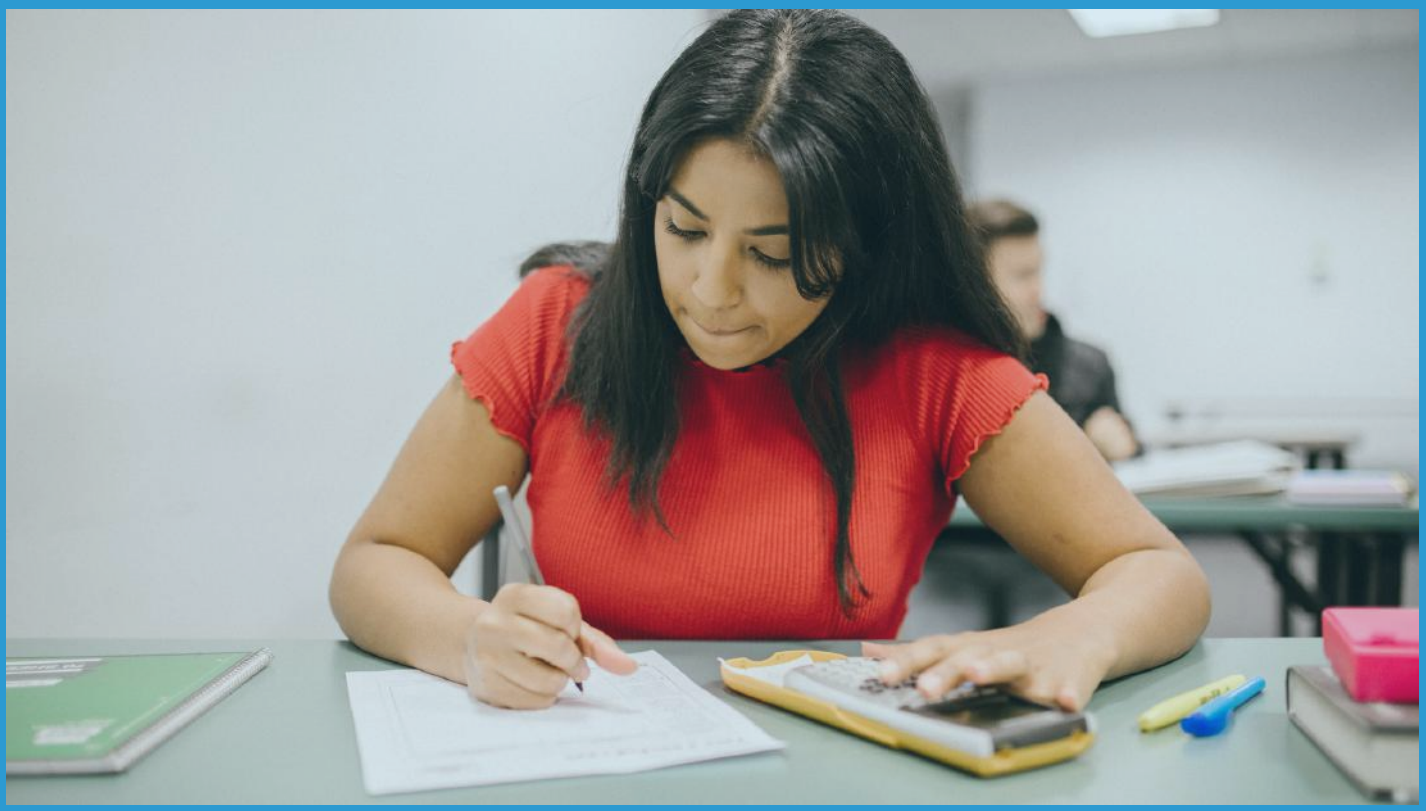
# TS PGECET QUESTION PAPER

2023



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**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 $\lambda$ is an eigenvalue of $A$ then the eigenvalues of $Adj(A)$ is

**Options :**

1. ✖ $\frac{1}{\lambda}$

2. ✗ $\lambda$

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. ✖ $\pi$

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. ✖

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

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 Id :** 283936179

| | |
|---|---|
| **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 in .....DNA 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**

$CO_2$ 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 for ……purpose

**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 at .....m 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 structral 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**

A ……is 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. ✖ Methylotrophs

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

4. ✖ 20

**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. ✖ $H_2SO_4$

3. ✔ Acetic acid

4. ✖ $HNO_3$

**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 to ……..enzyme kinetics

**Options :**

1. ✖ Reversible

2. ✖ Irreversible

3. ✖ Single substrate

4. ✔ Bisubstrate