Question Paper Preview

Question Paper Name:	Bio Technology 3rd May 2019 S1
Subject Name:	Bio Technology
Duration:	120
Share Answer Key With Delivery Engine:	Yes
Actual Answer Key:	Yes

Bio Technology

Display Number Panel:	Yes
Group All Questions:	No

Question Number : 1 Question Id : 250107841 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If the rank of a matrix $A=\begin{bmatrix}1 & 5 & x\\ 5 & 1 & -1\\ 1 & 2 & 1\end{bmatrix}$ is 2 then $x=$____.

Options :

1. 1

2. 2

3. 3

4. 0

Question Number : 2 Question Id : 250107842 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The equation $x+y=0$ has ____.

Options :

1. infinite number of solutions

2. no solution

3. exactly one solution

4. exactly two solutions

Question Number : 3 Question Id : 250107843 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

$\lim_{x\to 0} \frac{x-\sin x}{1-\cos x} =$ _____.

Options :

1. 0

2. 3

3. 1

4. ∞

Question Number : 4 Question Id : 250107844 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following integral is not bounded?

Options :

1. $\int_0^{\infty} \frac{1}{1+x^2} dx$

2. $\int_0^{\pi/4} \tan x \, dx$

3. $\int_0^{1} \frac{1}{1-x} dx$

4. $\int_0^{\infty} xe^{-x}dx$

Question Number : 5 Question Id : 250107845 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The solution of the initial value problem $\frac{dy}{dx}=-2xy,\ y(0)=2$, is _____.

Options :

1. $1+e^{-x^2}$

2. $2e^{-x^2}$

3. $1+e^{x^2}$

4. $2e^{x^2}$

Question Number : 6 Question Id : 250107846 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is the one dimensional heat equation?

Options :

1. $\frac{\partial^2 f}{\partial t^2}=A\frac{\partial^2 f}{\partial x^2}$

2. $\frac{\partial f}{\partial t}=A\frac{\partial^2 f}{\partial x^2}$

3. $\frac{\partial^2 f}{\partial x^2}+\frac{\partial^2 f}{\partial y^2}=0$

4. $\frac{\partial^2 f}{\partial t^2}=0$

Question Number : 7 Question Id : 250107847 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $P(A \cup B)=0.75$ and $P(A \cap B)=0.15$ then $P(\overline{A})+P(\overline{B})=$ ____.

Options :

1. 0.9

2. 1.1

3. 0.6

4. 1.25

Question Number : 8 Question Id : 250107848 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The mean of the density function $f(x)=\frac{2x}{9}, 0 \le x \le 3,$ is ____.

Options :

1. 2

2. $\frac{1}{2}$

3. $\frac{3}{2}$

4. $\frac{2}{9}$

Question Number : 9 Question Id : 250107849 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The iterative formula for False position method is _____.

Options :

1. $x_{n+1}=\frac{x_{n-1}f(x_n)-x_nf(x_{n-1})}{f(x_n)-f(x_{n-1})}$

2. $$x_{n+1} = \frac{x_{n-1}f(x_n) + x_n f(x_{n-1})}{f(x_n) - f(x_{n-1})}$$

3. $$x_{n+1} = \frac{x_{n-1}f(x_n) - x_n f(x_{n-1})}{f(x_n) + f(x_{n-1})}$$

4. $$x_{n+1} = \frac{x_{n-1}f(x_n) + x_n f(x_{n-1})}{f(x_n) + f(x_{n-1})}$$

Question Number : 10 Question Id : 250107850 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $f(0)=1, f(1)=2, f(2)=7.4, f(3)=20.1, f(4)=54.6$ and $h=1$ then $\int_0^4 f(x)dx$ by Simpson's $\frac{1}{3}^{rd}$ rule is _____.

Options :

1. 53.06

2. 52.93

3. 50.06

4. 53.86

Question Number : 11 Question Id : 250107851 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A bacterium, having doubling time of 10 minutes, fills a cylindrical vessel completely in 3 hours. How much time will it take to fill half of the vessel?

Options :

1. 80 minutes

2. 90 minutes

3. 150 minutes

4. 170 minutes

Question Number : 12 Question Id : 250107852 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The organism responsible for retarding penetration of host cell by an inhibitor of ATP synthesis is

Options :

1. *M. pneumonia*

2. *Rickettsia rickettsii*

3. *Chlamydia trachomatis*

4. *Chlamydia psittaci*

Question Number : 13 Question Id : 250107853 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Carbohydrates, present in the plasma membrane

Options :

1. have a structural role

2. form a channel

3. act as carrier

4. help in molecular recognition

Question Number : 14 Question Id : 250107854 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following plant virus has DNA in it?

Options :

1. Tobacco mosaic virus

2. Potato mosaic virus

3. Tomato mosaic virus

4. Cauliflower mosaic virus

Question Number : 15 Question Id : 250107855 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

When food materials are preserved at a temperature just above freezing temperature, the process is called _____.

Options :

1. Freezing

2. Pasteurisation

3. Chilling

4. Frosting

Question Number : 16 Question Id : 250107856 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Cadherin is termed as

Options :

1. Ca^{2+} dependent trans-membrane glycoprotein

2. Responsible for attachment of cell to extra cellular matrix

3. Protein responsible for heterophilic interaction

4. Structural component of gap junction

Question Number : 17 Question Id : 250107857 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Plants cannot absorb molecular N_2 in the atmosphere because

Options :

1. N_2 has double bonds making it highly stable

2. abundance in the atmosphere inhibits absorption

3. N_2 has triple bonds making it highly stable

4. as it is most abundant in dry air

Question Number : 18 Question Id : 250107858 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In biological membrane, the lipids and integral proteins interact mainly through

Options :

1. Hydrophobic interactions

2. Vander wal forces

3. H- bond

4. Covalent bond

Question Number : 19 Question Id : 250107859 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Antibiotics kanamycin, neomycin and streptomycin belongs to _____ group.

Options :

1. Tetracyclines

2. Glycylcyclines

3. Aminoglycoside

4. Lactams

Question Number : 20 Question Id : 250107860 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Mitochondria is missing in

Options :

1. Yeasts

2. Filamentous Fungi

3. Protozoan Parasites

4. Viruses

Question Number : 21 Question Id : 250107861 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Cyanobacteria does not use, which of the following for both oxidative and photophosphorylation?

Options :

1. Cytochrome c6

2. Cytochrome b6f

3. Plastoquinone

4. Plastocyanin

Question Number : 22 Question Id : 250107862 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is responsible for the mechanical support, protein synthesis and enzyme transport?

Options :

1. Cell membrane

2. Mitochondria

3. Dictyosome

4. Endoplasmic reticulum

Question Number : 23 Question Id : 250107863 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is not a characteristic of t-RNA?

Options :

1. It contains a codon

2. It contains an anti-codon

3. It can be attached covalently to an amino acid

4. It interacts with mRNA during transcription

Question Number : 24 Question Id : 250107864 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Krabbe's disease is due to the deficiency of _____ enzyme.

Options :

1. Ceramide lactosidase

2. Ceramidase

3. β-Galactosidase

4. GM1 β-Galactosidase

Question Number : 25 Question Id : 250107865 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The effect of increased levels of hydrogen ions in the inter-membrane space of the mitochondria is

Options :

1. increases ATP production

2. decreases levels of oxidative phosphorylation

3. increases levels of water in inter-membrane space

4. decreases levels of chemiosmosis

Question Number : 26 Question Id : 250107866 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

One of the cell organelle is said to function as "trigger of cell division"

Options :

1. Sphaerosome

2. Lysosome

3. Lomasome

4. Glyoxysome

Question Number : 27 Question Id : 250107867 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In a given nucleic acid G+A is not equal to C+T content, then the sample indicates

Options :

1. AT rich

2. ssDNA

3. dsDNA

4. GC rich

Question Number : 28 Question Id : 250107868 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A mitochondrial marker enzyme is

Options :

1. Aldolase

2. Amylase

3. Succinic dehydrogenase

4. Pyruvate dehydrogenase

Question Number : 29 Question Id : 250107869 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Native state of a protein can be disrupted by

Options :

1. Temperature

2. pH

3. Removal of water

4. Presence of hydrophilic surfaces

Question Number : 30 Question Id : 250107870 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

At what value of [S], is the velocity of an enzyme catalyzed reaction is 25% of the V_{max}?

Options :

1. 3/4 K_m

2. 4 K_m

3. 1/3 K_m

4. 1/4 K_m

Question Number : 31 Question Id : 250107871 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

During replication of DNA, which of the following enzyme polymerizes the okazaki fragments

Options :

1. DNA polymerase III

2. DNA polymerase II

3. DNA polymerase I

4. RNA polymerase I

Question Number : 32 Question Id : 250107872 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The most abundant free nucleotide in mammalian cells is

Options :

1. ATP

2. NAD

3. GTP

4. FAD

Question Number : 33 Question Id : 250107873 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Eukaryotes differ from prokaryotes in mechanism of DNA replication due to

Options :

1. Use of DNA primer rather than RNA primer

2. Different enzymes for synthesis of lagging and leading strand

3. Discontinuous rather than semi-discontinuous replication

4. Unidirectional rather than semi-discontinuous replication

Question Number : 34 Question Id : 250107874 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In eukaryotic cell transcription, RNA splicing and RNA capping takes place inside the

Options :

1. Ribosome

2. Nucleus

3. Dictyosomes

4. ER

Question Number : 35 Question Id : 250107875 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is used in rolling circle DNA replication but not in normal cellular DNA replication ?

Options :

1. Endonuclease

2. Exonuclease

Primase

3.

DNA ligase

4.

Question Number : 36 Question Id : 250107876 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Calcium absorption is inferred by

Options :

1. Fatty acids

2. Amino acids

3. Vitamin D

4. Vitamin B_{12}

Question Number : 37 Question Id : 250107877 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is not involved in the post transcriptional processing of t-RNA?

Options :

1. Base modulation

2. Attachment of CCA arm

3. Splicing

4. Attachment of poly-A tail

Question Number : 38 Question Id : 250107878 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

With regard to the ABO blood group typing system, if a father is of blood group AB and a mother is of blood group O, what are the possible blood groups that a son of the couple have?

Options :

1. O only

2. AB only

3. A and B only

4. AB, A, B and O

Question Number : 39 Question Id : 250107879 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In human gene mapping the impact of modern molecular biological techniques is termed as

Options :

1. Determinant mapping

2. Physical mapping

3. Hetero mapping

4. Chemical mapping

Question Number : 40 Question Id : 250107880 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Removal of RNA polymerase III from nucleoplasm will affect the synthesis of

Options :

1. rRNA

2. tRNA

3. hnRNA

4. mRNA

Question Number : 41 Question Id : 250107881 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Exopolysaccharides are mostly composed of

Options :

1. Polysaccharides & proteins

2. Polysaccharides, proteins & Lipids

3. Proteins, Lipids & DNA

4. Monosaccharides & Polysaccharides

Question Number : 42 Question Id : 250107882 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In L-lysine production feedback inhibition is done by

Options :

1. lysine and threonine

2. methionine and serine

3. alanine and glutamine

4. lysine and serine

Question Number : 43 Question Id : 250107883 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following separation technique is a suitable method for a protein sample with large differences in molecular mass?

Options :

1. Dialysis

2. Salting out process

3. Density gradient centrifugation

4. Rate zonal centrifugation

Question Number : 44 Question Id : 250107884 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The pH, to be maintained for the production of penicillin is

Options :

1. 7.5

2. 6.5

3. 8.0

4. 5.0

Question Number : 45 Question Id : 250107885 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Protease enzyme is produced by

Options :

1. *Bacillus subtilis*

2. *Saccharomyces cerevisiae*

3. *Aspergillus flavus*

4. *Aspergillus oryzae*

Question Number : 46 Question Id : 250107886 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In citric acid production, the mycelium structure is determined by

Options :

1. Iron to zinc ratio

2. Iron to copper ratio

3. Copper to zinc ratio

4. Copper to lead ratio

Question Number : 47 Question Id : 250107887 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

High performance liquid chromatography (HPLC) is not suitable to

Options :

1. identify the various pigments from a leaf extract.

2. separate organic pesticides.

3. determine the caffeine content in coffee samples.

4. determine the mercury content in a fish sample.

Question Number : 48 Question Id : 250107888 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Vitamin B_{12} can be estimated and determined by using organism

Options :

1. *Lactobacillus sps*

2. *Lactobacillus Leichmanni*

3. *Bacillus subtilis*

4. *Escherichia Coli*

Question Number : 49 Question Id : 250107889 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Recombinant protein is a

Options :

1. A gene encoded by recombinant DNA

2. A gene encoded by recombinant RNA

3. A gene not encoded by recombinant DNA

4. A gene encoded by microorganism

Question Number : 50 Question Id : 250107890 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following enzyme was first isolated and purified in the form of crystals?

Options :

1. Amylase

2. Urease

3. Ribonuclease

4. Pepsin

Question Number : 51 Question Id : 250107891 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The purity of a solute collected between two times t1 and t2 during chromatographic separation is

Options :

1. Amount of solute eluted - amount of impurity eluted

2. Amount of solute eluted / amount of impurity eluted

3. Amount of solvent eluted + amount of impurity eluted

4. Amount of solvent eluted / amount of impurity eluted

Question Number : 52 Question Id : 250107892 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Gel retardation assay is commonly used to monitor interactions between

Options :

1. Proteins

2. drug and nucleic acid

3. nucleic acid

4. protein and nucleic acid

Question Number : 53 Question Id : 250107893 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

During the enzymatic reaction of an immobilized enzyme, the rate of substrate transfer is

Options :

1. Equal to that of substrate consumption

2. More than that of substrate consumption

3. Lesser than that of substrate consumption

4. Is nothing to do with the substrate consumption

Question Number : 54 Question Id : 250107894 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In PCR, annealing occurs due to the change in the temperature from

Options :

1. high temperature to low temperature

2. high pressure to low pressure

3. low pressure to high pressure

4. low temperature to high temperature

Question Number : 55 Question Id : 250107895 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

During which stage of wastewater treatment are methanogenic microbes most important?

Options :

1. Primary treatment

2. Sludge digestion

3. Biological oxidation

4. Secondary treatment

Question Number : 56 Question Id : 250107896 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following will increase the oxygen transfer rate in a shake flask system?

Options :

1. Use of baffled flask

2. Larger liquid volume

3. Higher stirred speed

4. Wider flask

Question Number : 57 Question Id : 250107897 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Hydrophobic compounds can be received by which filtration technique?

Options :

1. Permeation

2. Micro-filtration

3. Perstraction

4. Pervaporation

Question Number : 58 Question Id : 250107898 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The class of enzymes, Hydrolases are not included in which of the following category

Options :

1. Lipase

2. Esterases

3. oxygenases

4. Glycosidases

Question Number : 59 Question Id : 250107899 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following mutations would be easiest to revert?

Options :

1. An insertion of 10 base pairs

2. A deletion of more than 10 base pairs

3. A base pair substitution

4. Insertion of a transposon

Question Number : 60 Question Id : 250107900 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is the relationship between specific growth rate and dilution rate in CSTR at steady state condition?

Options :

1. Specific growth rate = Dilution rate

2. Specific growth rate < Dilution rate

3. Specific growth rate > Dilution rate

4. Specific growth rate = 2(Dilution rate)

Question Number : 61 Question Id : 250107901 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In continuous culture method, steady state is dependent on

Options :

1. Flow rate

2. dilution rate

3. specific growth rate

4. volumetric flow rate

Question Number : 62 Question Id : 250107902 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following metal ions is associated with urease enzyme?

Options :

1. Fe

2. Ni

3. Mg

4. Cu

Question Number : 63 Question Id : 250107903 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A pure drug is administered as a sphere and as a cube. The amount of drug is the same in the two tablets. Assuming that the shape and size do not influence the mass transfer, the ratio of rate of dissolution in water at $t = 0$ for the cubic to spherical tablet is

Options :

1. 1.04

2. 1.94

3. 1.24

4. 0.54

Question Number : 64 Question Id : 250107904 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the factors is not effecting oxygen transfer rate in bioreactor?

Options :

1. Bubble size

2. Gas holder

3. Gas velocity

4. Volume of the reactor

Question Number : 65 Question Id : 250107905 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Bubbles are generally beneficial because of the increase gas hold-up and large interfacial surface

Options :

1. Larger

2. small

3. spherical

4. oval

Question Number : 66 Question Id : 250107906 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Aspartase is an artificial sweetener. It is chemically present in

Options :

1. fatty acid

2. carbohydrate

3. dipeptide

4. oligopeptide

Question Number : 67 Question Id : 250107907 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The dynamic method of gassing out procedure

Options :

1. Increases the supply of air to the fermentation

2. Stops the supply of air to the fermentation

3. Changes the supply of air to the fermentation

4. No relation with the supply of air

Question Number : 68 Question Id : 250107908 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which type of sparger is suitable for microbial cell culture?

Options :

1. Ring sparger

2. Micro sparger

3. Coil sparger

4. Helical coil sparger

Question Number : 69 Question Id : 250107909 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In a bioreactor baffles are incorporated to

Options :

1. Prevent vortex and to improve aeration efficiency

2. Maintain uniform suspension of cells

3. Minimize the size of air bubble for greater aeration

4. Maintain uniform nutrient medium

Question Number : 70 Question Id : 250107910 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

During 'invert syrup' production, the purpose of adding small amounts of xylene is

Options :

1. to prevent microbial contamination

2. to facilitate product recovery

3. to substrate activation

4. to prevent product inhibition

Question Number : 71 Question Id : 250107911 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which among the following is not a type of elicitor ?

Options :

1. Bacterial cell free extracts

2. Heavy metals

3. Signalling compounds

4. Ammonium Nitrate

Question Number : 72 Question Id : 250107912 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Golden rice is a promising transgenic crop. When released for cultivation, it will help in

Options :

1. herbicide tolerance

2. producing a petrol like fuel form rice

3. alleviation of vitamin A deficiency

4. pest resistance

Question Number : 73 Question Id : 250107913 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The naturally occurring auxin's chemical structure is very similar to the structure of

Options :

1. Proline

2. Pectin

3. Tyrosine

4. Tryptophan

Question Number : 74 Question Id : 250107914 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The selecting agent used to detect high producing cell-line is

Options :

1. Pimelic acid

2. Alkaloids

3. Gibberellic acid

4. Anthocyanins

Question Number : 75 Question Id : 250107915 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Clonal propagation can be achieved by using which explant

Options :

1. Leaf

2. Flower

3. Shoot tip

4. Root

Question Number : 76 Question Id : 250107916 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The ingestion of BST in milk is no threat to humans because

Options :

1. It is destroyed in the stomach

2. It cannot be digested and will pass through as waste

3. They do not have the hormones to utilize it

4. It is destroyed in the pasteurization process

Question Number : 77 Question Id : 250107917 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

For the production of polio vaccine, which of the following cell line is used ?

Options :

1. Primate kidney cell line

2. CHO cell line

3. Dog kidney cell line

4. Mouse fibroblast cell line

Question Number : 78 Question Id : 250107918 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Plating density is the ratio of

Options :

1. Number of cells per volume of culture medium

2. Number of cells per volume of biomass

3. Number of cells per volume of reactor

4. Number of cells per volume of air

Question Number : 79 Question Id : 250107919 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which among the following is not a plant derived compound

Options :

1. Artemisinin

2. Taxol

3. Vinblastine

4. Cisplatin

Question Number : 80 Question Id : 250107920 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Morphylaxis can be defined as

Options :

1. Production of lost organ by division in remaining cell

2. Reinitiation of cell division in existing cells, followed by repatterning of those cells

3. Production of complete organism by single cell

4. Movement of organism towards stimulus

Question Number : 81 Question Id : 250107921 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which organelle is responsible for production of lipids, membrane phospholipids, and calcium concentration regulation?

Options :

1. Golgi complex

2. Smooth endoplasmic reticulum

3. Rough endoplasmic reticulum

4. Nucleus

Question Number : 82 Question Id : 250107922 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which is the correct statement related to hepatitis B virus?

Options :

1. Paramyxovirus

2. Orthomyxovirus

3. Reoviruses

4. Retroviruses

Question Number : 83 Question Id : 250107923 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is NOT the major function of the serum?

Options :

1. Promotion of tuber and bulb formation

2. Stimulate cell growth

3. Enhance cell attachment

4. Provide transport proteins

Question Number : 84 Question Id : 250107924 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following organs is used for IFN production?

Options :

1. Spleen

2. Thymus

3. Lymph nodes

4. Kidney

Question Number : 85 Question Id : 250107925 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The term "nuclear envelope" is more suitable than the term "nuclear membrane" because

Options :

1. The enclosure has pores which membranes do not

2. The enclosure is made up of two membranes

3. The chemical composition is inconsistent with cellular membranes

4. The enclosure is made up of three membranes

Question Number : 86 Question Id : 250107926 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Hydatid disease is identified by

Options :

1. Schick test

2. Dick test

3. Casoni test

4. Freis test

Question Number : 87 Question Id : 250107927 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Name the organism on which first cell line was observed?

Options :

1. *E.coli*

2. Sheep

3. Mouse

4. *Drosophila*

Question Number : 88 Question Id : 250107928 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A technique of using very small metal particles coated with desired gene in the gene transfer is called

Options :

1. Electroporation

2. microinjection

3. liposome

4. biolistics

Question Number : 89 Question Id : 250107929 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Who was the scientist, from the following, showed that leucocytes can divide outside of the body?

Options :

1. Adams

2. Arnold

3. Walker

4. Meyers

Question Number : 90 Question Id : 250107930 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Attenuated, oral poliomyelitis vaccine is

Options :

1. BCG

2. Measles vaccine

3. Sabin vaccine

4. TAB vaccine

Question Number : 91 Question Id : 250107931 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The mononuclear phagocyte system does not include

Options :

1. Monocytes

2. Kupffer cells

3. Kidney mesangial cells

4. Endothelial cells

Question Number : 92 Question Id : 250107932 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

How many heavy chain domains are present in the IgE molecule?

Options :

1. 5

2. 2

3. 4

4. 1

Question Number : 93 Question Id : 250107933 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Individuals exposed to small pox virus are immune to same diseases due to

Options :

1. presence of large amounts of antibodies

2. generation of antigen specific macrophages

3. presence of long lived memory cells

4. healthy life style of individuals

Question Number : 94 Question Id : 250107934 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A living microbe with reduced virulence that is used for vaccination is considered as _____.

Options :

1. a toxoid

2. dormant

3. virulent

4. attenuated

Question Number : 95 Question Id : 250107935 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Toll-like-receptors(TLRs) play an important role in immune defense by recognizing

Options :

1. MHC-peptide complexes

2. microbial components

3. anti idiotypic immunogobulins

4. conformational differences in antigenic proteins

Question Number : 96 Question Id : 250107936 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

IgG molecule is divided into which sequence of the heavy chain constant region?

Options :

1. Amino acid sequence

2. Globin sequence

3. Protein sequence

4. Heavy chain sequence

Question Number : 97 Question Id : 250107937 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Small proteins secreted by virus-containing cells

Options :

1. Regulatory T cells

2. Helper T cells

3. Complement

4. Interferon

Question Number : 98 Question Id : 250107938 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is the most potent anaphylotoxin

Options :

1. C3a

2. C4a

3. C5a

4. C1

Question Number : 99 Question Id : 250107939 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The antigen specificity of an adaptive immune response is due to

Options :

1. phagocytosis of certain pathogens by macrophages

2. activation of antigen specific lymphocytes

3. folding of antibody to fit the pathogen

4. lysis of few pathogens by neutrophils

Question Number : 100 Question Id : 250107940 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Cytokines are produced by cells of the immune system in response to various physiological stimuli

Options :

1. Modulate cell function through subsequent cell differentiation or cell profileration

2. Facilitate cell lysis

3. Cause glycosylation of immunoglobins

4. Cause histamine release

Question Number : 101 Question Id : 250107941 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is known as molecular glue?

Options :

1. Endonucleases

2. Exonucleases

3. Methylases

4. DNA Ligases

Question Number : 102 Question Id : 250107942 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What, approximately, is the fraction of genetic variation in the nuclear genome is that is expected to have a harmful effect on gene function?

Options :

1. 50%

2. 25%

3. 10%

4. 1%

Question Number : 103 Question Id : 250107943 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the genes code for a protein that plays a role in growth?

Options :

1. DCP1

2. SCLC6A4

3. KRTHA1

4. GH1

Question Number : 104 Question Id : 250107944 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The substrate for restriction enzyme is

Options :

1. Single stranded RNA

2. Partially double stranded RNA

3. Cell wall proteins

4. Double stranded DNA

Question Number : 105 Question Id : 250107945 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

To identify an mRNA molecule in a sample, which of the following technique is suitable?

Options :

1. Western blotting

2. Eastern blotting

3. Northern blotting

4. Southern blotting

Question Number : 106 Question Id : 250107946 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Increased flavorful shelf life of tomato has been achieved by

Options :

1. Enhancing epidermal growth factor

2. Reducing activity of enzyme polygalacturonase

3. Promoting activity of enzyme polygalacturonase

4. Developing between storage facilities

Question Number : 107 Question Id : 250107947 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Paul Berg's gene splicing experiment created the first rDNA molecule which was a

Options :

1. a T4 phage fragment incorporated into SV40 vector

2. a lambda phage fragment incorporated into SV40 vector

3. a T4 phage fragment incorporated into pSC101 vector

4. a lambda phage fragment incorporated into pSC101 vector

Question Number : 108 Question Id : 250107948 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Nick translation of DNA is a method for making DNA probes. Identify from below, which is not required for nick translation method?

Options :

1. DNA polymerase

2. DNAase

3. Primers

4. Deoxyribonucleotides

Question Number : 109 Question Id : 250107949 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The DNA fingerprint pattern of a child is

Options :

1. exactly similar to that of the parents

2. 100% similar to that of the father's DNA print

3. 100% similar to that of the mother's DNA print

4. 50% bands similar to father and rest similar to mother

Question Number : 110 Question Id : 250107950 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The enzyme used in Maxam- Gilbert method for 32P labeling of the DNA at 3' end is

Options :

1. polynucleotide kinase

2. alkaline phosphatase

3. exonuclease

4. terminal nucleotidyl transferase

Question Number : 111 Question Id : 250107951 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is a sequence alignment tool

Options :

1. BLAST

2. PRINT

3. PROSITE

4. PIR

Question Number : 112 Question Id : 250107952 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

An example of homology and similarity tool

Options :

1. Prospect

2. Emboss

3. Rasmal

4. BLAST

Question Number : 113 Question Id : 250107953 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Sequencing of twenty-four chromosomes in humans was completed in which year?

Options :

1. 2008

2. 2006

3. 2003

4. 2001

Question Number : 114 Question Id : 250107954 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

You need to use a first generation sequencing method for de novo sequencing, which template should give optimum results for this project?

Options :

1. Genomic DNA

2. PCR product

3. Bacterial artificial chromosome

4. Plasmid DNA

Question Number : 115 Question Id : 250107955 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Phylogenetic relationship can be shown by

Options :

1. Dendogram

2. Genebank

3. Data retrieving tool

4. Data search tool

Question Number : 116 Question Id : 250107956 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is a protein sequence database?

Options :

1. DDBJ

2. EMBL

3. GenBank

4. PIR

Question Number : 117 Question Id : 250107957 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A compound that possess desirable properties to become a drug is referred to as

Options :

1. Lead

2. Find

3. Fit drug

4. Fit compound

Question Number : 118 Question Id : 250107958 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Once the sequences are obtained from your Next Generation Sequencing experiment what is the first thing you should do?

Options :

1. Perform a bioinformatics analysis of your data

2. Check your data using a different method

3. Publish your results

4. Further investigate the sequences of interest

Question Number : 119 Question Id : 250107959 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is the source of protein structures in SCOP and CATH?

Options :

1. Uniprot

2. Protein Data Bank

3. Ensemble

4. InterPro

Question Number : 120 Question Id : 250107960 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

PRINTS are software used for

Options :

1. detection of genes from genome sequence

2. identification of functional domains or motifs of proteins

3. detection of tRNA genes

4. prediction of function of a new gene