. C, D
2. D, E
3. E, B
4. A, C

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

Question Type : **MCQ**
Question ID : **458908860**
Option 1 ID : **4589083437**
Option 2 ID : **4589083438**
Option 3 ID : **4589083439**
Option 4 ID : **4589083440**
Status : **Answered**
Chosen Option : **2**

Q.9

Immigration, Natality, Morality and Emigration changes 'N'



In this figure, N is designated to

1. Age pyramids
2. Population Growth
3. Population Density
4. Population Interactions

Options 1. 1

2. 2

3. 3

4. 4

Question Type :	**MCQ**
Question ID :	**458908853**
Option 1 ID :	**4589083409**
Option 2 ID :	**4589083410**
Option 3 ID :	**4589083411**
Option 4 ID :	**4589083412**
Status :	**Answered**
Chosen Option :	**3**

Q.10

Mohan gave 25% of certain amount to Ram. From the money received Ram spent 20% on fee payment, and 35% on buying books. After the expenses, he is left with Rs. 2700/-. How much money Mohan had?

1. Rs. 16,000
2. Rs. 20,000
3. Rs. 24,000
4. Rs. 30,000

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

Question Type :	**MCQ**
Question ID :	**458908870**
Option 1 ID :	**4589083477**
Option 2 ID :	**4589083478**
Option 3 ID :	**4589083479**
Option 4 ID :	**4589083480**
Status :	**Not Answered**
Chosen Option :	**--**

Q.11

Find the number which when added to the terms of 3:5 gives the new ratio as 5:6?

1. 5
2. 6
3. 7
4. 8

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

Question Type :	**MCQ**
Question ID :	**458908864**
Option 1 ID :	**4589083453**
Option 2 ID :	**4589083454**
Option 3 ID :	**4589083455**
Option 4 ID :	**4589083456**
Status :	**Answered**
Chosen Option :	**1**

Q.12

I am standing at the centre of a circular field. I go down south to the edge of the field and then turning left I walk along the boundary of the filed equal to three-eighths of its circumference of field. Then I turn west and go across to the opposite point on the boundary. In which direction am I from the starting point.

1. North-West
2. South-West
3. North
4. West

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

Question Type : **MCQ**
Question ID : **458908859**
Option 1 ID : **4589083433**
Option 2 ID : **4589083434**
Option 3 ID : **4589083435**
Option 4 ID : **4589083436**
Status : **Answered**
Chosen Option : **2**

Q.13

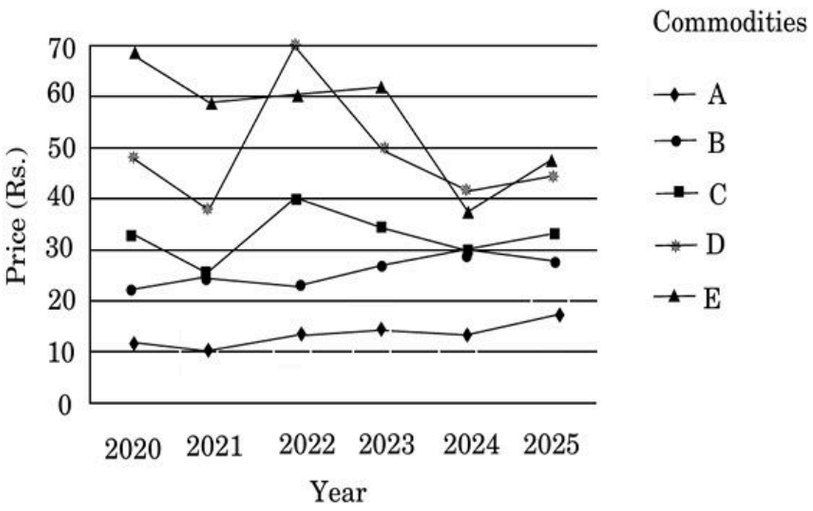
In a coded language BLOOD is coded as 15, LOGICAL is coded as 21 DIRECTION is coded as 27 then which will be the code of REMEMBERING

1. 36
2. 33
3. 30
4. 39

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

Question Type : **MCQ**
Question ID : **458908858**
Option 1 ID : **4589083429**
Option 2 ID : **4589083430**
Option 3 ID : **4589083431**
Option 4 ID : **4589083432**
Status : **Answered**
Chosen Option : **2**

Q.14



The above graph shows mid-year prices of some commodities. Which of the following statements is correct based on the above data

1. The price increase immediately follow a price decline only twice in this period is for the commodities C
2. During this period, commodity D exhibited net overall increase
3. During this period, commodity B exhibited net overall decrease
4. The number of commodities that experienced a price decline for two or more consecutive years is 2

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

Question Type :	**MCQ**
Question ID :	**458908862**
Option 1 ID :	**4589083445**
Option 2 ID :	**4589083446**
Option 3 ID :	**4589083447**
Option 4 ID :	**4589083448**
Status :	**Not Answered**
Chosen Option :	**--**

Q.15

Five persons A, B, C, D and E are travelling to five different places viz., Hyderabad, Bangalore, Dehradun, Delhi and Pune using different mode of transport viz., Bike, Bus, Car, Flight and Train, not necessarily in the same order. A is not travelling to Pune and is going by flight. D is not travelling to Hyderabad and is going by Bike. B is going to Bangalore. C is going to Delhi by Car. One who is going to Dehradun is going by Bus. Which of the following combination is correct?

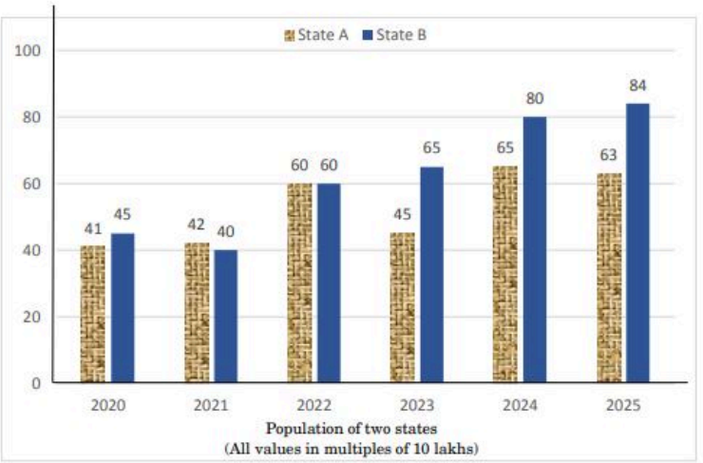
1. B – Bangalore – Car
2. E – Dehradun – Bus
3. D – Pune – Train
4. A – Dehradun – Flight

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

Question Type :	**MCQ**
Question ID :	**458908861**
Option 1 ID :	**4589083441**
Option 2 ID :	**4589083442**
Option 3 ID :	**4589083443**
Option 4 ID :	**4589083444**
Status :	**Answered**
Chosen Option :	**4**

Q.16

The chart gives the population of 2 states from 2020 to 2025. For which state and in which year, there is highest rise in population percentage in comparison with the previous year?



Population of two states
(All values in multiples of 10 lakhs)

1. State B – 2022
2. State B – 2021
3. State A – 2023
4. State A – 2024

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

Question Type : **MCQ**
Question ID : **458908852**
Option 1 ID : **4589083405**
Option 2 ID : **4589083406**
Option 3 ID : **4589083407**
Option 4 ID : **4589083408**
Status : **Answered**
Chosen Option : **3**

Q.17

Identify the wrong term in the following series.

ALARM, LARMA, ARMAL, RAMLA, MALAR

1. LARMA
2. ARMAL
3. RAMLA
4. MALAR

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

Question Type : **MCQ**
Question ID : **458908857**
Option 1 ID : **4589083425**
Option 2 ID : **4589083426**
Option 3 ID : **4589083427**
Option 4 ID : **4589083428**
Status : **Not Answered**
Chosen Option : **--**

Q.18

Four friends are wearing digital clocks. They have set a timer for drinking water. The timers have been set by them to ring after 30 minute, 1 hour, 1.5 hour and 1 hour 45 minute respectively. If their timer rang together at 12:00 noon. Find out the time when will they ring together again

1. 6:00 am
2. 3:00 am
3. 9:00 am
4. 10:00 am

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

Question Type : **MCQ**
Question ID : **458908865**
Option 1 ID : **4589083457**
Option 2 ID : **4589083458**
Option 3 ID : **4589083459**
Option 4 ID : **4589083460**
Status : **Answered**
Chosen Option : **2**

Q.19

For a certain sum, the simple interest in 2 years at 8% per annum is Rs. 90 more than the simple interest in 1.5 years at the rate of 10% per annum for the same sum. Find the sum.

1. Rs. 9,000
2. Rs. 9,500
3. Rs. 8,000
4. Rs. 9,200

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

Question Type : **MCQ**
Question ID : **458908868**
Option 1 ID : **4589083469**
Option 2 ID : **4589083470**
Option 3 ID : **4589083471**
Option 4 ID : **4589083472**
Status : **Answered**
Chosen Option : **2**

Q.20

A startup Science lab of nine employees pay its employees between 25,000 per month to 75,000 per month. The median salary of the lab is 55,000 per month. The highest earning employee got a device patent in the name of company, to appreciate the achievement she got a 25% hike in her salary. After this hike what would be the new median salary of the company?

1. 68,750/-
2. Median will increase by 25%
3. Median will decrease by 25%
4. 55,000/-

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

Question Type : **MCQ**
Question ID : **458908866**
Option 1 ID : **4589083461**
Option 2 ID : **4589083462**
Option 3 ID : **4589083463**
Option 4 ID : **4589083464**
Status : **Answered**
Chosen Option : **2**

Section : **PART B**

Q.21 Match List I with List II

	List I		List II
A.	Chlamydiae	I.	Aquatic
B.	Chloroflexi	II.	Heat resistant
C.	Dictyoglomi	III.	Intracellular pathogen
D.	Planctomycetes	IV.	Green non-sulfur

Choose the correct answer from the options given below:

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

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

Question Type : **MCQ**
Question ID : **458908919**
Option 1 ID : **4589083673**
Option 2 ID : **4589083674**
Option 3 ID : **4589083675**
Option 4 ID : **4589083676**
Status : **Answered**
Chosen Option : **1**

Q.22

Match List I with List II

List I		List II	
A.	Excision repair	I.	UmuCD
B.	Translesion repair	II.	UVR genes
C.	Mismatch repair	III.	Rec genes
D.	Recombination repair	IV.	Mut genes

Choose the correct answer from the options given below:

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

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

Question Type : **MCQ**
Question ID : **458908880**
Option 1 ID : **4589083517**
Option 2 ID : **4589083518**
Option 3 ID : **4589083519**
Option 4 ID : **4589083520**
Status : **Answered**
Chosen Option : **4**

Q.23

Uptake of Na^+ and Ca^{2+} ions into plant vacuoles from the cytosol are carried out by:

1. Proton antiporters
2. Ion channels
3. Receptor mediated endocytosis
4. Vesicular transport

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

Question Type : **MCQ**
Question ID : **458908884**
Option 1 ID : **4589083533**
Option 2 ID : **4589083534**
Option 3 ID : **4589083535**
Option 4 ID : **4589083536**
Status : **Answered**
Chosen Option : **4**

Q.24

Match List I with List II

	List I		List II
A.	Endospore	I.	Carbolfuchsin
B.	Flagella	II.	India ink
C.	Capsule	III.	DAPI
D.	DNA	IV.	Malachite green

Choose the correct answer from the options given below:

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

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

Question Type : **MCQ**
Question ID : **458908918**
Option 1 ID : **4589083669**
Option 2 ID : **4589083670**
Option 3 ID : **4589083671**
Option 4 ID : **4589083672**
Status : **Answered**
Chosen Option : **3**

Q.25

Which cells produce the largest amount of Heparin in humans?

1. Basophilic mast cells
2. Hepatocytes
3. Keratinocytes
4. Erythrocytes

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

Question Type : **MCQ**
Question ID : **458908896**
Option 1 ID : **4589083581**
Option 2 ID : **4589083582**
Option 3 ID : **4589083583**
Option 4 ID : **4589083584**
Status : **Answered**
Chosen Option : **1**

Q.26

In B-cell development, the heavy chain locus is always rearranged first. The rearrangement starts with D-J locus followed by V-D-J arrangements. The enzyme involved in the process is:

1. Terminal deoxynucleotidyl kinase
2. Terminal oxynucleotidyl transferase
3. Terminal deoxynucleotidyl transferase
4. Deoxynucleotidyl phosphatase

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

Question Type : **MCQ**
Question ID : **458908893**
Option 1 ID : **4589083569**
Option 2 ID : **4589083570**
Option 3 ID : **4589083571**
Option 4 ID : **4589083572**
Status : **Answered**
Chosen Option : **1**

Q.27

The region of hippocampus in the adult brain where new neurons are formed is_____

1. Granular layer.
2. Subventricular zone.
3. Cortex.
4. Ventricular zone.

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

Question Type : **MCQ**
Question ID : **458908892**
Option 1 ID : **4589083565**
Option 2 ID : **4589083566**
Option 3 ID : **4589083567**
Option 4 ID : **4589083568**
Status : **Answered**
Chosen Option : **4**

Q.28

Which of the following is an inducible promoter for plant genetic transformation?

1. 35S promoter of CaMV
2. rbcS
3. Cab3
4. PR1

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

Question Type : **MCQ**
Question ID : **458908901**
Option 1 ID : **4589083601**
Option 2 ID : **4589083602**
Option 3 ID : **4589083603**
Option 4 ID : **4589083604**
Status : **Answered**
Chosen Option : **1**

Q.29

Which of the following represents a model for floral organ identity?

1. ABC model
2. NZY model
3. Turing model
4. Turgor model

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

Question Type : **MCQ**
Question ID : **458908899**
Option 1 ID : **4589083593**
Option 2 ID : **4589083594**
Option 3 ID : **4589083595**
Option 4 ID : **4589083596**
Status : **Answered**
Chosen Option : **2**

Q.30

A specimen selected by a competent worker from the original materials studied by the author of the species when no holotype was designated or holotype is destroyed / lost is known as:

1. Isotype
2. Lectotype
3. Neotype
4. Paratype

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

Question Type : **MCQ**
Question ID : **458908907**
Option 1 ID : **4589083625**
Option 2 ID : **4589083626**
Option 3 ID : **4589083627**
Option 4 ID : **4589083628**
Status : **Answered**
Chosen Option : **2**

Q.31

Which of the following soil formation process prevails in tropical climate?

1. Laterization
2. Podzolization
3. Gleization
4. Salinization

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

Question Type : **MCQ**
Question ID : **458908905**
Option 1 ID : **4589083617**
Option 2 ID : **4589083618**
Option 3 ID : **4589083619**
Option 4 ID : **4589083620**
Status : **Answered**
Chosen Option : **1**

Q.32

A potent neurotoxin responsible for the death of hundreds of marine birds and sea lions is _____.

1. Alginic acid
2. Domoic acid
3. Silica
4. Xanthins

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

Question Type : **MCQ**
Question ID : **458908914**
Option 1 ID : **4589083653**
Option 2 ID : **4589083654**
Option 3 ID : **4589083655**
Option 4 ID : **4589083656**
Status : **Answered**
Chosen Option : **1**

Q.33

Rh blood group system is used in clinical practice to detect the risk of _____ in new born.

1. *Diabetes insipidus*
2. Hemolytic anaemia
3. Leukemia
4. Thrombosis

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

Question Type : **MCQ**
Question ID : **458908897**
Option 1 ID : **4589083585**
Option 2 ID : **4589083586**
Option 3 ID : **4589083587**
Option 4 ID : **4589083588**
Status : **Answered**
Chosen Option : **2**

Q.34 A mutation in a gene wherein a mutant allele encoding for a protein impedes the functioning of the protein encoded by the wild type allele is frequently referred as:

1. Loss of function
2. A mutation causing synthetic lethality
3. Dominant negative mutation
4. A missense mutation with positional variegation effect

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

Question Type : **MCQ**
Question ID : **458908876**
Option 1 ID : **4589083501**
Option 2 ID : **4589083502**
Option 3 ID : **4589083503**
Option 4 ID : **4589083504**
Status : **Answered**
Chosen Option : **2**

Q.35 The probability of a hemophilic carrier mother married to non-hemophilic healthy male to bear a hemophilic daughter and a hemophilic son is:

1. 50% daughter; 0% son
2. 0% daughter; 100% son
3. 0% daughter; 50% son
4. 50% daughter; 50% son

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

Question Type : **MCQ**
Question ID : **458908877**
Option 1 ID : **4589083505**
Option 2 ID : **4589083506**
Option 3 ID : **4589083507**
Option 4 ID : **4589083508**
Status : **Answered**
Chosen Option : **4**

Q.36

Which of the following represents the ratio between experimentally observed results and theoretically expected results?

1. Chi-square value
2. F ratio
3. Theta value
4. Variance ratio

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

Question Type :	**MCQ**
Question ID :	**458908900**
Option 1 ID :	**4589083597**
Option 2 ID :	**4589083598**
Option 3 ID :	**4589083599**
Option 4 ID :	**4589083600**
Status :	**Answered**
Chosen Option :	**1**

Q.37

Methylene blue and crystal violet are examples of:

1. Basic dyes
2. Basic and acidic dyes, respectively
3. Acidic and basic dyes, respectively
4. Acidic dyes

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

Question Type :	**MCQ**
Question ID :	**458908920**
Option 1 ID :	**4589083677**
Option 2 ID :	**4589083678**
Option 3 ID :	**4589083679**
Option 4 ID :	**4589083680**
Status :	**Answered**
Chosen Option :	**2**

Q.38 Two genes A and B on the same chromosome known to be 20 cM apart implies:

1. A and B are strongly linked and will always be inherited as a single block
2. The distance between A and B is 20 million bases
3. The frequency of recombination between A and B is 20% in the given population
4. The frequency of double cross over between A and B is 40% in the given population

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

Question Type : **MCQ**
Question ID : **458908875**
Option 1 ID : **4589083497**
Option 2 ID : **4589083498**
Option 3 ID : **4589083499**
Option 4 ID : **4589083500**
Status : **Answered**
Chosen Option : **1**

Q.39 The "forever chemicals" used in nonstick cookware are:

1. Polyethylene
2. Polyfluoro alkyl substances
3. Glass
4. Hexachlorocyclo hexane

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

Question Type : **MCQ**
Question ID : **458908885**
Option 1 ID : **4589083537**
Option 2 ID : **4589083538**
Option 3 ID : **4589083539**
Option 4 ID : **4589083540**
Status : **Answered**
Chosen Option : **2**

Q.40

Catechol-O-Methyltransferase (COMT) is not involved in breakdown of which of the following neurotransmitters?

1. Epinephrine
2. Nor-epinephrine
3. 3,4 dihydroxymandelic acid
4. Acetylcholine

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

Question Type : **MCQ**
Question ID : **458908912**
Option 1 ID : **4589083645**
Option 2 ID : **4589083646**
Option 3 ID : **4589083647**
Option 4 ID : **4589083648**
Status : **Not Answered**
Chosen Option : **--**

Q.41

Which one of the following statement is INCORRECT according to the Hardy-Weinberg law?

1. This law is applied to calculate the genotype frequencies in the next generation from the allele frequencies in the current generation.
2. Hardy-Weinberg equilibrium applies only to X-linked loci.
3. This law can be used to calculate allele frequencies from the genotype frequencies within a single generation.
4. This law does not apply when the two alleles have differential effect on the phenotype.

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

Question Type : **MCQ**
Question ID : **458908890**
Option 1 ID : **4589083557**
Option 2 ID : **4589083558**
Option 3 ID : **4589083559**
Option 4 ID : **4589083560**
Status : **Answered**
Chosen Option : **2**

Q.42

Reverse transcriptase activity is associated with the following natural ribozyme to complete homing:

1. Group I introns
2. Group II introns
3. Hammerhead ribozyme
4. Varkud satellite ribozyme

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

Question Type : **MCQ**
Question ID : **458908878**
Option 1 ID : **4589083509**
Option 2 ID : **4589083510**
Option 3 ID : **4589083511**
Option 4 ID : **4589083512**
Status : **Not Answered**
Chosen Option : **--**

Q.43

Arrange the following events in chronological order:

A. Splicing of RNA molecule
B. Migration of RNA molecule to cytoplasm
C. Guanyl capping of RNA molecule
D. Degradation of mRNA molecule

Which of the following is correct?

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

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

Question Type : **MCQ**
Question ID : **458908910**
Option 1 ID : **4589083637**
Option 2 ID : **4589083638**
Option 3 ID : **4589083639**
Option 4 ID : **4589083640**
Status : **Not Answered**
Chosen Option : **--**

Q.44

Which of the following is correct about the synthesis of carbohydrates in plants?

1. Starch is synthesized in the chloroplast and sucrose is synthesized in the cytosol.
2. Sucrose is synthesized in the chloroplast and starch is synthesized in the cytosol.
3. Both are synthesized in the chloroplasts.
4. Both are synthesized in the cytosol.

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

Question Type :	**MCQ**
Question ID :	**458908902**
Option 1 ID :	**4589083605**
Option 2 ID :	**4589083606**
Option 3 ID :	**4589083607**
Option 4 ID :	**4589083608**
Status :	**Answered**
Chosen Option :	**1**

Q.45

Which of the following statement is correct with respect to cleavage of the given peptide?

Cys – Ser – Pro – Lys – Gly – Met

1. Trypsin will cleave at the N terminus of Gly
2. Trypsin will cleave at the C terminus of Gly
3. Trypsin will cleave at the N terminus of Lys
4. Trypsin will cleave at the C terminus of Lys

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

Question Type :	**MCQ**
Question ID :	**458908913**
Option 1 ID :	**4589083649**
Option 2 ID :	**4589083650**
Option 3 ID :	**4589083651**
Option 4 ID :	**4589083652**
Status :	**Not Answered**
Chosen Option :	**--**

Q.46

Which of the following best describes why some Iguana lizards shifted to marine life on the Galapagos islands?

1. Pressure of Iguana overcrowding and competition for food drove some members of the population out of the terrestrial habitat.
2. Volcanic eruption wiped away all the terrestrial Iguana species.
3. Intense competition with pre-existing mammalian species drove them to the sea.
4. The Iguana lizard shifting to marine life is a consequence of modern human predatory activities.

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

Question Type : **MCQ**
Question ID : **458908872**
Option 1 ID : **4589083485**
Option 2 ID : **4589083486**
Option 3 ID : **4589083487**
Option 4 ID : **4589083488**
Status : **Answered**
Chosen Option : **1**

Q.47

Given below are two statements about the success of Mendel's inheritance experiments with true-breeding pea plant.

Statement I: He studied complex traits simultaneously with systematic statistical record.

Statement II: He studied contrasting traits simultaneously with systematic statistical record.

In the light of the above statements, choose the correct 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 1. 1
2. 2
3. 3
4. 4

Question Type : **MCQ**
Question ID : **458908871**
Option 1 ID : **4589083481**
Option 2 ID : **4589083482**
Option 3 ID : **4589083483**
Option 4 ID : **4589083484**
Status : **Answered**
Chosen Option : **4**

Q.48

Which RNA virus causes cancer in humans?

1. Human Herpes virus
2. Human Papilloma virus
3. Human T-cell leukemia virus-I
4. Epstein-Barr virus

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

Question Type : **MCQ**
Question ID : **458908887**
Option 1 ID : **4589083545**
Option 2 ID : **4589083546**
Option 3 ID : **4589083547**
Option 4 ID : **4589083548**
Status : **Answered**
Chosen Option : **3**

Q.49

The layer of the shoot apical meristem that gives rise to the vascular bundles during leaf development in dicots is _____.

1. L1
2. L2
3. L3
4. L4

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

Question Type : **MCQ**
Question ID : **458908898**
Option 1 ID : **4589083589**
Option 2 ID : **4589083590**
Option 3 ID : **4589083591**
Option 4 ID : **4589083592**
Status : **Not Answered**
Chosen Option : **--**

Q.50 Which of the following characterizes the Dauer stage larvae of *C. elegans*?

1. Feeding and metabolically active
2. Feeding and metabolically dormant
3. Non-feeding and metabolically active
4. Non-feeding and metabolically dormant

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

Question Type : **MCQ**
Question ID : **458908895**
Option 1 ID : **4589083577**
Option 2 ID : **4589083578**
Option 3 ID : **4589083579**
Option 4 ID : **4589083580**
Status : **Answered**
Chosen Option : **2**

Q.51 Diagnostic test is usually conducted in pregnant women to detect the presence of which of the following parasite, with part of its life cycle in cats, and may cause congenital infections *in utero*?

1. *Babesia microti*
2. *Cryptosporidium*
3. *Cyclospora*
4. *Toxoplasma gondii*

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

Question Type : **MCQ**
Question ID : **458908915**
Option 1 ID : **4589083657**
Option 2 ID : **4589083658**
Option 3 ID : **4589083659**
Option 4 ID : **4589083660**
Status : **Answered**
Chosen Option : **4**

Q.52

Which of the following statement is correct for a cell undergoing cell cycle exit in mitosis?

1. APC/C ubiquitin ligase is active.
2. p21 is active.
3. p16 is inactive.
4. Wee1 kinase is active.

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

Question Type :	**MCQ**
Question ID :	**458908882**
Option 1 ID :	**4589083525**
Option 2 ID :	**4589083526**
Option 3 ID :	**4589083527**
Option 4 ID :	**4589083528**
Status :	**Not Answered**
Chosen Option :	**--**

Q.53

The correct taxonomic ranking is:

1. Family, Class, Order, Division, Kingdom
2. Family, Class, Division, Kingdom, Order
3. Family, Order, Class, Division, Kingdom
4. Family, Division, Class, Order, Kingdom

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

Question Type :	**MCQ**
Question ID :	**458908881**
Option 1 ID :	**4589083521**
Option 2 ID :	**4589083522**
Option 3 ID :	**4589083523**
Option 4 ID :	**4589083524**
Status :	**Answered**
Chosen Option :	**3**

Q.54

In the case of ecological pyramids:

A. Pyramid of energy is always upright

B. Pyramids of biomass and number may be inverted

C. Pyramid of biomass is always inverted

D. Pyramid of number is always upright

Choose the correct answer from the options given below:

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

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

Question Type :	**MCQ**
Question ID :	**458908908**
Option 1 ID :	**4589083629**
Option 2 ID :	**4589083630**
Option 3 ID :	**4589083631**
Option 4 ID :	**4589083632**
Status :	**Answered**
Chosen Option :	**1**

Q.55 Which of the following is/are characteristic feature(/s) of CPSF (cleavage and polyadenylation specificity factor) in the generation of 3' ends of mRNA?

A. Recruits poly(A)polymerase

B. Modifies the 5' end of a nascent mRNA by adding 7-methyl guanosine cap

C. Is an endonuclease

D. Is an exonuclease

Choose the correct answer from the options given bellow:

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

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

Question Type :	**MCQ**
Question ID :	**458908891**
Option 1 ID :	**4589083561**
Option 2 ID :	**4589083562**
Option 3 ID :	**4589083563**
Option 4 ID :	**4589083564**
Status :	**Not Answered**
Chosen Option :	**--**

Q.56

Given below are two statements related to the neutral theory of molecular evolution:

Statement I: Most newly acquired mutations are neutral.

Statement II: Genetic drift acts on dominant alleles and leads to evolution.

In the light the above statements, choose the correct 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 1. 1
2. 2
3. 3
4. 4

Question Type : **MCQ**
Question ID : **458908906**
Option 1 ID : **4589083621**
Option 2 ID : **4589083622**
Option 3 ID : **4589083623**
Option 4 ID : **4589083624**
Status : **Answered**
Chosen Option : **1**

Q.57

Which of the following model represents logistic population growth curve?

1. $N_t = N_0 \lambda^t$
2. $N_t = N_0 e^{rt}$
3. $dN/dt = rN(1-N/K)$
4. $\ln 2/r$

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

Question Type : **MCQ**
Question ID : **458908904**
Option 1 ID : **4589083613**
Option 2 ID : **4589083614**
Option 3 ID : **4589083615**
Option 4 ID : **4589083616**
Status : **Not Answered**
Chosen Option : **--**

Q.58

Which one of the following is an INCORRECT statement related to eutrophication?

1. Cultural eutrophication is greatly accelerating eutrophication of lakes worldwide.
2. Planktons are less abundant in eutrophic lakes than oligotrophic and mesotrophic lakes.
3. Carp fish are often abundant in eutrophic lakes because they are adapted to live in warm, shallow, turbid, and oxygen poor waters.
4. Algal bloom is created when average concentration of soluble inorganic nitrogen exceeds 0.30 ppm and soluble inorganic phosphate content exceeds 0.01 ppm.

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

Question Type : **MCQ**
Question ID : **458908916**
Option 1 ID : **4589083661**
Option 2 ID : **4589083662**
Option 3 ID : **4589083663**
Option 4 ID : **4589083664**
Status : **Not Answered**
Chosen Option : **--**

Q.59

Which of the following statement is INCORRECT according to Charles Darwin's theory of Natural Selection?

1. Organisms produce a far greater number of progeny than ever survived to adulthood.
2. The number of individuals in species remains more or less constant.
3. The individuals in a species are not all identical but show variation in heritable characters.
4. Parents for the next generation are randomly selected from the current generation.

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

Question Type : **MCQ**
Question ID : **458908873**
Option 1 ID : **4589083489**
Option 2 ID : **4589083490**
Option 3 ID : **4589083491**
Option 4 ID : **4589083492**
Status : **Answered**
Chosen Option : **4**

Q.60

Escherichia coli cells are growing in a tryptophan-limiting condition. Which is correct about leader region of the *trp* operon?

1. Ribosomes are able to synthesize the leader peptide.
2. Regions 3 and 4 in the leader sequence form the terminator hairpin.
3. Region 2 base pairs with region 3 leaving terminator region of the leader sequence single stranded.
4. Regions 1 and 2 base pair and prevent ribosome binding.

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

Question Type :	**MCQ**
Question ID :	**458908888**
Option 1 ID :	**4589083549**
Option 2 ID :	**4589083550**
Option 3 ID :	**4589083551**
Option 4 ID :	**4589083552**
Status :	**Answered**
Chosen Option :	**3**

Q.61

Human heart develops from:

1. Mesoderm on day 18 or 19 post-fertilization
2. Ectoderm on day 18 or 19 post-fertilization
3. Mesoderm after brain development
4. Mesoderm after lung development

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

Question Type :	**MCQ**
Question ID :	**458908894**
Option 1 ID :	**4589083573**
Option 2 ID :	**4589083574**
Option 3 ID :	**4589083575**
Option 4 ID :	**4589083576**
Status :	**Answered**
Chosen Option :	**1**

Q.62

ABC transporters are involved in

A. Flipping phospholipids from one membrane leaflet to other

B. ATP production

C. Transport of cholesterol

D. Transport of Cl^- ions

Choose the correct answer from the options given below:

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

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

Question Type : **MCQ**
Question ID : **458908883**
Option 1 ID : **4589083529**
Option 2 ID : **4589083530**
Option 3 ID : **4589083531**
Option 4 ID : **4589083532**
Status : **Not Answered**
Chosen Option : **--**

Q.63

The specific activity of 1 μg of a pure enzyme catalyzing a reaction at a rate of 0.5 mmol/min under optimum conditions is:

1. 0.005 U/μg
2. 0.05 U/μg
3. 0.5 U/μg
4. 0.1 U/μg

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

Question Type : **MCQ**
Question ID : **458908879**
Option 1 ID : **4589083513**
Option 2 ID : **4589083514**
Option 3 ID : **4589083515**
Option 4 ID : **4589083516**
Status : **Not Answered**
Chosen Option : **--**

Q.64

Given below are two statements:

Statement I: β-oxidation of fatty acids generates NADPH.

Statement II: Pentose phosphate pathway generates ATP.

In the light the above statements, choose the correct 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 1. 1
2. 2
3. 3
4. 4

Question Type : **MCQ**
Question ID : **458908909**
Option 1 ID : **4589083633**
Option 2 ID : **4589083634**
Option 3 ID : **4589083635**
Option 4 ID : **4589083636**
Status : **Answered**
Chosen Option : **1**

Q.65

Which of the following statement is correct?

1. r-strategic species reproduce profusely with a short vegetative growth period.
2. K-strategic species have short vegetative growth period and allocate more energy to reproduction.
3. r-strategic species have long vegetative growth period and allocate relatively less energy to reproduction.
4. Both r-and K-strategists have long vegetative growth period.

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

Question Type : **MCQ**
Question ID : **458908917**
Option 1 ID : **4589083665**
Option 2 ID : **4589083666**
Option 3 ID : **4589083667**
Option 4 ID : **4589083668**
Status : **Not Answered**
Chosen Option : **--**

Q.66 Which of the following statement is INCORRECT?

1. Sickle cell gene in human confers resistance to *Plasmodium falciparum*.
2. *Plasmodium falciparum* increases the pH of the infected erythrocyte.
3. *Plasmodium falciparum* favors deoxyhemoglobin formation through Bohr effect.
4. *Plasmodium falciparum* increases the sickling of the erythrocytes.

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

Question Type : **MCQ**
Question ID : **458908889**
Option 1 ID : **4589083553**
Option 2 ID : **4589083554**
Option 3 ID : **4589083555**
Option 4 ID : **4589083556**
Status : **Not Answered**
Chosen Option : **--**

Q.67 In an *E. coli* cell, the fractions of various macromolecules are:

1. Proteins 23%, Nucleic acids 9%, Lipids 55%
2. Proteins 23%, Nucleic acids 55%, Lipids 9%
3. Proteins 55%, Nucleic acids 23%, Lipids 9%
4. Proteins 55%, Nucleic acids 9%, Lipids 23%

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

Question Type : **MCQ**
Question ID : **458908886**
Option 1 ID : **4589083541**
Option 2 ID : **4589083542**
Option 3 ID : **4589083543**
Option 4 ID : **4589083544**
Status : **Answered**
Chosen Option : **1**

Q.68

The characteristics of the development of suspensor of plant embryo are:

A. It develops from the upper cell resulting from the first cell division of the embryo.

B. It connects the embryo to the embryo sac and the ovule tissue.

C. It forms part of the root meristem, root initial cells, and root cap.

D. It is short lived.

Choose the correct answer from the options given below:

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

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

Question Type : **MCQ**
Question ID : **458908903**
Option 1 ID : **4589083609**
Option 2 ID : **4589083610**
Option 3 ID : **4589083611**
Option 4 ID : **4589083612**
Status : **Answered**
Chosen Option : **3**

Q.69

The frequency of affected individuals for a disease caused by a recessive mutation, in an isolated population is, 1/1100. Assuming Hardy Weinberg equilibrium, what is the frequency of individuals who are carrier of this disease in the same population?

1. 0.03
2. 0.06
3. 0.97
4. 0.0009

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

Question Type : **MCQ**
Question ID : **458908874**
Option 1 ID : **4589083493**
Option 2 ID : **4589083494**
Option 3 ID : **4589083495**
Option 4 ID : **4589083496**
Status : **Not Answered**
Chosen Option : **--**

Q.70

The standard free energy change for the reaction:

Glucose + Pi $\rightarrow$ Glucose-6-phosphate $\Delta G = 15$ kJ/mol

And the standard free energy change for the reaction:

ATP $\rightarrow$ ADP + Pi $\Delta G = -30.5$ kJ/mol

What is the free energy change for the following reaction?

Glucose + ATP$\rightarrow$ Glucose-6-phosphate + ADP

1. –45.5 kJ/mol
2. –15.5 kJ/mol
3. 15.5 kJ/mol
4. 45.5 kJ/mol

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

Question Type : **MCQ**
Question ID : **458908911**
Option 1 ID : **4589083641**
Option 2 ID : **4589083642**
Option 3 ID : **4589083643**
Option 4 ID : **4589083644**
Status : **Not Answered**
Chosen Option : **--**

Section : **PART C**

Q.71

The Shannon-Weiner diversity index (H') for four different forest types are 4.78, 2.71. 2.96, and 3.62. Arrange the Simpson's concentration of dominance (CD) values of 0.04, 0.72, 0.68, and 0.06 as per the H' values.

1. 4.78 - 0.04, 2.71 - 0.72, 2.96 - 0.68, 3.62 - 0.06
2. 4.78 - 0.72, 2.71 - 0.04, 2.96 - 0.06, 3.62 - 0.68
3. 4.78 - 0.04, 2.71 - 0.06, 2.96 - 0.68, 3.62 - 0.72
4. 4.78 - 0.72, 2.71 - 0.68, 2.96 - 0.06, 3.62 - 0.04

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

Question Type : **MCQ**
Question ID : **458908991**
Option 1 ID : **4589083961**
Option 2 ID : **4589083962**
Option 3 ID : **4589083963**
Option 4 ID : **4589083964**
Status : **Not Answered**
Chosen Option : **--**

Q.72 Which of the following statement about vitamin D3 in INCORRECT?

1. Cholecalciferol (Vitamin D3) is formed in the skin.
2. Cholecalciferol is converted to 1,25-hydroxycholecalciferol in the skin.
3. Calcium ion concentration controls the formation of 1,25-dihydroxycholecalciferol.
4. 1,25-dihydrocholecalciferol is formed in the liver.

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

Question Type : **MCQ**
Question ID : **458908937**
Option 1 ID : **4589083745**
Option 2 ID : **4589083746**
Option 3 ID : **4589083747**
Option 4 ID : **4589083748**
Status : **Answered**
Chosen Option : **4**

Q.73 Given below are two statements:

Statement I: Ca^{2+} activates pyruvate dehydrogenase kinase.

Statement II: Pyruvate dehydrogenase activity is unaffected by cAMP.

In the light of the above statements, choose the correct 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 1. 1
2. 2
3. 3
4. 4

Question Type : **MCQ**
Question ID : **458908977**
Option 1 ID : **4589083905**
Option 2 ID : **4589083906**
Option 3 ID : **4589083907**
Option 4 ID : **4589083908**
Status : **Answered**
Chosen Option : **1**

Q.74

Rhodopsin, the photosensitive GPCR in rod cells comprises the protein linked to 11-cis retina. The presence of light induces:

1. Isomerization of the 11-cis retinal moiety to all-trans retinal
2. Isomerization of trans retinal moiety to all-cis retinal
3. Polymerization of 11-cis retinal moiety and trans retinal
4. Breakdown of 11-cis retinal moiety to small components which further couples with GPCR

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

Question Type : **MCQ**
Question ID : **458908935**
Option 1 ID : **4589083737**
Option 2 ID : **4589083738**
Option 3 ID : **4589083739**
Option 4 ID : **4589083740**
Status : **Not Answered**
Chosen Option : **--**

Q.75

Given below are two statements:

Statement I: In metazoans, cyclin D in G1 phase binds to CDK4 and CDK6, but do not show a strong stage-dependent fluctuation.

Statement II: Cyclin E in metazoans is a S/G2 cyclin, which binds to CDK2 to trigger S/G2 transition.

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

Question Type : **MCQ**
Question ID : **458908972**
Option 1 ID : **4589083885**
Option 2 ID : **4589083886**
Option 3 ID : **4589083887**
Option 4 ID : **4589083888**
Status : **Not Answered**
Chosen Option : **--**

Q.76

How will the photosynthesis be affected, if the atmospheric CO_2 concentration is doubled and temperature remains the same?

1. Photorespiration increases.
2. Decrease in carboxylation by RubisCo.
3. Calvin Cycle stops.
4. Increased carbon fixation by RubisCo.

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

Question Type : **MCQ**
Question ID : **458908994**
Option 1 ID : **4589083973**
Option 2 ID : **4589083974**
Option 3 ID : **4589083975**
Option 4 ID : **4589083976**
Status : **Answered**
Chosen Option : **3**

Q.77

Which of the following transcription factor is involved in the functioning of phytochrome receptors in plants?

1. PIF
2. WRKY
3. SEUSS
4. STM

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

Question Type : **MCQ**
Question ID : **458908939**
Option 1 ID : **4589083753**
Option 2 ID : **4589083754**
Option 3 ID : **4589083755**
Option 4 ID : **4589083756**
Status : **Not Answered**
Chosen Option : **--**

Q.78

An *E.coli seqA*$^-$ strain was constructed by an investigator. To make the *E.coli seqA*$^-$ *lacZ*$^+$ strain, the *lacZ* gene can be transferred by:

1. Generalized transduction mediated via P1 phage
2. Generalized transduction mediated via λ phage
3. Specialized transduction mediated via P1 phage
4. Specialized transduction mediated via P22 phage

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

Question Type : **MCQ**
Question ID : **458908960**
Option 1 ID : **4589083837**
Option 2 ID : **4589083838**
Option 3 ID : **4589083839**
Option 4 ID : **4589083840**
Status : **Not Answered**
Chosen Option : **--**

Q.79

Which of the following statement is INCORRECT about classical MHC genes?

1. MHC Class I genes encode proteins that present cytosolic peptide antigens to $CD8^+$ T cells.
2. Proteins encoded by MHC Class III genes do not play a direct role in presenting antigen to T cells.
3. Glycoproteins encoded by MHC Class II genes primarily present exogenous peptide antigen to $CD4^+$ T cells.
4. MHC Class III gene products are predominantly expressed on macrophages, dendritic cells, and B cells.

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

Question Type : **MCQ**
Question ID : **458908930**
Option 1 ID : **4589083717**
Option 2 ID : **4589083718**
Option 3 ID : **4589083719**
Option 4 ID : **4589083720**
Status : **Not Answered**
Chosen Option : **--**

Q.80

A typical NGS-based exome sequence experiment aims to achieve 100X coverage for a eukaryotic genome of 50 Mb. What is the minimum amount of sequence data needed to achieve this goal?

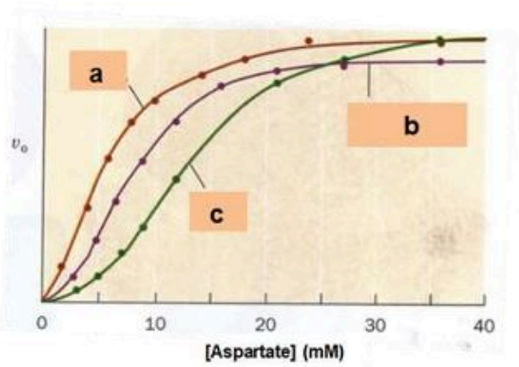
1. 500 Mb
2. 5 Gb
3. 50 Gb
4. 500 Gb

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

Question Type :	**MCQ**
Question ID :	**458908950**
Option 1 ID :	**4589083797**
Option 2 ID :	**4589083798**
Option 3 ID :	**4589083799**
Option 4 ID :	**4589083800**
Status :	**Not Answered**
Chosen Option :	**--**

Q.81

Aspartate transcarbamoylase catalyzes the reaction between carbamoyl phosphate and aspartate to form N-carbamoyl aspartate. Following plot represents the rate of reaction vs increasing concentration of aspartate. ATP and CTP are the allosteric effectors of the enzyme. Identify the curves which are obtained in the presence of ATP or CTP.



1. a : ATP, b : No effectors, c : CTP
2. a : No effectors, b : ATP, c : CTP
3. a : ATP, b : CTP, c : No effectors
4. a : No effectors, b : CTP, c : ATP

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

Question Type :	**MCQ**
Question ID :	**458908932**
Option 1 ID :	**4589083725**
Option 2 ID :	**4589083726**
Option 3 ID :	**4589083727**
Option 4 ID :	**4589083728**
Status :	**Not Answered**
Chosen Option :	**--**

Q.82

The protein yields of five bacterial cultures are 3, 5, 2, 4 and 1 mg/ml, respectively. The standard error of the mean in the ungrouped data is:

1. 0.55
2. 0.71
3. 0.22
4. 0.33

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

Question Type : **MCQ**
Question ID : **458908940**
Option 1 ID : **4589083757**
Option 2 ID : **4589083758**
Option 3 ID : **4589083759**
Option 4 ID : **4589083760**
Status : **Not Answered**
Chosen Option : **--**

Q.83

SOCS-2 is a negative regulator of cytokine signaling. *socs-2* knockout mice were phenotypically larger in size as compared to the wild type. Their lifespan was not affected. This defect is, therefore, due to:

1. Downregulated cytokine signaling and elevated levels of growth hormones
2. Reduced *SOCS-2* levels which could potentially promotes cytokine signaling
3. Elevated cytokine signaling which could play a significant role in regulating cell growth
4. Inhibition of mTOR pathway which is associated with cell size

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

Question Type : **MCQ**
Question ID : **458908958**
Option 1 ID : **4589083829**
Option 2 ID : **4589083830**
Option 3 ID : **4589083831**
Option 4 ID : **4589083832**
Status : **Not Answered**
Chosen Option : **--**

Q.84

Which of the following statement is correct for histidine biosynthesis in eukaryotes?

1. Transcriptional attenuation takes place because of pairing between leader regions 1 and 2.
2. Transcriptional attenuation takes place because of the formation of termination loops between leader regions 3 and 4.
3. Antitermination loop is formed between leader regions 2 and 3.
4. Transcriptional attenuation will not take place.

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

Question Type : **MCQ**
Question ID : **458908928**
Option 1 ID : **4589083709**
Option 2 ID : **4589083710**
Option 3 ID : **4589083711**
Option 4 ID : **4589083712**
Status : **Not Answered**
Chosen Option : **--**

Q.85

Which of the following rate equation is correct when malonate is added to a stereospecific dehydrogenation of succinate to fumarate catalyzed by succinate dehydrogenase?

1. $v = \frac{V_{max}\,[S]}{K_M + [S]}$

2. $v = \frac{V_{max}\,[S]}{K_M\,(1+[I]/K_I)+[S]}$

3. $v = \frac{V_{max}\,(1+[I]/K_I).\,[S]}{K_M + [S]}$

4. $v = \frac{V_{max}\,[S]}{K_M + [S]\,(1+[I]/K_I)}$

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

Question Type :	**MCQ**
Question ID :	**458908967**
Option 1 ID :	**4589083865**
Option 2 ID :	**4589083866**
Option 3 ID :	**4589083867**
Option 4 ID :	**4589083868**
Status :	**Not Answered**
Chosen Option :	**--**

Q.86

Given below are two statements:

Statement I: The lambda repressor cl acts at the O_L and O_R operators to block immediate early genes.

Statement II: Cro binds to the same operator as the lambda repressor but with different affinities to establish lysogeny.

In the light of the above statements, choose the correct 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 1. 1
2. 2
3. 3
4. 4

Question Type : **MCQ**
Question ID : **458908934**
Option 1 ID : **4589083733**
Option 2 ID : **4589083734**
Option 3 ID : **4589083735**
Option 4 ID : **4589083736**
Status : **Not Answered**
Chosen Option : **--**

Q.87

Which of the following is a free-living anaerobic nitrogen fixer?

1. *Clostridium*
2. *Azotobacter*
3. *Calothrix*
4. *Nostoc*

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

Question Type : **MCQ**
Question ID : **458908929**
Option 1 ID : **4589083713**
Option 2 ID : **4589083714**
Option 3 ID : **4589083715**
Option 4 ID : **4589083716**
Status : **Answered**
Chosen Option : **1**

Q.88

If X ray treatment with 1000 roentgens (R) increases the mutation rate of a gene by 2%, what approximate percent increase in mutation rate of the gene would be expected if the organism is treated with X ray doses of 500 R in three independent rounds of treatment or 1500 R in a single treatment?

1. 3% increase in both the rounds of treatment.
2. 6% increase in fragmented rounds compared to ~3% in single round.
3. 9% increase in both the rounds of treatment.
4. 6% increase in fragmented rounds compared to ~9% in single round.

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

Question Type : **MCQ**
Question ID : **458908948**
Option 1 ID : **4589083789**
Option 2 ID : **4589083790**
Option 3 ID : **4589083791**
Option 4 ID : **4589083792**
Status : **Not Answered**
Chosen Option : **--**

Q.89

The rate of synonymous site substitutions in a particular gene was higher than the rate of non-synonymous substitutions. Which of the following statement best describes the mode of evolution operating on this gene?

1. It is undergoing positive selection.
2. It is undergoing diversifying selection.
3. It is evolving neutrally.
4. It is undergoing negative selection.

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

Question Type : **MCQ**
Question ID : **458908951**
Option 1 ID : **4589083801**
Option 2 ID : **4589083802**
Option 3 ID : **4589083803**
Option 4 ID : **4589083804**
Status : **Not Answered**
Chosen Option : **--**

Q.90

Match List I with List II

	List I		List II
A.	Glycine	I.	Imidazole side chain
B.	Threonine	II.	Sulfhydryl side chain
C.	Cysteine	III.	Uncharged polar side chain
D.	Histidine	IV.	Non polar side chain

Choose the correct answer from the options given below:

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

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

Question Type : **MCQ**
Question ID : **458908978**
Option 1 ID : **4589083909**
Option 2 ID : **4589083910**
Option 3 ID : **4589083911**
Option 4 ID : **4589083912**
Status : **Not Answered**
Chosen Option : **--**

Q.91

The contributing genome in fertile allopolyploid species may be quantitatively different under which of the following condition?

1. Polyploids created by hybridization between different species
2. Polyploids created by chromosome duplication within a species
3. Polyploids created by hybridization within same species
4. The univalent solitary chromosome yields aneuploid cells during anaphase of first meiotic division

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

Question Type : **MCQ**
Question ID : **458908974**
Option 1 ID : **4589083893**
Option 2 ID : **4589083894**
Option 3 ID : **4589083895**
Option 4 ID : **4589083896**
Status : **Not Answered**
Chosen Option : **--**

Q.92

Match List I with List II

List I (Secondary metabolites)		List II (Terpene type)
A. Pyrethroids	I.	Triterpenes
B. Limonoids	II.	Diterpenes
C. Gibberellins	III.	Monoterpenes
D. Carotenoids	IV.	Tetraterpenes

Choose the correct answer from the options given below:

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

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

Question Type : **MCQ**
Question ID : **458908990**
Option 1 ID : **4589083957**
Option 2 ID : **4589083958**
Option 3 ID : **4589083959**
Option 4 ID : **4589083960**
Status : **Not Answered**
Chosen Option : **--**

Q.93

As per Woese's three-domain classification, which of the following cannot be used to differentiate between Eubacteria, Archaea and Eukaryota?

1. Sensitivity to antibiotics
2. Structure of membrane lipids
3. Sequence of rRNA
4. Type of locomotion

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

Question Type : **MCQ**
Question ID : **458908955**
Option 1 ID : **4589083817**
Option 2 ID : **4589083818**
Option 3 ID : **4589083819**
Option 4 ID : **4589083820**
Status : **Answered**
Chosen Option : **4**

Q.94

You are required to make 50 ml TE buffer (pH 8) containing 50 mM Tris-chloride (Tris-Cl) and 10 mM EDTA. You are given a stock solution of 2 M Tris-chloride and 0.5 M EDTA, calculate the volume required from the stock in each case for making TE buffer.

1. 1.0 ml Tris-Cl and 2.0 ml EDTA
2. 1.25 ml Tris-Cl and 1.0 ml EDTA
3. 1.0 ml Tris-Cl and 1.25 ml EDTA
4. 2.0 ml Tris-Cl and 1.0 ml EDTA

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

Question Type :	**MCQ**
Question ID :	**458908927**
Option 1 ID :	**4589083705**
Option 2 ID :	**4589083706**
Option 3 ID :	**4589083707**
Option 4 ID :	**4589083708**
Status :	**Not Answered**
Chosen Option :	**--**

Q.95

Which of the following Cas enzymes can be used to target specific genomic loci without creating nick or break?

1. Cas9
2. dCas9
3. SpCas9
4. Cas12

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

Question Type :	**MCQ**
Question ID :	**458908995**
Option 1 ID :	**4589083977**
Option 2 ID :	**4589083978**
Option 3 ID :	**4589083979**
Option 4 ID :	**4589083980**
Status :	**Not Answered**
Chosen Option :	**--**

Q.96

Identify the type of ecological succession based on gross production (P) and community respiration (R) relationship when P>R.

1. Allogenic
2. Autotrophic
3. Heterotrophic
4. Secondary

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

Question Type : **MCQ**
Question ID : **458908944**
Option 1 ID : **4589083773**
Option 2 ID : **4589083774**
Option 3 ID : **4589083775**
Option 4 ID : **4589083776**
Status : **Answered**
Chosen Option : **1**

Q.97

Which of the following conditions must be used to separate two proteins with following characteristics?

Protein	Molecular weight (in kDa)	pI
A	115	5.1
B	115	7.0

1. 10% PAGE for IEF pH 3-12 and 20% SDS-PAGE
2. 4% PAGE for IEF pH 3-12 and 10% SDS-PAGE
3. 4% PAGE for IEF pH 3-12 and 20% SDS-PAGE
4. 12% PAGE for IEF pH 3-12 and 10% SDS-PAGE

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

Question Type : **MCQ**
Question ID : **458908922**
Option 1 ID : **4589083685**
Option 2 ID : **4589083686**
Option 3 ID : **4589083687**
Option 4 ID : **4589083688**
Status : **Not Answered**
Chosen Option : **--**

Q.98

Which of the following is NOT a precursor for the biosynthesis of IAA?

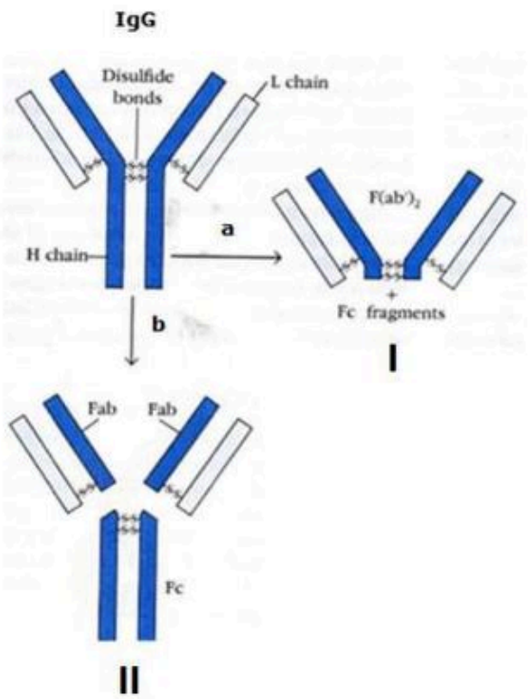
1. Indole
2. Indole-3-glycerol phosphate
3. Tryptophan
4. Mevalonic acid

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

Question Type :	**MCQ**
Question ID :	**458908943**
Option 1 ID :	**4589083769**
Option 2 ID :	**4589083770**
Option 3 ID :	**4589083771**
Option 4 ID :	**4589083772**
Status :	**Not Answered**
Chosen Option :	**--**

Q.99

Treatment of IgG with enzymes / chemicals gives rise to different products I and II. Find 'a' and 'b' in the schematic given below that yields the indicated products.



1. a: pepsin; b: papain
2. a: papain; b: pepsin
3. a: mercaptoethanol; b: pepsin
4. a: papain; b: mercaptoethanol

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

Question Type :	**MCQ**
Question ID :	**458908966**
Option 1 ID :	**4589083861**
Option 2 ID :	**4589083862**
Option 3 ID :	**4589083863**
Option 4 ID :	**4589083864**
Status :	**Not Answered**
Chosen Option :	**--**

Q.100

Standard reduction potential of the half reactions of NADH oxidation by O_2 are the following:

$NAD^+ + 2H^+ + 2_e^- \rightleftharpoons NADH \qquad \varepsilon^{o\prime} = -0.315\,V$

And $\frac{1}{2}O_2 + 2H^+ + 2_e^- \rightleftharpoons H_2O \qquad \varepsilon^{o\prime} = -0.815\,V$

What would be the standard free energy change $\left(\Delta G^{o\prime}\right)$ for overall reaction?

$\frac{1}{2}O_2 + NADH + H^+ \rightleftharpoons H_2O + NAD^+$ (1 Faraday = 96485 $J.V^{-1}\,mol^{-1}$)

1. $-142\ kJ\ mol^{-1}$
2. $-218\ kJ\ mol^{-1}$
3. $500\ kJ\ mol^{-1}$
4. $-1130\ kJ\ mol^{-1}$

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

Question Type :	**MCQ**
Question ID :	**458908933**
Option 1 ID :	**4589083729**
Option 2 ID :	**4589083730**
Option 3 ID :	**4589083731**
Option 4 ID :	**4589083732**
Status :	**Not Answered**
Chosen Option :	**--**

Q.101

UDP Glucoronyl tranferase is involved in which of the following function?

1. In spleen, for conversion of biliverdin to bilirubin
2. In liver, for metabolizing bilirubin
3. In liver, for metabolizing glucose
4. In kidney, for transfer of bilirubin to liver

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

Question Type :	**MCQ**
Question ID :	**458908938**
Option 1 ID :	**4589083749**
Option 2 ID :	**4589083750**
Option 3 ID :	**4589083751**
Option 4 ID :	**4589083752**
Status :	**Not Answered**
Chosen Option :	**--**

Q.102

Which of the following statement regarding translation in bacteria is correct?

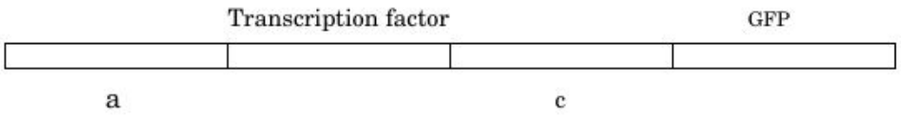
1. UAG is recognized by RF1, UGA by RF2, and UAA by both RF1 and RF2.
2. UAG is recognized by RF1 and RF2, UGA by RF2, and UAA by RF1.
3. UAG is recognized by RF2, UGA by RF1, and UAA by both RF1 and RF2.
4. UAG is recognized by RF1, UGA by both RF1 and RF2, and UAA by RF2.

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

Question Type : **MCQ**
Question ID : **458908924**
Option 1 ID : **4589083693**
Option 2 ID : **4589083694**
Option 3 ID : **4589083695**
Option 4 ID : **4589083696**
Status : **Not Answered**
Chosen Option : **--**

Q.103

Shown below is a diagram of a biosensor:



Which of the following strategies would result in a better biosensor?

1. Use of constitutive promoter at 'a' and inducible promoter at 'c'.
2. Use of constitutive promoter at 'c' and inducible promoter at 'a'.
3. Use of repressive promoters at 'a' and 'c'.
4. Use of constitutive promoters at 'a' and 'c'.

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

Question Type : **MCQ**
Question ID : **458908926**
Option 1 ID : **4589083701**
Option 2 ID : **4589083702**
Option 3 ID : **4589083703**
Option 4 ID : **4589083704**
Status : **Not Answered**
Chosen Option : **--**

Q.104 Which of the following statement is correct for F_1-component of ATP synthase?

1. It has tetrahedral symmetry.
2. It has dihedral symmetry.
3. It has pseudo-three-fold symmetry.
4. It has pseudo-four-fold symmetry.

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

Question Type :	**MCQ**
Question ID :	**458908979**
Option 1 ID :	**4589083913**
Option 2 ID :	**4589083914**
Option 3 ID :	**4589083915**
Option 4 ID :	**4589083916**
Status :	**Not Answered**
Chosen Option :	**--**

Q.105 Which of the following nitrogen fixing legumes is NOT an amide exporter?

1. Pea
2. Clove
3. Broad bean
4. Soyabean

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

Question Type :	**MCQ**
Question ID :	**458908989**
Option 1 ID :	**4589083953**
Option 2 ID :	**4589083954**
Option 3 ID :	**4589083955**
Option 4 ID :	**4589083956**
Status :	**Answered**
Chosen Option :	**2**

Q.106

Cancer cells de-emphasize oxidative phosphorylation even when oxygen is plentiful, taking up glucose in large quantity. This phenomenon is explained by:

1. Glycolysis is the most efficient way of ATP production required by the cancer cells to proliferate.
2. Despite the inefficient way of ATP production, glycolysis subsequently leads to the production of intermediate metabolites essential for the synthesis of proteins and nucleic acids that enable cellular proliferation.
3. Warburg effect states oxidative phosphorylation is preferred by the cancer cells under aerobic condition. Under anerobic condition glycolysis is the only option for cancer cells for energy production.
4. Oxidative phosphorylation is the most efficient way to manage energy production, hence cancer cells do not de-emphasize but switch to oxidative phosphorylation despite glucose availability.

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

Question Type :	**MCQ**
Question ID :	**458908956**
Option 1 ID :	**4589083821**
Option 2 ID :	**4589083822**
Option 3 ID :	**4589083823**
Option 4 ID :	**4589083824**
Status :	**Not Answered**
Chosen Option :	**--**

Q.107

A protein with four identical subunits shows:

1. Cyclic C4 and Dihedral D2 symmetry
2. Cyclic C2 and Icosahedral symmetry
3. Cyclic C3 and Octahedral symmetry
4. Cyclic C3 and Icosahedral symmetry

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

Question Type :	**MCQ**
Question ID :	**458908968**
Option 1 ID :	**4589083869**
Option 2 ID :	**4589083870**
Option 3 ID :	**4589083871**
Option 4 ID :	**4589083872**
Status :	**Answered**
Chosen Option :	**1**

Q.108

Which of the following type of structural proteins in plant cell walls are implicated in the growth, nutrition, and guidance of pollen tubes through stylar tissues?

1. Arabinogalactan proteins
2. Glycine-rich proteins
3. Hydroxyproline-rich glycoproteins
4. Proline-rich proteins

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

Question Type :	**MCQ**
Question ID :	**458908941**
Option 1 ID :	**4589083761**
Option 2 ID :	**4589083762**
Option 3 ID :	**4589083763**
Option 4 ID :	**4589083764**
Status :	**Answered**
Chosen Option :	**3**

Q.109

In relation to atmospheric gas composition and global warming:

A. The atmosphere contains about 380 ppm CO_2 by volume.

B. The concentration of CH_4 is about 1000 times less than that of CO_2 in the atmosphere but at least 20 times as potent at retaining heat.

C. Ozone is more potent at retaining heat and is more in concentration compared to CO_2.

D. Nitrogen oxides are more potent and persistent, and are in equal concentration compared to CO_2.

Choose the correct answer from the options given below:

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

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

Question Type :	**MCQ**
Question ID :	**458908992**
Option 1 ID :	**4589083965**
Option 2 ID :	**4589083966**
Option 3 ID :	**4589083967**
Option 4 ID :	**4589083968**
Status :	**Answered**
Chosen Option :	**4**

Q.110

Which of the following event is NOT associated with jaundice?

1. Increased hemolysis, excess unconjugated bilirubin can appear in plasma
2. Blockage of intra hepatic biliary canaliculi
3. Blockage of bile duct
4. Enhanced breakdown of bilirubin

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

Question Type : **MCQ**
Question ID : **458908980**
Option 1 ID : **4589083917**
Option 2 ID : **4589083918**
Option 3 ID : **4589083919**
Option 4 ID : **4589083920**
Status : **Not Answered**
Chosen Option : **--**

Q.111

BRCA1 loss of function mutations are associated with ovarian and breast cancer. The best-known mechanism to cause transformation of cells due to loss of *BRCA1* is:

1. *BRCA1* is essential for homologous recombination repair. Loss of *BRCA1* leads to genomic instability leading to cancer.
2. *BRCA1* is essential for nucleotide excision repair. Pyrimidine dimers caused due to UV exposure cannot be repaired with loss of *BRCA1*.
3. *BRCA1* is essential for base excision repair. Spontaneous deamination of cytosine and uracil due to carcinogen cannot be repaired in cells lacking *BRCA1*.
4. *BRCA1* is essential for non-homologous end joining (NHEJ) pathway. Loss of *BRCA1*, thus, leads to genomic instability due to loss of NHEJ activity.

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

Question Type : **MCQ**
Question ID : **458908973**
Option 1 ID : **4589083889**
Option 2 ID : **4589083890**
Option 3 ID : **4589083891**
Option 4 ID : **4589083892**
Status : **Not Answered**
Chosen Option : **--**

Q.112

"Nitrogen Narcosis", also called as "raptures of the depth", can occur during deep sea diving due to compressed nitrogen. The mechanism behind this is:

1. It dissolves cytosolic proteins of cardiac cells.
2. It dissolves fatty substances in neurons.
3. It enhances neuronal excitability.
4. Excess calcium secreted out of cardiac cells.

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

Question Type : **MCQ**
Question ID : **458908936**
Option 1 ID : **4589083741**
Option 2 ID : **4589083742**
Option 3 ID : **4589083743**
Option 4 ID : **4589083744**
Status : **Not Answered**
Chosen Option : **--**

Q.113

Match List I with List II

	List I		List II
A.	Prolactin	I.	Posterior pituitary
B.	Insulin	II.	Hypothalamus
C.	Oxytocin	III.	Anterior pituitary
D.	Dopamine	IV.	Pancreas

Choose the correct answer from the options given below:

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

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

Question Type : **MCQ**
Question ID : **458908981**
Option 1 ID : **4589083921**
Option 2 ID : **4589083922**
Option 3 ID : **4589083923**
Option 4 ID : **4589083924**
Status : **Answered**
Chosen Option : **3**

Q.114

Which of the following parameter best assesses the efficacy of a conjugate vaccine against SARS-CoV-2?

1. Cytokine levels in blood
2. IgM and IgG antibody titers
3. IgA and IgD antibody titers
4. IgE antibody titer

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

Question Type : **MCQ**
Question ID : **458908961**
Option 1 ID : **4589083841**
Option 2 ID : **4589083842**
Option 3 ID : **4589083843**
Option 4 ID : **4589083844**
Status : **Not Answered**
Chosen Option : **--**

Q.115

Given below are two statements:

Statement I: Catabolite repressor protein (CRP) regulates both arabinose and lactose operons.

Statement II: Both *ara* and *lac* operon will be switched on when *E. coli* are grown in a medium containing arabinose and lactose.

In the light of the above statements, choose the correct 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 1. 1
2. 2
3. 3
4. 4

Question Type : **MCQ**
Question ID : **458908964**
Option 1 ID : **4589083853**
Option 2 ID : **4589083854**
Option 3 ID : **4589083855**
Option 4 ID : **4589083856**
Status : **Answered**
Chosen Option : **1**

Q.116

The half-life of a radionucleotide with a decay constant of 2×10^{-2} min^{-1} is:

1. 0.35 min
2. 3.46 min
3. 34.50 min
4. 346.50 min

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

Question Type : **MCQ**
Question ID : **458908976**
Option 1 ID : **4589083901**
Option 2 ID : **4589083902**
Option 3 ID : **4589083903**
Option 4 ID : **4589083904**
Status : **Not Answered**
Chosen Option : **--**

Q.117

Which of the following combination do not represent the functional attributes of a grassland ecosystem?

1. nutrient cycling and energy flow
2. macroconsumers and microconsumers
3. homeostasis, and diversity in time and space
4. food chain and development of ecosystem

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

Question Type : **MCQ**
Question ID : **458908954**
Option 1 ID : **4589083813**
Option 2 ID : **4589083814**
Option 3 ID : **4589083815**
Option 4 ID : **4589083816**
Status : **Answered**
Chosen Option : **3**

Q.118

Which of the following diagnostic techniques(/s) use radiofrequency?

A. Magnetic Resonance Imaging

B. X-Ray

C. Positron Emission Tomography

D. Ultrasound

Choose the most appropriate answer from the options given below:

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

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

Question Type : **MCQ**
Question ID : **458908946**
Option 1 ID : **4589083781**
Option 2 ID : **4589083782**
Option 3 ID : **4589083783**
Option 4 ID : **4589083784**
Status : **Not Answered**
Chosen Option : **--**

Q.119

Given below are two statements:

Statement I: To analyze rolling circle replication, Southern blotting is performed under non-denaturing conditions.

Statement II: UV crosslinking primarily involves pyrimidine nucleotides.

In the light of the above statements, choose the correct 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 1. 1
2. 2
3. 3
4. 4

Question Type : **MCQ**
Question ID : **458908975**
Option 1 ID : **4589083897**
Option 2 ID : **4589083898**
Option 3 ID : **4589083899**
Option 4 ID : **4589083900**
Status : **Not Answered**
Chosen Option : **--**

Q.120

Analyze the sequence below:

ATG AAG TCA AAT CGA

A change in the underlined C to G would result in:

1. Silent mutation
2. Frame shift mutation
3. Non sense mutation
4. Missense mutation

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

Question Type : **MCQ**
Question ID : **458908970**
Option 1 ID : **4589083877**
Option 2 ID : **4589083878**
Option 3 ID : **4589083879**
Option 4 ID : **4589083880**
Status : **Answered**
Chosen Option : **2**

Q.121

The cellulose microfibrils are synthesized by the enzyme cellulose synthase in which part of the plant cell?

1. Cytosol
2. Endoplasmic reticulum
3. Golgi apparatus
4. Plasma membrane

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

Question Type : **MCQ**
Question ID : **458908942**
Option 1 ID : **4589083765**
Option 2 ID : **4589083766**
Option 3 ID : **4589083767**
Option 4 ID : **4589083768**
Status : **Answered**
Chosen Option : **2**

Q.122

Which of the following statement is correct regarding heterodimeric transcription factor NF-κB in resting cells?

1. It is composed of p50 and p65 subunits bound to I-κBa in the cytosol.
2. It is composed of p50 and p65 subunits bound to I-κBa in the nucleus.
3. It is composed of p53 and p65 subunits bound to I-κBa in the cytosol.
4. It is composed of p21 and p65 subunits bound to I-κBa in the nucleus.

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

Question Type :	**MCQ**
Question ID :	**458908949**
Option 1 ID :	**4589083793**
Option 2 ID :	**4589083794**
Option 3 ID :	**4589083795**
Option 4 ID :	**4589083796**
Status :	**Not Answered**
Chosen Option :	**--**

Q.123

Two populations get geographically separated but during the initial stage of speciation they remain connected through gene flow. Which of the following best describes this mode of speciation?

1. Allopatric
2. Parapatric
3. Polyploid
4. Chromosomal speciation

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

Question Type :	**MCQ**
Question ID :	**458908984**
Option 1 ID :	**4589083933**
Option 2 ID :	**4589083934**
Option 3 ID :	**4589083935**
Option 4 ID :	**4589083936**
Status :	**Answered**
Chosen Option :	**4**

Q.124

The following statements are related to the regulation of the enzyme nitrate reductase.

A. Light, carbohydrate levels, and other environmental factors activate the enzymes by dephosphorylation.

B. Light, carbohydrate levels, and other environmental factors inactivate the enzymes by dephosphorylation.

C. Darkness and Mg^{2+} inactivate the enzyme by phosphorylation.

D. Darkness and Mg^{2+} activate the enzyme by dephosphorylation.

Choose the correct answer from the options given below:

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

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

Question Type : **MCQ**
Question ID : **458908962**
Option 1 ID : **4589083845**
Option 2 ID : **4589083846**
Option 3 ID : **4589083847**
Option 4 ID : **4589083848**
Status : **Not Answered**
Chosen Option : **--**

Q.125

Which of the following is not a targeted therapy routinely used to treat cancer patients?

1. Palbociclib
2. Imatinib
3. Doxorubicin
4. Herceptin

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

Question Type : **MCQ**
Question ID : **458908953**
Option 1 ID : **4589083809**
Option 2 ID : **4589083810**
Option 3 ID : **4589083811**
Option 4 ID : **4589083812**
Status : **Not Answered**
Chosen Option : **--**

Q.126

Given below are two statements:

Statement I: Vapour Pressure Deficit (VPD) is the difference between the partial pressure of water vapour at saturation and the actual vapour pressure.

Statement II: VPD is a measure of moisture relation because evaporation tend to be proportional to VPD rather than to relative humidity.

In the light of the above statements, choose the correct 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 1. 1
2. 2
3. 3
4. 4

Question Type : **MCQ**
Question ID : **458908993**
Option 1 ID : **4589083969**
Option 2 ID : **4589083970**
Option 3 ID : **4589083971**
Option 4 ID : **4589083972**
Status : **Not Answered**
Chosen Option : **--**

Q.127

Which of the following best describes how cDNA library is synthesized from human liver tissue?

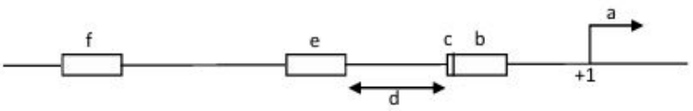
1. Use of oligo dT primers with reverse transcriptase followed by amplification with random hexamers
2. Use of random hexamers with Taq polymerase followed by amplification with oligo dT primers
3. Use of oligo dT primers with Taq polymerase and amplification with random hexamers
4. Use of random hexamers with reverse transcriptase followed by amplification with oligo dT primers

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

Question Type : **MCQ**
Question ID : **458908959**
Option 1 ID : **4589083833**
Option 2 ID : **4589083834**
Option 3 ID : **4589083835**
Option 4 ID : **4589083836**
Status : **Not Answered**
Chosen Option : **--**

Q.128

Match the labels (a-f) with the different components of a bacterial promoter as given below:



1. a: translation start site, b: extended –10, c: –10, d: spacer, e: –35, f: UP element
2. a: transcription start site, b: extended –10, c: –10, d: spacer, e: –35, f: UP element
3. a: translation start site, b: –10, c: extended –10, d: spacer, e: –35, f: UP element
4. a: transcription start site, b: –10, c: extended –10, d: spacer, e: –35, f: UP element

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

Question Type :	**MCQ**
Question ID :	**458908952**
Option 1 ID :	**4589083805**
Option 2 ID :	**4589083806**
Option 3 ID :	**4589083807**
Option 4 ID :	**4589083808**
Status :	**Not Answered**
Chosen Option :	**--**

Q.129

The activity of which enzyme of C3 pathway will be maximally inhibited when a plant is suddenly brought to dark from light?

1. Hexokinase
2. Fructose-1,6-bisphosphatase
3. Transketolase
4. ATP synthase

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

Question Type :	**MCQ**
Question ID :	**458908945**
Option 1 ID :	**4589083777**
Option 2 ID :	**4589083778**
Option 3 ID :	**4589083779**
Option 4 ID :	**4589083780**
Status :	**Answered**
Chosen Option :	**2**

Q.130

Local anaesthetics like Procaine and Tetracaine act by:

A. Blocking the sodium channels

B. Exciting the sodium channels

C. Reducing membrane excitability

D. Increasing the membrane threshold

Choose the most appropriate answer from the options given below:

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

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

Question Type : **MCQ**
Question ID : **458908947**
Option 1 ID : **4589083785**
Option 2 ID : **4589083786**
Option 3 ID : **4589083787**
Option 4 ID : **4589083788**
Status : **Answered**
Chosen Option : **3**

Q.131

An enzyme has K_M of 16 µM in the absence of a competitive inhibitor and K_M^{app} of 24 µM in the presence of 6 µM of the inhibitor. Calculate K_I.

1. 8 µM
2. 4 µM
3. 6 µM
4. 12 µM

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

Question Type : **MCQ**
Question ID : **458908965**
Option 1 ID : **4589083857**
Option 2 ID : **4589083858**
Option 3 ID : **4589083859**
Option 4 ID : **4589083860**
Status : **Not Answered**
Chosen Option : **--**

Q.132

Which mass spectrometer should be used for performing MS/MS/MS and MS^n experiments?

1. Fourier Transform Ion Cyclotron Resonance Spectrometer (FTICR)
2. TOF
3. qTOF
4. TOF-TOF

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

Question Type : **MCQ**
Question ID : **458908921**
Option 1 ID : **4589083681**
Option 2 ID : **4589083682**
Option 3 ID : **4589083683**
Option 4 ID : **4589083684**
Status : **Answered**
Chosen Option : **1**

Q.133

Tetramethyl silane (TMS) is used as an internal standard in proton NMR studies because:

A. None of the protons in this compound are identical
B. TMS is insoluble in most organic liquids
C. TMS gives a single peak
D. TMS is inert

Choose the correct answer from the options given below:

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

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

Question Type : **MCQ**
Question ID : **458908923**
Option 1 ID : **4589083689**
Option 2 ID : **4589083690**
Option 3 ID : **4589083691**
Option 4 ID : **4589083692**
Status : **Not Answered**
Chosen Option : **--**

Q.134

The common herbicide, paraquat, kills plants by disrupting:

1. Amino acid synthesis
2. Carotenoid biosynthesis
3. Photosynthetic electron flow
4. Fatty acid synthesis

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

Question Type : **MCQ**
Question ID : **458908988**
Option 1 ID : **4589083949**
Option 2 ID : **4589083950**
Option 3 ID : **4589083951**
Option 4 ID : **4589083952**
Status : **Answered**
Chosen Option : **3**

Q.135

The family of prokaryotes that possess remarkable metabolic flexibility and can use variety of metal electron acceptors such as uranium, neptunium, selenium, tellurite, and vanadate etc. are:

1. *Shewanellaceae*
2. *Vibrionaceae*
3. *Enterobacteriaceae*
4. *Pasteurellaceae*

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

Question Type : **MCQ**
Question ID : **458908925**
Option 1 ID : **4589083697**
Option 2 ID : **4589083698**
Option 3 ID : **4589083699**
Option 4 ID : **4589083700**
Status : **Not Answered**
Chosen Option : **--**

Q.136 The fluidity of plasma membrane can be increased by introduction of:

1. *cis* unsaturation in fatty acid chains
2. *trans* unsaturation in fatty acid chains
3. longer fatty acid chains
4. saturation in fatty acid chains

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

Question Type : **MCQ**
Question ID : **458908963**
Option 1 ID : **4589083849**
Option 2 ID : **4589083850**
Option 3 ID : **4589083851**
Option 4 ID : **4589083852**
Status : **Answered**
Chosen Option : **2**

Q.137 Match List I with List II

	List I		List II
A.	Facilitation model	I.	Species traits are more important than the prevailing environment
B.	Initial floristic model	II.	One group of species may secrete allelochemicals to prevent others to come
C.	Tolerance model	III.	A species creates favourable environment for the next to come
D.	Inhibition model	IV.	Proposed by Connell and Slatyer

Choose the correct answer from the options given below:

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

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

Question Type : **MCQ**
Question ID : **458908969**
Option 1 ID : **4589083873**
Option 2 ID : **4589083874**
Option 3 ID : **4589083875**
Option 4 ID : **4589083876**
Status : **Not Answered**
Chosen Option : **--**

Q.138

Fresh LB medium was inoculated with 4000 bacterial cells. After 12 hours, the cell numbers reached to 256000. Considering that the bacteria exponentially multiply by binary fission, the generation time of bacteria is:

1. 30 min
2. 1 hour
3. 1.5 hours
4. 2 hours

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

Question Type :	**MCQ**
Question ID :	**458908986**
Option 1 ID :	**4589083941**
Option 2 ID :	**4589083942**
Option 3 ID :	**4589083943**
Option 4 ID :	**4589083944**
Status :	**Not Answered**
Chosen Option :	**--**

Q.139

Which would be the fractional saturation of Myoglobin when the partial pressure of O_2 is 30 torr?

1. 0.91 – 0.92
2. 0.84 – 0.85
3. 0.95 – 0.96
4. 0.88 – 0.89

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

Question Type :	**MCQ**
Question ID :	**458908931**
Option 1 ID :	**4589083721**
Option 2 ID :	**4589083722**
Option 3 ID :	**4589083723**
Option 4 ID :	**4589083724**
Status :	**Not Answered**
Chosen Option :	**--**

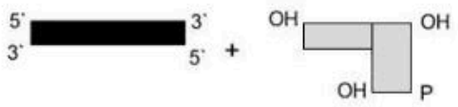
Q.140 Which of the following is INCORRECT regarding the mRNA decay in eukaryotes?

1. An exonuclease removes the poly(A) tail of mRNA.
2. Decapping enzyme Dcp1/Dcp2 removes 5' m^7G cap leaving mRNA with a 5' monophosphate.
3. RNase E binds to 5' monophosphate of mRNA and cleaves it as an endonuclease.
4. A 5'-3' exonuclease, Xrn1 completely digests 5'-mono phosphorylated mRNA.

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

Question Type : **MCQ**
Question ID : **458908987**
Option 1 ID : **4589083945**
Option 2 ID : **4589083946**
Option 3 ID : **4589083947**
Option 4 ID : **4589083948**
Status : **Answered**
Chosen Option : **4**

Q.141 A researcher ligated a DNA sequence with adaptors and phosphorylated the ends using T4 DNA polynucleotide kinase, as shown:



Which of the following is the correct product?

1. 

2. 

3. 

4. 

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

Question Type : **MCQ**
Question ID : **458908983**
Option 1 ID : **4589083929**
Option 2 ID : **4589083930**
Option 3 ID : **4589083931**
Option 4 ID : **4589083932**
Status : **Not Answered**
Chosen Option : **--**

Q.142

Regular chewing of bubble gum containing sucrose results in tooth decay because

1. Sucrose in bubble gum causes a decrease in pH and the acid erodes tooth enamel
2. Sucrose in bubble gum causes an increase in pH and alkalinity attacks tooth enamel
3. Sucrose in bubble gum causes no change in pH and promotes mechanical damage of tooth enamel
4. Sucrose in bubble gum causes no changes in pH and promote thermogenic damage of tooth enamel

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

Question Type : **MCQ**
Question ID : **458908982**
Option 1 ID : **4589083925**
Option 2 ID : **4589083926**
Option 3 ID : **4589083927**
Option 4 ID : **4589083928**
Status : **Answered**
Chosen Option : **1**

Q.143

Flower color and pollen grain shapes are linked in sweet peas. Purple (F) is dominant to red (f) flower color and long pollen grains (L) are dominant to round pollen grains (l). If the parental genotype is FL/fl, what would be the recombinant genotype in the gametes?

1. FL and fl
2. Ff and Ll
3. Fl and fL
4. FF and ll

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

Question Type : **MCQ**
Question ID : **458908971**
Option 1 ID : **4589083881**
Option 2 ID : **4589083882**
Option 3 ID : **4589083883**
Option 4 ID : **4589083884**
Status : **Not Answered**
Chosen Option : **--**

Q.144 A female mouse, homozygous for 'a' allele of the Igf2 gene, is crossed to a male which is homozygous for 'b' allele of this gene. Which of the following statement best describes the most appropriate outcome regarding the expression of Igf2 in the F1 progeny?

1. Igf2 locus is maternally imprinted, hence allele 'b' will be expressed.
2. Igf2 locus is maternally imprinted, hence allele 'a' will be expressed.
3. Igf2 locus is paternally imprinted, hence allele 'b' will be expressed.
4. Igf2 locus is paternally imprinted, hence allele 'a' will be expressed.

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

Question Type : **MCQ**
Question ID : **458908957**
Option 1 ID : **4589083825**
Option 2 ID : **4589083826**
Option 3 ID : **4589083827**
Option 4 ID : **4589083828**
Status : **Answered**
Chosen Option : **3**

Q.145 Which type of hypersensitivity is elicited in individuals injected intradermally with a filtrate derived from a mycobacterial culture?

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

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

Question Type : **MCQ**
Question ID : **458908985**
Option 1 ID : **4589083937**
Option 2 ID : **4589083938**
Option 3 ID : **4589083939**
Option 4 ID : **4589083940**
Status : **Answered**
Chosen Option : **3**

Exam Summary

LIFE SCIENCES

Section Name	No. of Questions	Answered	Not Answered	Marked for Review	Answered & Marked for Review	Not Visited
PART A	20	15	5	0	0	0

PART B	50	35	15	0	0	0
PART C	75	25	50	0	0	0

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