

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 24th Sept 2020 Shift 1
Subject Name :	Bio Technology
Creation Date :	2020-09-24 15:58:28
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

Bio Technology

Group Number :	1
Group Id :	88039694
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

Mathematics

Section Id :	880396171
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	10
Number of Questions to be attempted :	10
Section Marks :	10
Display Number Panel :	Yes
Group All Questions :	Yes
Mark As Answered Required? :	Yes
Sub-Section Number :	1
Sub-Section Id :	880396171
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 88039611161 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Local maximum of $f(x, y) = x^2 + y^2$ subject to $x + y = 1$ is obtained at the point $(x, y) =$

Options :

$$\left(\frac{1}{4}, \frac{1}{4}\right)$$

88039644641. ✖

88039644642. ✘ $\left(\frac{1}{2}, -\frac{1}{2}\right)$

88039644643. ✘ $\left(-\frac{1}{2}, \frac{1}{2}\right)$

88039644644. ✔ $\left(\frac{1}{2}, \frac{1}{2}\right)$

Question Number : 2 Question Id : 88039611162 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

The Laplacian of $f(x, y) = x^3 - 3xy^2 + x^2 - y^2$ is

Options :

88039644645. ✔ 0

88039644646. ✘ f

88039644647. ✘ $2f$

88039644648. ✘ $3f$

Question Number : 3 Question Id : 88039611163 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

The average of squares of first n natural numbers is

Options :

88039644649. ✘ $\frac{2n^2 + 3n + 1}{2}$

88039644650. ✘ $\frac{2n^2 - 3n + 1}{6}$

88039644651. ✘ $\frac{2n^2 + 3n + 1}{3}$

88039644652. ✔ $\frac{2n^2 + 3n + 1}{6}$

Question Number : 4 Question Id : 88039611164 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

$$1 + 3(2!) + 7(3!) + 13(4!) + \dots + (n^2 - n + 1)(n!) =$$

Options :

88039644653. ✔ $1 - 3(n + 1)! + (n + 2)!$

88039644654. ✘ $1 - 3(n + 1)! + (n + 3)!$

88039644655. ✘ $1 - 3(n + 1)! + (n + 4)!$

88039644656. ✖ $1 + 3(n + 1)!$

Question Number : 5 Question Id : 88039611165 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The series $\sum_{n=0}^{\infty} \left(\frac{3x-4}{2x} \right)^n \frac{2x}{\sqrt[3]{n}}$ converges in the interval

Options :

88039644657. ✔ $\left(\frac{4}{5}, 4 \right)$

88039644658. ✖ $(0, 4)$

88039644659. ✖ $(-1, 4)$

88039644660. ✖ $(-2, 4)$

Question Number : 6 Question Id : 88039611166 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

$$\int_0^1 \int_0^1 xy \cos x \, dy \, dx =$$

Options :

88039644661. ✖ $-1 + \sin 1 \cos 1$

88039644662. ✘ $1 + \sin 1 \cos 1$

88039644663. ✘ $-\frac{1}{2}(-1 + \sin 1 \cos 1)$

88039644664. ✔ $\frac{1}{2}(-1 + \sin(1) \cos(1))$

Question Number : 7 Question Id : 88039611167 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

The solution of $y'' + 6y' + 9y = 0$ satisfying $y(0) = 1$, and $y'(0) = 0$ is $y(x) =$

Options :

88039644665. ✘ $e^{-3x} (3x^2 + x + 1)$

88039644666. ✔ $e^{-3x} (3x + 1)$

88039644667. ✘ $e^{-3x} (x^2 + 3x + 1)$

88039644668. ✘ $e^{-3x} (x^2 + 1)$

Question Number : 8 Question Id : 88039611168 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

The particular integral of $y'' + y' - 6y = xe^x$ is

Options :

88039644669. ✘ $-\frac{3}{16}e^x + \frac{1}{2}xe^x$

88039644670. ✘ $-\frac{3}{16}e^x + \frac{xe^x}{4}$

88039644671. ✔ $\frac{-3e^x}{16} - \frac{xe^x}{4}$

88039644672. ✘ $\frac{-3e^x}{16} + \frac{xe^x}{8}$

Question Number : 9 Question Id : 88039611169 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Characteristic equation of $\begin{pmatrix} 2 & 0 & 4 \\ 1 & 0 & 2 \\ -1 & 0 & 3 \end{pmatrix}$ is

Options :

88039644673. ✘ $\lambda^3 + 3\lambda^2 + 10\lambda = 0$

88039644674. ✘ $\lambda^3 + 4\lambda^2 - 10\lambda = 0$

88039644675. ✘ $\lambda^3 - 5\lambda^2 - 10\lambda = 0$

88039644676. ✔ $\lambda^3 - 5\lambda^2 + 10\lambda = 0$

Question Number : 10 Question Id : 88039611170 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Rank of the matrix $\begin{pmatrix} 3 & 5 & 0 \\ -2 & -3 & 1 \\ 1 & 2 & 1 \end{pmatrix}$ is

Options :

88039644677. ✖ 0

88039644678. ✖ 1

88039644679. ✔ 2

88039644680. ✖ 3

Bio Technology

Section Id :	880396172
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	110
Number of Questions to be attempted :	110
Section Marks :	110
Display Number Panel :	Yes
Group All Questions :	Yes
Mark As Answered Required? :	Yes

Sub-Section Number :

1

Sub-Section Id :

880396172

Question Shuffling Allowed :

Yes

Question Number : 11 Question Id : 88039611171 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Transcytosis is the movement of

Options :

88039644681. ✓ Endocytosed vesicles between the apical and basolateral compartments of the cells

88039644682. ✗ Sodium ions into the cells

88039644683. ✗ Water molecules outside the cells

88039644684. ✗ Proteins formed by the granular endoplasmic reticulum

Question Number : 12 Question Id : 88039611172 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Assertion (A): The major source of energy for the basic functioning of the cell is derived from oxidative metabolism.

Reasoning (R): Mitochondria oxidise substrates to CO_2 , transferring the high energy electron from the original molecules (eg, glucose) to molecular oxygen, and generating low-energy electrons of water which leads to H^+ ions flow through proton pumps, and the energy released is used in the synthesis of ATP.

Options :

88039644685. ✓ Both A and R are true and R is the correct reason for A

88039644686. ✗ Both A and R are true and R is not the correct reason for A

88039644687. ✗ A is true but R is false

88039644688. ✗ A is false but R is true

Question Number : 13 Question Id : 88039611173 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Corona virus is a

Options :

88039644689. ✗ Double stranded DNA virus

88039644690. ✓ Single stranded RNA virus

88039644691. ✗ Double stranded RNA virus

88039644692. ✗ Retro virus

Question Number : 14 Question Id : 88039611174 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Transduction is

Options :

88039644693. ✘ Transfer of genetic material through special pores
88039644694. ✘ Transfer of genetic material between bacterial cells by direct cell-to-cell contact
88039644695. ✘ Direct incorporation of naked donor DNA by the recipient cell
88039644696. ✔ Phage - mediated genetic recombination

Question Number : 15 Question Id : 88039611175 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

The primary route of carbon assimilation used by organisms that can use CO₂ as a sole source of carbon is

Options :

88039644697. ✘ Hexose monophosphate shunt
88039644698. ✘ Glyoxalate cycle
88039644699. ✔ Calvin cycle
88039644700. ✘ Embden-Meyerhof pathway

Question Number : 16 Question Id : 88039611176 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Which of the following is not a component of peptidoglycan ?

Options :

88039644701. ✓ Lipid A

88039644702. ✗ Pentaglycan

88039644703. ✗ N- Acetyl muramic acid

88039644704. ✗ N-Acetyl glucosamine

Question Number : 17 Question Id : 88039611177 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

A 26 year old women has 10 Escherichia coli inoculated into her bladder during coitus. These E coli have a generation time of 20 minutes. After a lag of 20 minutes, the E coli enter the logarithmic phase of growth. After 3 hours of logarithmic phase of growth, the total number of cells is (growth constant = 2.07 h^{-1})

Options :

88039644705. ✓ 2560

88039644706. ✗ 5012

88039644707. ✗ 1028

88039644708. ✗ 1,000,000

Question Number : 18 Question Id : 88039611178 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Sedimentation coefficient of bacterial ribosomes is

Options :

88039644709. ✘ 60S

88039644710. ✔ 70S

88039644711. ✘ 80S

88039644712. ✘ 90S

Question Number : 19 Question Id : 88039611179 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Conjugation does not involve

Options :

88039644713. ✔ Bacteriophages

88039644714. ✘ Her

88039644715. ✘ Fr

88039644716. ✘ Plasmids

Question Number : 20 Question Id : 88039611180 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Based on Oxygen requirements *Clostridium botulinum* is classified as

Options :

88039644717. ✘ Facultative anaerobe

88039644718. ✘ Microaerophilic

88039644719. ✔ Obligate anaerobe

88039644720. ✘ Aerobic

Question Number : 21 Question Id : 88039611181 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Which of the following enzyme contains Molybdenum?

Options :

88039644721. ✔ Xanthine oxidase

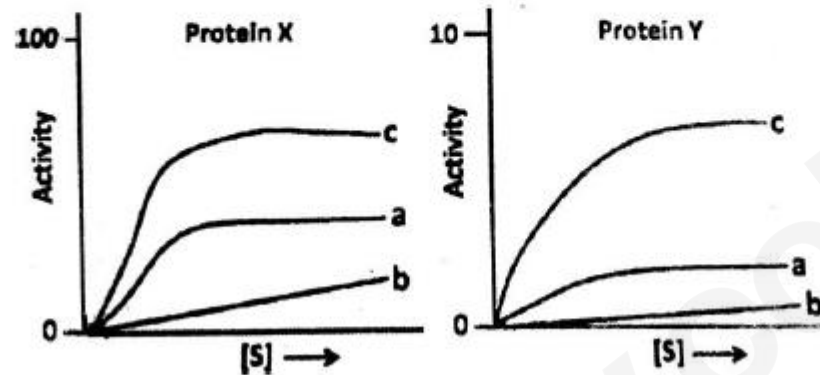
88039644722. ✘ Cytochrome oxidase

88039644723. ✘ Carbonic anhydrase

88039644724. ✘ Phosphoglucomutase

Question Number : 22 Question Id : 88039611182 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

A researcher was investigating the substrate specificity of two different enzymes, X and Y, on the same substrate. Both the enzymes were subjected to treatment with either heat or an inhibitor which inhibits the enzyme activity. Following are the results obtained where, a = inhibitor treatment, b = heat treatment, c = control.



Which of the following statement is correct?

Options :

- 88039644725. ✘ Only protein X is specific for the substrate S
- 88039644726. ✘ Only protein Y is specific for the substrate S
- 88039644727. ✔ Both X and Y are specific for the substrate S
- 88039644728. ✘ Both X and Y are non-specific for the substrate S

Question Number : 23 Question Id : 88039611183 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Catalytic activity of phosphofructokinase is increased by all of the following, except

Options :

88039644729. ✘ AMP

88039644730. ✔ ATP

88039644731. ✘ Fructose-2,6-bisphosphate

88039644732. ✘ Fructose-6-phosphate

Question Number : 24 Question Id : 88039611184 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Which enzyme generates NADPH?

Options :

88039644733. ✘ Pyruvate carboxylase

88039644734. ✘ Pyruvate dehydrogenase

88039644735. ✔ Glucose-6-phosphate dehydrogenase

88039644736. ✘ Lactate dehydrogenase

Question Number : 25 Question Id : 88039611185 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Which one of the reactions is unique to gluconeogenesis?

Options :

- 88039644737. ✘ 1, 3-Bisphosphoglycerate to 3-phosphoglycerate
- 88039644738. ✘ Lactate to pyruvate
- 88039644739. ✔ Oxaloacetate to phosphoenolpyruvate
- 88039644740. ✘ Phosphoenolpyruvate to pyruvate

Question Number : 26 Question Id : 88039611186 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Fluidity of the membranes depends on

Options :

- 88039644741. ✔ Nature of fatty acids
- 88039644742. ✘ Concentration of proteins
- 88039644743. ✘ Glycosylation of proteins
- 88039644744. ✘ Membrane pumps

Question Number : 27 Question Id : 88039611187 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

During which phase of prophase I, the crossing over takes place?

Options :

88039644745. ✓ Pachytene

88039644746. ✗ Leptotene

88039644747. ✗ Zygotene

88039644748. ✗ Diplotene

Question Number : 28 Question Id : 88039611188 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Warburg's effect is

Options :

88039644749. ✗ Metabolic switch to an anaerobic glycolysis

88039644750. ✗ Decreased cellular uptake of glucose and glutamine

88039644751. ✗ Decreased oxidative phosphorylation

88039644752. ✓ Increased oxidative phosphorylation

Question Number : 29 Question Id : 88039611189 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is a catabolic process?

Options :

88039644753. ✘ Photosynthesis

88039644754. ✘ Glycogenesis

88039644755. ✔ Glycolysis

88039644756. ✘ Glyconeogenesis

Question Number : 30 Question Id : 88039611190 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

During the cell cycle, 2 molecules of DNA are present in a chromosome in the

Options :

88039644757. ✘ G1 phase

88039644758. ✔ Beginning of S phase

88039644759. ✘ G2 phase

88039644760. ✘ End of M phase

Question Number : 31 Question Id : 88039611191 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Programmed cell death is known as

Options :

88039644761. ✘ Necrosis

88039644762. ✔ Apoptosis

88039644763. ✘ Ischemia

88039644764. ✘ Cell lysis

Question Number : 32 Question Id : 88039611192 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which among the following is an imino acid?

Options :

88039644765. ✘ Alanine

88039644766. ✘ Glycine

88039644767. ✔ Proline

88039644768. ✘ Serine

Question Number : 33 Question Id : 88039611193 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

HMP shunt generates the following except

Options :

88039644769. ✘ Fructose 6 phosphate

88039644770. ✘ NADPH

88039644771. ✘ Riboses

88039644772. ✔ ATP

Question Number : 34 Question Id : 88039611194 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Baldness is more common in males than in females. This is explained on the basis that

Options :

88039644773. ✔ Genes of baldness are holandric genes

88039644774. ✘ Genes of baldness are located on X-chromosomes of male

88039644775. ✘ Genes of baldness are located on autosome but are influenced by androgens

88039644776. ✘ Genes do not regulate baldness but hormones do

Question Number : 35 Question Id : 88039611195 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In a type I hypersensitivity- mediated asthmatic response, which one of the following is thought to contribute significantly to the prolonged bronchospasm and build-up of mucous seen in asthmatics?

Options :

88039644777. ✘ Thromboxane

88039644778. ✔ Leukotriene

88039644779. ✘ TGF β

88039644780. ✘ Chondroitin

Question Number : 36 Question Id : 88039611196 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The second messenger, which opens calcium ion pores in endoplasmic reticulum and plasma membrane is

Options :

88039644781. ✘ Diacylglycerol

88039644782. ✘ cAMP

88039644783. ✘ Phosphatidyl inositol biphosphate

88039644784. ✔ Inositol triphosphate

Question Number : 37 Question Id : 88039611197 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Shine-Dalgarno sequence in bacterial mRNA is near

Options :

88039644785. ✓ AUG codon

88039644786. ✗ UAA codon

88039644787. ✗ UAG codon

88039644788. ✗ UGA codon

Question Number : 38 Question Id : 88039611198 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

All but one of the following histones are found located within the superhelix formed between

DNA and the histone octamer; this histone is

Options :

88039644789. ✗ Histone H2B

88039644790. ✓ Histone H1

88039644791. ✗ Histone 3

88039644792. ✗ Histone 4

Question Number : 39 Question Id : 88039611199 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The DNA segment from which the primary transcript is copied or transcribed is called

Options :

88039644793. ✓ Coding strand

88039644794. ✗ Translation unit

88039644795. ✗ Transcriptome

88039644796. ✗ Initiator methionine domain

Question Number : 40 Question Id : 88039611200 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

What is the macromolecular complex that associates with introns during mRNA splicing?

Options :

88039644797. ✗ Splicer

88039644798. ✗ Spliceosome

88039644799. ✓ Dicer

88039644800. ✗ Nuclear body

Question Number : 41 Question Id : 88039611201 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

What is on the 3' end of all functional, mature tRNA?

Options :

88039644801. ✘ The cloverleaf loop

88039644802. ✔ The sequence CCA

88039644803. ✘ The codon

88039644804. ✘ The anticodon

Question Number : 42 Question Id : 88039611202 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Mutations in the middle of an open reading frame that create a stop codon are termed

Options :

88039644805. ✘ Frameshift mutation

88039644806. ✘ Missence mutation

88039644807. ✘ No-nonsense mutation

88039644808. ✔ Nonsense mutation

Question Number : 43 Question Id : 88039611203 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

RFLP (Restriction fragment length polymorphism) is used to

Options :

- 88039644809. ✘ Identify a specific gene in bacteria
- 88039644810. ✘ Amplify genes
- 88039644811. ✘ Study the rate of transcription
- 88039644812. ✔ Locates mutations in DNA

Question Number : 44 Question Id : 88039611204 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

A radio labelled nucleic acid probe is usually employed for all the following processes, except

Options :

- 88039644813. ✘ Southern blotting
- 88039644814. ✘ Northern blotting
- 88039644815. ✔ Western blotting
- 88039644816. ✘ DNA hybridisation

Question Number : 45 Question Id : 88039611205 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which of the following tool makes possible genetic engineering?

Options :

88039644817. ✓ Restriction endonuclease

88039644818. ✗ DNA polymerase

88039644819. ✗ Helicase

88039644820. ✗ RNA polymerase

Question Number : 46 Question Id : 88039611206 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The half life period of P^{32} is 14.5 days, how long does it take to decay 10 gms to P^{32} 2.5 gms

Options :

88039644821. ✗ 40 Days

88039644822. ✓ 29 Days

88039644823. ✗ 30 Days

88039644824. ✗ 27 Days

Question Number : 47 Question Id : 88039611207 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Ethidium Bromide is a florescent probe for determining the presence of

Options :

88039644825. ✓ Nucleic acids

88039644826. ✗ Protein

88039644827. ✗ Carbohydrates

88039644828. ✗ Lipids

Question Number : 48 Question Id : 88039611208 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Variable Number of Tandem Repeats (VNTRs) in the DNA molecule are highly useful in

Options :

88039644829. ✓ DNA fingerprinting

88039644830. ✗ Stem Cell Culture

88039644831. ✗ Recombinant DNA technology

88039644832. ✗ Monoclonal Antibody production

Question Number : 49 Question Id : 88039611209 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Lac repressor of E. coli contains _____ DNA binding motifs

Options :

- 88039644833. ✓ Helix turn helix
- 88039644834. ✗ Helix loop helix
- 88039644835. ✗ Leucine zipper
- 88039644836. ✗ Zinc finger motif

Question Number : 50 Question Id : 88039611210 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which of the following DNA modifications results in silencing of a gene?

Options :

- 88039644837. ✗ Acetylation
- 88039644838. ✗ Ethylation
- 88039644839. ✓ Methylation
- 88039644840. ✗ De-methylation

Question Number : 51 Question Id : 88039611211 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is correct regarding genetic code?

Options :

88039644841. ✘ UUU is the initiation codon which also codes for phenylalanine

88039644842. ✔ There are 64 triplet codons which codes for 20 amino acids

88039644843. ✘ Three random nitrogen bases specify the placement of one amino acid

88039644844. ✘ UAA is the nonsense codon which also codes for methionine

Question Number : 52 Question Id : 88039611212 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which one of the following DNA markers can be used to distinguish between a homozygote and heterozygote ?

Options :

88039644845. ✘ RAPD

88039644846. ✘ AFLP

88039644847. ✔ RFLP

88039644848. ✘ ISSR

Question Number : 53 Question Id : 88039611213 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Pasteurization of milk means

Options :

88039644849. ✘ Removal of fat
88039644850. ✘ Addition of Vitamin A and D
88039644851. ✘ Heating to 110 °C for 30 minutes followed by quick cooling
88039644852. ✔ Heating upto 60 °C for 30 minutes followed by quick cooling

Question Number : 54 Question Id : 88039611214 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Agar is commercially obtained from

Options :

88039644853. ✘ Blue-green algae
88039644854. ✔ Red algae
88039644855. ✘ Brown algae
88039644856. ✘ Green algae

Question Number : 55 Question Id : 88039611215 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Liposomes are used in

Options :

88039644857. ✓ Drug delivery

88039644858. ✗ Tissue engineering

88039644859. ✗ Vaccine production

88039644860. ✗ Stem Cell therapy

Question Number : 56 Question Id : 88039611216 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Biogas produced by fermentation of manure, sewage, and cattle dung, predominantly comprises of

Options :

88039644861. ✗ Methane, nitrogen and hydrogen

88039644862. ✓ Methane and carbon dioxide

88039644863. ✗ Methane and carbon monoxide

88039644864. ✗ Methane and nitric oxide

Question Number : 57 Question Id : 88039611217 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In batch culture the pH of an actively growing culture

Options :

88039644865. ✘ Will remain constant

88039644866. ✔ Will not remain constant

88039644867. ✘ pH will be automatically adjusted

88039644868. ✘ pH remains constant at 7

Question Number : 58 Question Id : 88039611218 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

PTFE filter is used as an air filter because it is

Options :

88039644869. ✘ Thermostable

88039644870. ✔ Hydrophobic

88039644871. ✘ Hydrophilic

88039644872. ✘ Resistant to organic chemicals

Question Number : 59 Question Id : 88039611219 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A sparger is a device for introducing _____ into the fermentor

Options :

88039644873. ✓ Air

88039644874. ✗ Liquid

88039644875. ✗ Inoculum

88039644876. ✗ Anti foaming agents

Question Number : 60 Question Id : 88039611220 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Production of acetone was developed by liquid fermentation using

Options :

88039644877. ✓ Clostridium acetobutylicum

88039644878. ✗ Penicillium chrysogenum

88039644879. ✗ Streptomyces aureofaciens

88039644880. ✗ Streptomyces clavuligerus

Question Number : 61 Question Id : 88039611221 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Vermicomposting of biological waste is enabled by

Options :

88039644881. ✘ Algae

88039644882. ✔ Earthworms

88039644883. ✘ Yeast

88039644884. ✘ Protozoans

Question Number : 62 Question Id : 88039611222 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Point out the most commonly used microorganism in alcohol fermentation

Options :

88039644885. ✘ Bacillus subtilis

88039644886. ✘ Escherichia coli

88039644887. ✘ Pseudomonas aeruginosa

88039644888. ✔ Zymomonas mobilis

Question Number : 63 Question Id : 88039611223 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The amount of oxygen required for oxidation by microbes per unit volume of water is known as

Options :

88039644889. ✓ Biological Oxygen Demand (BOD)

88039644890. ✗ Dissolved Oxygen (DO)

88039644891. ✗ Eutrophication

88039644892. ✗ Microaerophily

Question Number : 64 Question Id : 88039611224 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

When an increase in nutrient levels and productivity occurs, then that phenomenon is known as

Options :

88039644893. ✗ Bioaccumulation

88039644894. ✗ Biomagnification

88039644895. ✓ Eutrophication

88039644896. ✗ Bioremediation

Question Number : 65 Question Id : 88039611225 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

On scale up, the effective area available for heat transfer in a bioreactor

Options :

88039644897. ✘ Increases

88039644898. ✔ Decreases

88039644899. ✘ Depends on viscosity of the medium

88039644900. ✘ Remains constant

Question Number : 66 Question Id : 88039611226 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In which one of the following fermentations an inhibitor is added to increase the productivity?

Options :

88039644901. ✔ Rifamycin B fermentation

88039644902. ✘ Tetracycline fermentation

88039644903. ✘ Glutamic acid fermentation

88039644904. ✘ Citric acid fermentation

Question Number : 67 Question Id : 88039611227 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which bioreactor is used for waste water treatment?

Options :

88039644905. ✘ Fed batch bioreactor

88039644906. ✔ Continuous bioreactor

88039644907. ✘ Batch bioreactor

88039644908. ✘ Membrane bioreactor

Question Number : 68 Question Id : 88039611228 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The growth curve obtained for a media containing two carbon sources is called-

Options :

88039644909. ✔ Diauxic curve

88039644910. ✘ Continuous curve

88039644911. ✘ Synchronous curve

88039644912. ✘ Batch growth curve

Question Number : 69 Question Id : 88039611229 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Plant transformation can be obtained by

Options :

- 88039644913. ✘ Combining plant and animal cells in culture
- 88039644914. ✔ Shooting DNA into plant cells with a shotgun
- 88039644915. ✘ Using the E. coli bacterium to infect plant roots
- 88039644916. ✘ Infecting plants with a tobacco mosaic virus

Question Number : 70 Question Id : 88039611230 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Cry genes or Bt genes are obtained from

Options :

- 88039644917. ✘ Cotton pest
- 88039644918. ✘ Tobacco plant
- 88039644919. ✔ Bacillus thuringiensis
- 88039644920. ✘ E.coli

Question Number : 71 Question Id : 88039611231 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

The vector which is most commonly used in crop improvement

Options :

88039644921. ✘ Plasmid

88039644922. ✔ Agrobacterium

88039644923. ✘ Bacteriophage

88039644924. ✘ Cosmid

Question Number : 72 Question Id : 88039611232 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The production of secondary metabolites require the use of

Options :

88039644925. ✘ Protoplast

88039644926. ✔ Cell suspension

88039644927. ✘ Meristem

88039644928. ✘ Auxillary buds

Question Number : 73 Question Id : 88039611233 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Hormone pair required for a callus to differentiate are

Options :

- 88039644929. ✓ Auxin and cytokinin
- 88039644930. ✗ Auxin and ethylene
- 88039644931. ✗ Auxin and abscisic acid
- 88039644932. ✗ Cytokinin and gibberellins

Question Number : 74 Question Id : 88039611234 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

The most widely used chemical for protoplast fusion as fusogens is

Options :

- 88039644933. ✗ Mannitol
- 88039644934. ✗ Sorbitol
- 88039644935. ✗ Mannol
- 88039644936. ✓ Polyethylene glycol

Question Number : 75 Question Id : 88039611235 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Part of plant used for plant tissue culturing is called

Options :

88039644937. ✘ Scion

88039644938. ✘ Stock

88039644939. ✔ Explant

88039644940. ✘ Callus

Question Number : 76 Question Id : 88039611236 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Which of the following is a characteristic of transgenic crop?

Options :

88039644941. ✘ Intolerant to herbicide

88039644942. ✘ Bt insect resistance toxin

88039644943. ✘ Decreased methionine content

88039644944. ✔ Intolerant to drought

Question Number : 77 Question Id : 88039611237 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

HeLa, HEP-2 and KB are examples of

Options :

88039644945. ✘ Primary cell cultures

88039644946. ✘ Diploid cell strains

88039644947. ✔ Continuous cell lines

88039644948. ✘ Secondary cell cultures

Question Number : 78 Question Id : 88039611238 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

After how many serial passages does a diploid cell strain undergo senescence?

Options :

88039644949. ✘ 40

88039644950. ✘ 30

88039644951. ✔ 50

88039644952. ✘ 100

Question Number : 79 Question Id : 88039611239 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

The type of graft from genetically different members of the same species is called as

Options :

88039644953. ✓ Allograft

88039644954. ✗ Autograft

88039644955. ✗ Xenograft

88039644956. ✗ Isograft

Question Number : 80 Question Id : 88039611240 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

To prepare individual tissue cells from a primary culture, the cell-cell and cell-matrix interaction must be broken. To achieve this would NOT use

Options :

88039644957. ✗ EDTA

88039644958. ✗ Trypsin

88039644959. ✓ Separase

88039644960. ✗ Collagenase

Question Number : 81 Question Id : 88039611241 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

In animal cell culture, particularly mammalian cell culture, transformation means

Options :

88039644961. ✘ Uptake of new genetic material

88039644962. ✔ Phenotypic modifications of cells in culture

88039644963. ✘ Uptake of new genetic material as well phenotypic modifications of cells

88039644964. ✘ Release of genetic information

Question Number : 82 Question Id : 88039611242 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

What is the concentration range of CO₂ required for culturing animal cells?

Options :

88039644965. ✘ 1 - 5%

88039644966. ✔ 4 - 10%

88039644967. ✘ 10 - 15%

88039644968. ✘ 15 - 20%

Question Number : 83 Question Id : 88039611243 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Which of the following is not the explantation technique?

Options :

88039644969. ✘ Slide culture

88039644970. ✘ Carrel flask culture

88039644971. ✘ Roller test tube culture

88039644972. ✔ Adherent primary culture

Question Number : 84 Question Id : 88039611244 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

A man is brought to court in a paternity case. He has blood type B, Rh+ve. The mother has blood group B, Rh -ve. The child's blood type is A, Rh -ve. Which statement about man is correct ?

Options :

88039644973. ✘ He is the father

88039644974. ✘ He might be the father

88039644975. ✔ He is not the father

88039644976. ✘ He might not be the father

Question Number : 85 Question Id : 88039611245 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

The total number of cells in a culture is counted using the trypan blue exclusion assay and is found to be 6.8×10^6 cells/ml. Each well in a 6 well plate requires 2×10^5 cells. How should the solution be diluted so that 1ml can be added to each well?

Options :

88039644977. ✘ 1 : 6.8 then 1 : 10

88039644978. ✘ 1 : 10 then 1 : 2

88039644979. ✔ 1 : 3.4 then 1 : 10

88039644980. ✘ 1 : 3.4 then 1 : 2

Question Number : 86 Question Id : 88039611246 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Which of the following gives a better yield of penicillin in large scale production?

Options :

88039644981. ✘ *Penicillium notatum*

88039644982. ✔ *Penicillium chrysogenum*

88039644983. ✘ *Penicillium citrinum*

88039644984. ✘ *Staphylococcus sp*

Question Number : 87 Question Id : 88039611247 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

What is a characteristic of the adaptive immune response and not of the innate response?

Options :

88039644985. ✘ Physical barriers

88039644986. ✘ Chemical barriers

88039644987. ✘ Phagocytosis

88039644988. ✔ Clonal expansion of effector cells

Question Number : 88 Question Id : 88039611248 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The principle function of the class-I and class-II MHC molecules is

Options :

88039644989. ✔ Binding peptide antigens for review by antigen specific receptors on T cells

88039644990. ✘ Mediation of T-independent B-cell responses

88039644991. ✘ Helping in endocytosis of antigens by phagocytic cells

88039644992. ✘ Binding carbohydrate antigen directly for presentation on T cells

Question Number : 89 Question Id : 88039611249 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

IgE mediated histamine release is classified as

Options :

88039644993. ✓ Type-1 hypersensitivity reaction

88039644994. ✗ Type-2 hypersensitivity reaction

88039644995. ✗ Type-3 hypersensitivity reaction

88039644996. ✗ Type-4 hypersensitivity reaction

Question Number : 90 Question Id : 88039611250 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

NK cells express a killer immunoglobulin-like receptor, which recognises

Options :

88039644997. ✓ MHC class I molecules

88039644998. ✗ MHC class II molecules

88039644999. ✗ Cell adhesion molecules

88039645000. ✗ CD40 molecules

Question Number : 91 Question Id : 88039611251 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In any given immunoglobulin molecule, the light chains are

Options :

88039645001. ✘ Related but different amino acid sequence

88039645002. ✔ Identical to each other

88039645003. ✘ Identical to each other in their antigenic determinants

88039645004. ✘ Identical to each other in their overall domain structure

Question Number : 92 Question Id : 88039611252 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A cytokine that activates cells to express MHC class II antigens and protects the cells from virus replication is:

Options :

88039645005. ✘ IL-6

88039645006. ✘ IL-10

88039645007. ✘ TNF- α

88039645008. ✔ Interferon- γ

Question Number : 93 Question Id : 88039611253 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which is not a macrophage?

Options :

88039645009. ✘ Monocyte

88039645010. ✘ Microglia

88039645011. ✔ Lymphocytes

88039645012. ✘ Kupffer cells

Question Number : 94 Question Id : 88039611254 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

What are the major flower pigments in higher plants?

Options :

88039645013. ✘ auxins

88039645014. ✘ cytokinins

88039645015. ✘ chloroplasts

88039645016. ✔ anthocyanins

Question Number : 95 Question Id : 88039611255 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Prozone phenomenon is due to

Options :

88039645017. ✘ Antigen excess

88039645018. ✔ Antibody excess

88039645019. ✘ False +ive reaction

88039645020. ✘ False -ive reaction

Question Number : 96 Question Id : 88039611256 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

All of the following forces are involved in antigen antibody reaction except

Options :

88039645021. ✘ Electrostatic bond

88039645022. ✘ Hydrogen bond

88039645023. ✔ Covalent bond

88039645024. ✘ Van der Walls forces

Question Number : 97 Question Id : 88039611257 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

What reaction does reverse transcriptase catalyze?

Options :

88039645025. ✘ Translation of RNA to DNA

88039645026. ✘ Transcription of DNA to RNA

88039645027. ✔ Transcription of RNA to DNA

88039645028. ✘ Conversion of ribonucleotides into deoxyribonucleotides

Question Number : 98 Question Id : 88039611258 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Which of these restriction enzymes produce blunt ends?

Options :

88039645029. ✘ Sall

88039645030. ✔ EcoRV

88039645031. ✘ Xhol

88039645032. ✘ HindIII

Question Number : 99 Question Id : 88039611259 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

What is the source of ECO-RI?

Options :

88039645033. ✘ Escherichia coli R I

88039645034. ✘ Escherichia coli R I 13

88039645035. ✔ Escherichia coli R Y 13

88039645036. ✘ Escherichia coli R X 13

Question Number : 100 Question Id : 88039611260 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Restriction enzymes are named after

Options :

88039645037. ✘ The person who discovered

88039645038. ✔ The bacterium they are derived from

88039645039. ✘ The viral DNA that they attack

88039645040. ✘ Place of isolation

Question Number : 101 Question Id : 88039611261 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

In gel electrophoresis, DNA molecules migrate from _____ to _____ ends of the gel

Options :

88039645041. ✔ Negative to positive

88039645042. ✘ Basic to acidic

88039645043. ✘ Long to short

88039645044. ✘ Positive to negative

Question Number : 102 Question Id : 88039611262 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The hormone pairs required for a callus to differentiate are

Options :

88039645045. ✔ auxin and cytokinin

88039645046. ✘ auxin and gibberellin

88039645047. ✘ ethylene and gibberellin

88039645048. ✘ cytokinin and gibberellin

Question Number : 103 Question Id : 88039611263 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A clone is a group of organisms produced by

Options :

88039645049. ✔ Asexual method and genetically similar

88039645050. ✘ Asexual method and genetically dissimilar

88039645051. ✘ Sexual method and genetically similar

88039645052. ✘ Sexual method and genetically dissimilar

Question Number : 104 Question Id : 88039611264 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Overwinding of circular DNA leads to

Options :

88039645053. ✔ Positive Supercoiling

88039645054. ✘ Negative Supercoiling

88039645055. ✘ Both positive and negative supercoiling

88039645056. ✘ Relaxed open circular DNA

Question Number : 105 Question Id : 88039611265 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

The scientists who won nobel prize for physiology for their discovery of restriction endonucleases are

Options :

88039645057. ✘ Jacob and Monad

88039645058. ✔ Smith, Nathans and Arber

88039645059. ✘ Watson and Crick

88039645060. ✘ Alec Jaffreys and Milstein

Question Number : 106 Question Id : 88039611266 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

What is CRISPR-CAS9 ?

Options :

88039645061. ✘ DNA fingerprinting tool

88039645062. ✘ Gene gun

88039645063. ✔ Genome editing tool

88039645064. ✘ Bacteriophage

Question Number : 107 Question Id : 88039611267 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Dolly, the first animal produced through cloning is

Options :

88039645065. ✘ Camel

88039645066. ✘ Rat

88039645067. ✘ Cow

88039645068. ✓ Sheep

Question Number : 108 Question Id : 88039611268 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Gene therapy, a technique to cure inherited diseases by

Options :

88039645069. ✗ Replacing organ

88039645070. ✓ Introducing the correct copy of the gene

88039645071. ✗ Adding new cells to the body

88039645072. ✗ Polymerase chain reaction

Question Number : 109 Question Id : 88039611269 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Which of the following is a genetic vector?

Options :

88039645073. ✗ pET plasmid

88039645074. ✗ HeLa

88039645075. ✗ Rosetta

88039645076. ✓ BL21

Question Number : 110 Question Id : 88039611270 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Which of the following is a sequence alignment tool?

Options :

88039645077. ✓ BLAST

88039645078. ✗ PRINT

88039645079. ✗ PROSITE

88039645080. ✗ PIR

Question Number : 111 Question Id : 88039611271 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

A comprehensive database for the study of human genetics and molecular biology is

Options :

88039645081. ✗ PDB

88039645082. ✗ STAG

88039645083. ✓ OMIM

88039645084. ✗ PSD

Question Number : 112 Question Id : 88039611272 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

FlyBase is a

Options :

88039645085. ✘ Biodiversity database

88039645086. ✔ Model organism database

88039645087. ✘ Literature database

88039645088. ✘ Biomolecular database

Question Number : 113 Question Id : 88039611273 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

All are sequence alignment tools except

Options :

88039645089. ✔ Rasmol

88039645090. ✘ BLAST

88039645091. ✘ FASTA

88039645092. ✘ Clustal W

Question Number : 114 Question Id : 88039611274 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is
Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

PDB is a

Options :

- 88039645093. ✘ Secondary database for macromolecules
- 88039645094. ✘ Composite database
- 88039645095. ✔ Database for three dimensional structure of biological macromolecule
- 88039645096. ✘ Metabolic database

Question Number : 115 Question Id : 88039611275 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

The nucleic acid sequence database GenBank is maintained by

Options :

- 88039645097. ✘ Brookhaven laboratory
- 88039645098. ✔ National Centre for Biotechnology Information (NCBI)
- 88039645099. ✘ European Molecular Biology Laboratory (EMBL)
- 88039645100. ✘ DNA database of Japan (DDBJ)

Question Number : 116 Question Id : 88039611276 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Phylogenetic relationship can be shown by

Options :

88039645101. ✓ Dendrogram

88039645102. ✗ Gene bank

88039645103. ✗ Data retrieving tool

88039645104. ✗ Data search tool

Question Number : 117 Question Id : 88039611277 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

The computational methodology that tries to find the best matching between two molecules, a receptor and a ligand is known as

Options :

88039645105. ✗ Molecular matching

88039645106. ✗ Molecular fitting

88039645107. ✓ Molecular docking

88039645108. ✗ Molecular affinity checking

Question Number : 118 Question Id : 88039611278 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 1 Wrong Marks : 0

Antibiotic that is not inhibiting cell wall synthesis includes

Options :

88039645109. ✘ Cefuroxime

88039645110. ✘ Vancomycin

88039645111. ✔ Erythromycin

88039645112. ✘ Benzylpenicillin

Question Number : 119 Question Id : 88039611279 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Sterilization cannot be achieved with

Options :

88039645113. ✘ Gamma irradiation

88039645114. ✔ Boiling in water for 15 minutes

Moist heat at 121°C for 20 minutes at 15b pressure or dry heat at 150-170°C for
88039645115. ✘ 20 - 30 minutes

88039645116. ✘ Ethylene oxide chamber

Question Number : 120 Question Id : 88039611280 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Telomerase, a RNA- protein complex which completes the replication of telomeres during DNA synthesis, is a specialized

Options :

88039645117. ✓ RNA dependent DNA polymerase

88039645118. ✗ DNA dependent DNA polymerase

88039645119. ✗ DNA dependent RNA polymerase

88039645120. ✗ RNA dependent RNA polymerase