

Telangana State Council Higher Education

Notations :

1.Options shown in **green** color and with  icon are correct.

2.Options shown in **red** color and with  icon are incorrect.

Question Paper Name :	Bio Technology 30th May 2023 Shift1
Subject Name :	Bio Technology
Creation Date :	2023-05-30 13:11:07
Duration :	120
Total Marks :	120
Display Marks:	No
Share Answer Key With Delivery Engine :	Yes
Actual Answer Key :	Yes
Calculator :	None
Magnifying Glass Required? :	No
Ruler Required? :	No
Eraser Required? :	No
Scratch Pad Required? :	No
Rough Sketch/Notepad Required? :	No
Protractor Required? :	No
Show Watermark on Console? :	Yes
Highlighter :	No
Auto Save on Console?	Yes
Change Font Color :	No
Change Background Color :	No
Change Theme :	No

Help Button :	No
Show Reports :	No
Show Progress Bar :	No

Bio Technology

Group Number :	1
Group Id :	28393664
Group Maximum Duration :	0
Group Minimum Duration :	120
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	120
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

Mathematics

Section Id :	283936178
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	10
Number of Questions to be attempted :	10
Section Marks :	10
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0

Sub-Section Number : 1
Sub-Section Id : 283936178
Question Shuffling Allowed : Yes
Is Section Default? : null

Question Number : 1 Question Id : 2839369041 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

The condition for which all the eigenvalues of the matrix $A = \begin{bmatrix} 2 & 1 & 2 \\ 0 & K & 6 \\ 0 & 0 & 1 \end{bmatrix}$ are positive is

Options :

1. ✓ $K > 0$
2. ✗ $K > -3$
3. ✗ $K = 1$ only
4. ✗ $K > \frac{-2}{3}$

Question Number : 2 Question Id : 2839369042 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

If λ is an eigenvalue of A then the eigenvalues of $Adj(A)$ is

Options :

1. ✗ $\frac{1}{\lambda}$

2. ✖ λ

3. ✔ $\frac{|A|}{\lambda}$

4. ✖ $\frac{Adj(A)}{\lambda}$

Question Number : 3 Question Id : 2839369043 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

The sequence $\{x_n\}$ where $x_n = \left(1 + \frac{1}{3n}\right)^{2n}$ converge to

Options :

1. ✔ $e^{\frac{2}{3}}$

2. ✖ $e^{\frac{1}{3}}$

3. ✖ e^2

4. ✖ e^3

Question Number : 4 Question Id : 2839369044 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $f(x) = |x|$, $-\pi < x < \pi$ and the Fourier series of $f(x) = \sum_{n=0}^{\infty} (a_n \cos nx + b_n \sin nx)$ then $a_0 =$

Options :

1. ✖ $-\pi$

2. ✖ π

3. ✖ $\frac{-\pi}{2}$

4. ✔ $\frac{\pi}{2}$

Question Number : 5 Question Id : 2839369045 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

It is given that correlation coefficient of the 'n' pair of observations (x, y) is $r = 0.8$, $\sum XY = 60$, $\sum X^2 = 90$ and $\sigma_y = 2.5$, here X, Y are deviations from the arithmetic means of x and y , then $n =$

Options :

1. ✖ 30

2. ✖ 20

3. ✔ 10

4. ✖ 5

Question Number : 6 Question Id : 2839369046 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If the two regression coefficients are 0.8 and 0.2 , then the value of coefficient of correlation is

Options :

1. ✓ 0.4

2. ✗ 0.5

3. ✗ 0.6

4. ✗ 0.7

Question Number : 7 Question Id : 2839369047 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Integrating factor of $x^2 y dx - (x^3 + y^3) dy = 0$ is

Options :

1. ✗ $\frac{-1}{y^4}$

2. ✗ $\frac{1}{x^2 + y^2}$

3. ✗

$$\frac{1}{x^2 y^2}$$

4. ✓ y^4

Question Number : 8 Question Id : 2839369048 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

The general solution of $\frac{dy}{dx} + 1 = e^{x+y}$ is

Options :

1. ✗ $x - e^{-(x+y)} = c$

2. ✓ $x + e^{-(x+y)} = c$

3. ✗ $xe^{-(x+y)} = c$

4. ✗ $xye^{-(x+y)} = c$

Question Number : 9 Question Id : 2839369049 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

The first approximation to a real root of the equation $x^3 - x - 4 = 0$ by Regula-falsi method between 1 and 2 is

Options :

1. ✖ 1.223

2. ✖ 1.333

3. ✔ 1.666

4. ✖ 1.466

Question Number : 10 Question Id : 2839369050 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The iterative formula to find a numerical solution of an initial value problem

$\frac{dy}{dx} = f(x, y), y(x_0) = y_0$ using Euler's method is

Options :

1. ✖ $y_{n+1} = hf(x_n, y_n)$

2. ✖ $y_{n+1} = y_n + f(x_n, y_n)$

3. ✖ $y_{n+1} = y_0 + f(x_n, y_n)$

4. ✔ $y_{n+1} = y_n + hf(x_n, y_n)$

Bio Technology

Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	110
Number of Questions to be attempted :	110
Section Marks :	110
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	283936179
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 11 Question Id : 2839369051 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

.....is a secondary database

Options :

1. ✖ DDBJ

2. ✖ Genbank

3. ✖ PDB

4. ✔ Inter pro

Question Number : 12 Question Id : 2839369052 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

ddNTPs are used inDNA sequencing

Options :

1. ✖ Shot gun
2. ✔ Sanger
3. ✖ Pair-wise end
4. ✖ NGS

Question Number : 13 Question Id : 2839369053 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

.....is not a multiple sequence alignment tool

Options :

1. ✖ FASTA
2. ✖ CLUSTAL W
3. ✖ COBALT
4. ✔ BLAST

Question Number : 14 Question Id : 2839369054 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A node in a phylogenetic tree represents.....

Options :

1. ✓ a branching point from ancestral population
2. ✗ topmost branch of each point
3. ✗ a group of organisms
4. ✗ diversification of genus

Question Number : 15 Question Id : 2839369055 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In PAM250 matrix the figure 250 denotes.....

Options :

1. ✗ 250 squares are present in the matrix
2. ✗ 250 aminoacids are identical
3. ✓ 250 mutations per 100 aminoacids have happened
4. ✗ 250 different types of PAM are available

Question Number : 16 Question Id : 2839369056 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the difference between a genome and a transcriptome?

Options :

1. ✓ A genome is the complete set of genes in an organism, while a transcriptome is the complete set of RNA transcripts produced by the genome
2. ✗ A genome is the complete set of RNA transcripts produced by an organism, while a transcriptome is the complete set of genes in the genome
3. ✗ A genome is the complete set of proteins produced by an organism, while a transcriptome is the complete set of genes in the genome
4. ✗ A genome is the complete set of genes and proteins produced by an organism, while a transcriptome is the complete set of RNA transcripts produced by the genome

Question Number : 17 Question Id : 2839369057 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

.....microarrays can be used for the detection of both mutation genotyping and gene expression analysis

Options :

1. ✗ cDNA
2. ✓ Oligonucleotide

3. ✖ Gene chip

4. ✖ DNA microarray

Question Number : 18 Question Id : 2839369058 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

.....can be introduced in sequence alignments for better matching

Options :

1. ✖ BLAST

2. ✔ Gap penalty

3. ✖ Null characters

4. ✖ Relative scores

Question Number : 19 Question Id : 2839369059 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Lipinski rule of five is related to

Options :

1. ✔ Pharmacological suitability of drugs for oral administration

2. ✖ 5 atoms interaction in a drug

3. ✖ Binding energy of drug ligand interaction

4. ✖ Log p Value of greater than 5

Question Number : 20 Question Id : 2839369060 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

.....extension is used in files for nucleic acids

Options :

1. ✔ .fna

2. ✖ .fnf

3. ✖ .fan

4. ✖ .frn

Question Number : 21 Question Id : 2839369061 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Select the category of enzymes to which Bal31 belongs, which is purified from
Alteromonas Espejiana.

Options :

1. ✖ Phosphatase

2. ✖ Endonuclease

3. ✖ Helicase

4. ✔ Exonuclease

**Question Number : 22 Question Id : 2839369062 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Correct Marks : 1 Wrong Marks : 0

A vector named pBluescript S K is a best known example of

Options :

1. ✖ Virus

2. ✔ Phagemid

3. ✖ Cosmid

4. ✖ Phage

**Question Number : 23 Question Id : 2839369063 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Correct Marks : 1 Wrong Marks : 0

The length of DNA that is allowed to clone by a P1 cloning vector is

Options :

1. ✖ 20 kbp

2. ✖ 50 kbp

3. ✔ 100 kbp

4. ✖ 10 kbp

Question Number : 24 Question Id : 2839369064 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

pYAC3 is

Options :

1. ✖ Plasmid vector

2. ✔ Yeast artificial chromosome

3. ✖ Yeast chromosome

4. ✖ Hybrid of phage and plasmid

Question Number : 25 Question Id : 2839369065 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The Restriction enzyme E.CoR1, R stands for

Options :

1. ✖ Restriction site
2. ✔ RY 13 strain
3. ✖ Replication site on host DNA
4. ✖ Recombination site on host DNA after the action of the enzyme

Question Number : 26 Question Id : 2839369066 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The libraries that are constructed in plasmid vectors could be kept as

Options :

1. ✖ Naked DNA
2. ✖ Plasmid containing cells
3. ✖ Plasmid lacking cells
4. ✔ Both plasmid containing cells as well as naked DNA

Question Number : 27 Question Id : 2839369067 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Select a restriction modification system from the following.

Options :

1. ✖ DNA ligase + acetylase
2. ✖ DNA ligase + methylase
3. ✔ Restriction endonuclease + methylase
4. ✖ Restriction endonuclease + acetylase

Question Number : 28 Question Id : 2839369068 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The category of mutation which is not imposed by transposons is

Options :

1. ✖ Polar mutation
2. ✖ Frame shift mutation
3. ✔ Induced mutation
4. ✖ Reverse mutation

Question Number : 29 Question Id : 2839369069 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A tissue graft between two people who are not genetically identical is termed as

Options :

1. ✖ Isograft
2. ✔ Allograft
3. ✖ Xenograft
4. ✖ Autograft

Question Number : 30 Question Id : 2839369070 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The Maxam Gilbert method involves which type of DNA breakdown?

Options :

1. ✔ Base-specific
2. ✖ Interstitial
3. ✖ Gene-specific
4. ✖ Edge

Question Number : 31 Question Id : 2839369071 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of these enzymes is sensitive to high temperatures?

Options :

1. ✖ pfu polymerase
2. ✔ DNA polymerase III
3. ✖ Vent polymerase
4. ✖ Taq polymerase

**Question Number : 32 Question Id : 2839369072 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0**

Correct Marks : 1 Wrong Marks : 0

Which of the following is not a polymorphic marker?

Options :

1. ✖ Microsatellites
2. ✖ SNPs
3. ✖ RFLP
4. ✔ TALENS

**Question Number : 33 Question Id : 2839369073 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time**

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

CRISPR cas was identified as an immunological mechanism in

Options :

1. ✖ Fungi
2. ✖ Cancer cells
3. ✔ Bacteria
4. ✖ Plant cell

Question Number : 34 Question Id : 2839369074 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Common name of *Apis mellifera*

Options :

1. ✖ Microsporidium
2. ✖ Yeast
3. ✖ Fruit fly
4. ✔ Honeybee

Question Number : 35 Question Id : 2839369075 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In a laboratory experiment the catalytic activity of an enzyme is enhanced by mutating a specific aminoacid in the active site by

Options :

1. ✖ PCR
2. ✔ Site directed mutagenesis
3. ✖ Cloning
4. ✖ Transformation

Question Number : 36 Question Id : 2839369076 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The allergic reaction is mediated by which type of immunoglobulin

Options :

1. ✖ IgA
2. ✔ IgE
3. ✖ IgG
4. ✖ IgM

Question Number : 37 Question Id : 2839369077 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The antibody which reacts with small chemical groups on antigen are called as

Options :

1. ✖ Paratope

2. ✖ Allotope

3. ✔ Epitope

4. ✖ Isotope

Question Number : 38 Question Id : 2839369078 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The memory cells persist in -----

Options :

1. ✖ Spleen

2. ✖ Liver

3. ✖ Kidney

4. ✔ Bone marrow

Question Number : 39 Question Id : 2839369079 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The type of immunity provided in infant or foetus by IgG and IgA antibodies is called as

Options :

1. ✖ Artificial Active Immunity
2. ✖ Artificial Passive Immunity
3. ✖ Natural Active Immunity
4. ✔ Natural Passive Immunity

Question Number : 40 Question Id : 2839369080 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is produced due to natural humoral immune response against pathogens

Options :

1. ✖ Monoclonal antibodies
2. ✔ Polyclonal antibodies
3. ✖ Macrophages
4. ✖ Serum

Question Number : 41 Question Id : 2839369081 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The medium used for selection of hybrid cells in hybridoma technology

Options :

1. ✖ X-gal medium
2. ✖ MS medium
3. ✔ HAT medium
4. ✖ Mac conkey medium

Question Number : 42 Question Id : 2839369082 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The cell that are made by deficiency of Hypoxanthine-guanine phosphoribosyl transferase (HGPRT)

Options :

1. ✔ Myeloma cells
2. ✖ B cells
3. ✖ T cells

4. ✖ Hybrid cells

Question Number : 43 Question Id : 2839369083 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Component C3b in complement system helps in

Options :

1. ✖ An anaphylatoxin
2. ✔ Opsonization of bacteria
3. ✖ Chemotactic
4. ✖ Inactive form of C3

Question Number : 44 Question Id : 2839369084 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Salk and Sabin both are used as ----- vaccine

Options :

1. ✖ Hepatitis A
2. ✔ Polio
3. ✖ HIV

4. ✖ COVID-19

Question Number : 45 Question Id : 2839369085 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The disease/syndrome caused due to presence of anti-TSH receptor antibody associated with autoimmune thyroid disorder is

Options :

1. ✔ Grave's disease
2. ✖ Hashimoto thyroiditis
3. ✖ Goodpasture syndrome
4. ✖ Hurler Syndrome

Question Number : 46 Question Id : 2839369086 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

CO₂ is required in the maintenance of animal cell lines as it provides

Options :

1. ✔ pH maintenance
2. ✖ Carbons source

3. ✖ To neutralise toxins

4. ✖ For protein production

**Question Number : 47 Question Id : 2839369087 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Correct Marks : 1 Wrong Marks : 0

What is the plasma membrane composed of?

Options :

1. ✖ A phospholipid bilayer

2. ✖ Multiple layers of phospholipids

3. ✖ A single layer of phospholipids plus embedded proteins

4. ✔ A phospholipid bilayer plus embedded proteins

**Question Number : 48 Question Id : 2839369088 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Correct Marks : 1 Wrong Marks : 0

Micro carriers used in animal cell culture are intended forpurpose

Options :

1. ✖ Nutrition layer

2. ✖ Growth

3. ✖ Cell aggregation

4. ✔ Anchorage

Question Number : 49 Question Id : 2839369089 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

.....non tumorigenic cell line was used for the production of poliomyelitis vaccine

Options :

1. ✖ PER

2. ✔ Vero

3. ✖ MDCK

4. ✖ Hela

Question Number : 50 Question Id : 2839369090 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The Osmolarity of medium used for animal cell line cultivation is preferred atm
Osmoles

Options :

1. ✖ 100 – 120

2. ✓ 260 – 320

3. ✗ 400 – 490

4. ✗ 500 – 600

**Question Number : 51 Question Id : 2839369091 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0**

Correct Marks : 1 Wrong Marks : 0

The most abundant enzyme present on earth due to plants

Options :

1. ✓ RuBisCo

2. ✗ Triose phosphate isomerase

3. ✗ Trypsin

4. ✗ Lipase

**Question Number : 52 Question Id : 2839369092 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0**

Correct Marks : 1 Wrong Marks : 0

The capability of single cells to divide for the production of completely differentiated cells
resulting into a complete organism is known as

Options :

1. ✖ Unipotent
2. ✔ Totipotency
3. ✖ Multipotent
4. ✖ Pluripotent

Question Number : 53 Question Id : 2839369093 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The plant which obtains its necessary nutrients by trapping insects

Options :

1. ✔ Nepenthes
2. ✖ Orchids
3. ✖ Papyrus
4. ✖ Ferns

Question Number : 54 Question Id : 2839369094 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is an example of transformed root culture

Options :

1. ✖ Tap root
2. ✖ Meristem
3. ✔ Hairy root
4. ✖ Protoplast

Question Number : 55 Question Id : 2839369095 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The molecules called Elicitors are used in plant biotechnology to

Options :

1. ✖ induce cell division
2. ✔ stimulate secondary metabolite's production
3. ✖ stimulate hairy root formation
4. ✖ induce DNA replication

Question Number : 56 Question Id : 2839369096 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Ethanol, a secondary metabolite is produced in.....phase of growth by yeast

Options :

1. ✖ Lag phase
2. ✖ Log phase
3. ✔ Prediauxic phase
4. ✖ Death phase

Question Number : 57 Question Id : 2839369097 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

During downstream processing which of the following does not occur

Options :

1. ✖ Product purification
2. ✖ Product recovery
3. ✔ Media formulation
4. ✖ Cell lysis

Question Number : 58 Question Id : 2839369098 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which order is followed when substrate concentration is high in enzyme catalyzed reactions

Options :

1. ✖ Second order
2. ✔ First order
3. ✖ Steady state
4. ✖ Zero order

Question Number : 59 Question Id : 2839369099 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Exponential phase is of longer duration in which mode of fermentation

Options :

1. ✖ Batch
2. ✔ Continuous
3. ✖ Semi batch
4. ✖ Closed batch

Question Number : 60 Question Id : 2839369100 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

..... explains dissolution of gases in liquid and partial pressure

Options :

1. ✖ Law of mass action
2. ✔ Henry's law
3. ✖ Law of chemical combination
4. ✖ Boyle's law

Question Number : 61 Question Id : 2839369101 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The volumetric mass transfer coefficient parameter in a fermentation broth indicates

Options :

1. ✔ The rate of oxygen used for Fermentation
2. ✖ Amount of medium entering the microbial cell
3. ✖ Ratio of total volume to total mass in the fermenter
4. ✖ Agitation speed in the fermenter

Question Number : 62 Question Id : 2839369102 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

.....is a non-Newtonian fluid

Options :

1. ✖ Water
2. ✔ Blood
3. ✖ Mineral oil
4. ✖ Gasoline

Question Number : 63 Question Id : 2839369103 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

.....biosensors measure current flow between electrodes during a redox reaction

Options :

1. ✖ Potentiometric
2. ✔ Amperometric
3. ✖ Calorimetric
4. ✖ Piezoelectric

Question Number : 64 Question Id : 2839369104 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

.....is preferred in air sterilization in bioreactors

Options :

1. ✓ Steam sterilization
2. ✗ Heat sterilization
3. ✗ Chemical sterilization
4. ✗ Radiation

Question Number : 65 Question Id : 2839369105 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

While using enzymes for enzyme bioreactors,is a cost-effective method

Options :

1. ✓ Immobilised enzymes
2. ✗ Free soluble enzymes
3. ✗ Thermostable enzymes
4. ✗ Shear resistant enzymes

Question Number : 66 Question Id : 2839369106 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The preferred organism used in citric acid fermentation is

Options :

1. ✖ E.coli
2. ✖ Lactobacilli
3. ✔ Aspergillus niger
4. ✖ Bacillus subtilis

Question Number : 67 Question Id : 2839369107 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Precipitation of protein by salting out method is carried out by-----

Options :

1. ✖ Calcium chloride
2. ✔ Ammonium sulphate
3. ✖ Sodium chloride
4. ✖ Ammonium hydroxide

Question Number : 68 Question Id : 2839369108 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Diatomaceous earth matrix is used in which immobilization method

Options :

1. ✖ Adsorption
2. ✖ Covalent bonding
3. ✔ Entrapment
4. ✖ Membrane confinement

Question Number : 69 Question Id : 2839369109 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

L-alanine is produced by using the immobilized enzyme called

Options :

1. ✖ Lactase
2. ✖ Invertase
3. ✖ Lipase
4. ✔ Aspartate 4-decarboxylase

Question Number : 70 Question Id : 2839369110 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

.....are major polysaccharide component of structural scaffold of the biofilms produced by bacterial colonies

Options :

1. ✘ Teichoic acid
2. ✔ Exopolysaccharides
3. ✘ N-Acetyl glucosamine
4. ✘ Mannitol

Question Number : 71 Question Id : 2839369111 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

.....is a method for disposal of biomedical waste in hospitals

Options :

1. ✘ Landfill
2. ✘ Recycling
3. ✘ Vermicomposting
4. ✔ Incineration

Question Number : 72 Question Id : 2839369112 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Phytoremediation involves use of

Options :

1. ✘ methanogenic bacteria
2. ✘ microbes for degradation of hazardous materials
3. ✘ aerobic bacteria to clean up hazardous materials
4. ✔ plants for clean-up of hazardous materials

Question Number : 73 Question Id : 2839369113 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

.....is an example mainly of Anaerobic digestion

Options :

1. ✔ Biogas production
2. ✘ Composting
3. ✘ Sewage treatment
4. ✘ Effluent treatment

Question Number : 74 Question Id : 2839369114 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

.....process involves microbial extraction of metals from their ores

Options :

1. ✖ Bioaugmentation
2. ✔ Bioleaching
3. ✖ Bioprocessing
4. ✖ Bioremediation

Question Number : 75 Question Id : 2839369115 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

.....is used in purification of recombinant protein by affinity chromatography

Options :

1. ✖ Fc fragment
2. ✔ His tag
3. ✖ Resins
4. ✖ Carriers

Question Number : 76 Question Id : 2839369116 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The range of molecular weight cut for ultrafiltration should be close to

Options :

1. ✖ 0.1 kDa

2. ✖ 0.5 kDa

3. ✖ 1 kDa

4. ✔ 10 kDa

Question Number : 77 Question Id : 2839369117 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

.....enzymes are used in liquid detergents

Options :

1. ✖ Polymerases

2. ✖ Nucleases

3. ✔ Lipases

4. ✖ Papain

Question Number : 78 Question Id : 2839369118 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

For the production of probiotic biomass, the growth phase be better maintained in
phase

Options :

1. ✓ Log phase
2. ✗ Stationary phase
3. ✗ Lag phase
4. ✗ Extra lag phase

Question Number : 79 Question Id : 2839369119 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Pencillin produced by *Penicillium chrysogenum* is found to inhibit growth of

Options :

1. ✓ Gram positive bacteria
2. ✗ Gram negative bacteria
3. ✗ Fungus
4. ✗ Algae

Question Number : 80 Question Id : 2839369120 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

.....is a pigment found in humans

Options :

1. ✖ Myoglobin
2. ✔ Hemoglobin
3. ✖ Glycogen
4. ✖ Porphyrin

Question Number : 81 Question Id : 2839369121 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

.....enzymes play a key role in transition between supercoiled and relaxed forms
of DNA

Options :

1. ✖ Helicases
2. ✔ Topoisomerases
3. ✖ DNA polymerases

4. ✖ DNA ligases

Question Number : 82 Question Id : 2839369122 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In the Rho independent transcription termination pauses RNA polymerases

Options :

1. ✖ 3'UTS region
2. ✔ GC rich dyad symmetry of DNA and a stretch of Uridines
3. ✖ Dissociation of DNA from the RNA polymerase
4. ✖ Si RNA

Question Number : 83 Question Id : 2839369123 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In Eukaryotic transcription, ribosome binding to the mRNA is assisted by

Options :

1. ✔ 5' cap
2. ✖ Shine – Dalgarno sequence
3. ✖ 3' tail

4. ✖ Randomly

Question Number : 84 Question Id : 2839369124 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

.....can act independent of their orientation

Options :

1. ✖ TATA box

2. ✖ Regulator

3. ✖ CAAT box

4. ✔ Enhancer

Question Number : 85 Question Id : 2839369125 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In Eukaryotic organisms, the transcriptional gene control process is mediated by

Options :

1. ✖ proteins that bind to the cis-acting elements

2. ✖ metabolites failing to bind to cis-acting elements

3.

✓ trans-acting factors those binds to cis-acting elements

4. ✗ enhancer proteins that bind to operator sites

Question Number : 86 Question Id : 2839369126 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A test cross frequently used in genotype identification in breeding process is a

Options :

1. ✗ crossing between two dominant homozygotes
2. ✗ crossing of a dominant homozygote with a recessive heterozygote
3. ✗ crossing between two F_2 hybrids
4. ✓ crossing of an F_1 hybrid with a recessive homozygote

Question Number : 87 Question Id : 2839369127 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In gene interactions, which of the following ratio satisfies complementary way?

Options :

1. ✗ 15:1
2. ✓ 9:7

3. ✖ 1:2:1

4. ✖ 9:3:3:1

Question Number : 88 Question Id : 2839369128 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A centimorgan is used in genetics to measure

Options :

1. ✔ Genetic recombination frequency

2. ✖ Test cross results

3. ✖ Number of double cross overs

4. ✖ Length of the gene

Question Number : 89 Question Id : 2839369129 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

To map the genes accurately, which of the following mapping is used?

Options :

1. ✖ Single gene mapping

2. ✖ Two point mapping
3. ✔ Three point mapping
4. ✖ Four point mapping

Question Number : 90 Question Id : 2839369130 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The extensive phenotypic variations related to cytoplasm specific to some traits at cellular level is due to

Options :

1. ✖ Genetic effect
2. ✔ Different proportions of cytoplasmic genes
3. ✖ Environment effects
4. ✖ Epigenetic modifications

Question Number : 91 Question Id : 2839369131 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Monoploidy in plants can arise due to

Options :

1. ✖ Mutations

2. ✓ Parthenogenesis
3. ✗ Upon colchicine treatment
4. ✗ Genetic recombination

Question Number : 92 Question Id : 2839369132 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is the process through which some species travel from their origin to a new place leading to allele frequency variation?

Options :

1. ✗ genetic drift
2. ✓ gene migration
3. ✗ gene crossover
4. ✗ gene draft

Question Number : 93 Question Id : 2839369133 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In transposable elements, direct repeats in IS element are located

Options :

1. ✖ Within the transposon
2. ✖ Above the inverted repeat
3. ✔ Either side of the IS element
4. ✖ Below the inverted repeat

Question Number : 94 Question Id : 2839369134 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In a family, if the father is with a disease and the mother is not, while the daughters shows the same disease, but not the sons. Name this.

Options :

1. ✔ Sex-linked dominant
2. ✖ Autosomal recessive
3. ✖ Sex-linked recessive
4. ✖ Autosomal dominant

Question Number : 95 Question Id : 2839369135 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A population was calculated for two genes A and B. 100 people in the population are sampled. 50 people contained AA, 20AB, 30BB. Calculate the gene frequency of A and B.

Options :

1. ✖ frequency of gene A is 0.5 and B is 0.5
2. ✔ frequency of gene A is 0.6 and B is 0.4
3. ✖ frequency of gene A is 50 and B is 50
4. ✖ frequency of gene A is 0.5 and B is 0.3

Question Number : 96 Question Id : 2839369136 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which type of ribosomes are found in Prokaryotes

Options :

1. ✖ 80s
2. ✔ 70s
3. ✖ 20s
4. ✖ 18s

Question Number : 97 Question Id : 2839369137 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Lipoteichoic acids (LTA) are found in

Options :

1. ✓ Gram +ve bacteria
2. ✗ Gram -ve bacteria
3. ✗ Plant cell wall
4. ✗ Animal cell

Question Number : 98 Question Id : 2839369138 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The extremophile that grows at low temperature conditions are called as

Options :

1. ✗ Acidophilic
2. ✗ Thermophilic
3. ✓ Psychrophilic
4. ✗ Halophilic

Question Number : 99 Question Id : 2839369139 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A bacterial culture was inoculated which showed 10 generations after 5 hours. Calculate the doubling time in minutes

Options :

1. ✖ 2

2. ✔ 30

3. ✖ 5

4. ✖ 50

Question Number : 100 Question Id : 2839369140 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Ais used to maintain the concentration of medium composition constant.

Options :

1. ✖ Turbidostat

2. ✖ Bioreactor

3. ✔ Chemostat

4. ✖ Fermenter

Question Number : 101 Question Id : 2839369141 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In pharma industry sterility testing is done by

Options :

1. ✖ Agar medium
2. ✖ MacConkey agar
3. ✔ Thioglycollate Medium
4. ✖ Mannitol salt agar

Question Number : 102 Question Id : 2839369142 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

During anerobic respiration, CH_4 production by utilization of CO_2 as final electron acceptors is carried out by which group of organisms

Options :

1. ✔ Methanogens
2. ✖ Methylophils
3. ✖ Autotrophs
4. ✖ Methanotrophs

Question Number : 103 Question Id : 2839369143 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Auxotrophic mutants can be detected by

Options :

1. ✖ Streak plate technique

2. ✖ Spread plate technique

3. ✖ Pour plate technique

4. ✔ Replica plating

Question Number : 104 Question Id : 2839369144 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

-----are single-stranded RNA without a protein coat

Options :

1. ✖ Viruses

2. ✖ Bacteria

3. ✖ Prions

4. ✔ Viroids

Question Number : 105 Question Id : 2839369145 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Better transformation efficiency is expected in bacteria phase of growth

Options :

1. ✓ Mid log
2. ✗ Lag
3. ✗ Stationary
4. ✗ Independent parameter

Question Number : 106 Question Id : 2839369146 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The percentage of nitrogen in air is

Options :

1. ✓ 78
2. ✗ 21
3. ✗ 4
4. ✗ 12

Question Number : 107 Question Id : 2839369147 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is a promising nitrogen fixer?

Options :

1. ✘ Bean plant
2. ✔ Rhizobium
3. ✘ Rhizosphere
4. ✘ Leguminous plants

Question Number : 108 Question Id : 2839369148 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Corona virus contains.....as genetic material

Options :

1. ✔ RNA
2. ✘ DNA
3. ✘ Protein
4. ✘ RNA-DNA

Question Number : 109 Question Id : 2839369149 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

.....is used in the cleaning of laboratory glassware

Options :

1. ✖ Autoclave sterilisation
2. ✔ Chromic acid
3. ✖ Formaldehyde
4. ✖ Incineration

Question Number : 110 Question Id : 2839369150 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The frame shift mutation can occur due to

Options :

1. ✔ Insertion or deletion of a number of nucleotides that is not a multiple of three in the coding region
2. ✖ Protein termination due to nonsense mutation
3. ✖ Insertion of U for G by substitution mutation
4. ✖ Insertion of hydrophobic amino acids by missense mutation

Question Number : 111 Question Id : 2839369151 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

.....enzyme of glycolysis can be considered as flux generating step of glycolysis

Options :

1. ✖ Hexokinase
2. ✔ Phosphofructokinase
3. ✖ Aldolase
4. ✖ Triose isomerase

Question Number : 112 Question Id : 2839369152 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

.....ATP are produced if one complete oxidative cycle of TCA occurs which starts with citrate formation to regeneration of oxaloacetate

Options :

1. ✔ 12
2. ✖ 2
3. ✖ 5

Question Number : 113 Question Id : 2839369153 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The Enzyme commission number of Adenylate kinase is 2.7.4.3. What does 7 indicate as per EC number

Options :

1. ✖ Class of the enzyme
2. ✖ Type of reaction catalysed by the enzyme
3. ✖ Moles of substrate converted
4. ✔ Sub class of the enzyme class transfereases

Question Number : 114 Question Id : 2839369154 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In oxidative phosphorylation the energy required for phosphorylation of ADP to ATP is provided by

Options :

1. ✔ Electrochemical potential of protons
2. ✖ F1 ATP synthase

3. ✖ F0 ATP synthase

4. ✖ NADH

Question Number : 115 Question Id : 2839369155 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The molarity of commercial HCl is ~11N. Theoretically how much amount of commercial HCl is required to prepare 0.1N HCl of 25 ml solution.

Options :

1. ✖ 3.6 ml

2. ✔ 0.22 ml

3. ✖ 36 ml

4. ✖ 25 ml

Question Number : 116 Question Id : 2839369156 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The chemical formula of glucose is $C_6H_{12}O_6$. What is the weight (grams) of one mole of glucose

Options :

1. ✖ 60

2. ✖ 120

3. ✔ 180

4. ✖ 240

Question Number : 117 Question Id : 2839369157 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The following compound can show buffering capacity and follows Handerson Hasselbalch formula

Options :

1. ✖ HCl

2. ✖ H₂SO₄

3. ✔ Acetic acid

4. ✖ HNO₃

Question Number : 118 Question Id : 2839369158 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The molecular weight of NaOH is 40. To prepare 0.4M solution of 100 ml how much amount of NaOH is required.

Options :

1. ✖ 1 g

2. ✖ 4 g

3. ✔ 1.6 g

4. ✖ 40 mg

Question Number : 119 Question Id : 2839369159 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In which phase of cell cycle DNA is synthesised

Options :

1. ✖ G0 Phase

2. ✔ S phase

3. ✖ G2 phase

4. ✖ M phase

Question Number : 120 Question Id : 2839369160 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

ping pong mechanism is related toenzyme kinetics

Options :

1. ✖ Reversible
2. ✖ Irreversible
3. ✖ Single substrate
4. ✔ Bisubstrate