Andhra Pradesh State Council of Higher Education

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BioTechnology (BT)

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BioTechnology (BT)

Section Id :	29996532
Section Number :	1
Mandatory or Optional :	Mandatory
Number of Questions :	120
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Display Number Panel :	Yes
Group All Questions :	Yes
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Sub-Section Number :	1
Sub-Section Id :	29996532
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 2999653721 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

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Suppose A is a 3×3 unitary matrix and $a + i$ is an eigenvalue of A, where a is a real number. Then

Options :

1. $a = 1$

2. $a = -1$

3. $a = 0$

4. $a = 2$

Question Number : 2 Question Id : 2999653722 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The eigen values of the matrix $A = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 2 & 0 \\ 1 & 0 & 3 \end{bmatrix}$ are ____.

Options :

1. 1, 2, 3

2. –1, 0, 7

3. 0, 0, 7

4. 1, 0, 6

Question Number : 3 Question Id : 2999653723 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

If $f(x) = |x|$ defined in $[-1,1]$ then at $x = 0$, $f(x)$ *is* ____.

Options :

1. continuous and differentiable

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2. continuous but not differentiable

3. not continuous but differentiable

4. neither continuous nor differentiable

Question Number : 4 Question Id : 2999653724 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The maximum value of $3x^4 - 2x^3 - 6x^2 + 6x + 1$ in the interval (0, 2) is

Options :

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

2. $2\frac{7}{16}$

3. $2\frac{5}{16}$

4. $2\frac{3}{16}$

Question Number : 5 Question Id : 2999653725 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

What is the differential equation of all parabolas with x-axis as axis and (a, 0) as focus?

Options :

1. $y\frac{dy}{dx} = a$

2. $x\frac{dy}{dx} = 2a$

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3. $y\frac{dy}{dx}=2a$

4. $x\frac{dy}{dx}=a$

Question Number : 6 Question Id : 2999653726 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The partial differential equation $xf_{xx}+f_{yy}=0$ is hyperbolic if ____.

Options :

1. $x<0$

2. $x=0$

3. $x>0$

4. $x=1$

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Question Number : 7 Question Id : 2999653727 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The function $f(x)=Kx(1-x)$ in $0<x<1$ is a valid probability density function if K = ____.

Options :

1. 4

2. 3

3. 1

4. 6

Question Number : 8 Question Id : 2999653728 Question Type : MCQ Display Question Number : Yes Is

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

A pair of dice is tossed twice. The probability p of scoring 7 points at least once is

Options :

1. 25/36

2. 11/36

3. 7/36

4. 21/36

Question Number : 9 Question Id : 2999653729 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Find the value of $\int_0^2 f(x)\,dx$ by Trapezoidal rule from the given table.

x	0	0.5	1	1.5	2
f(x)	1	3	5	7	4

Options :

1. 39/4

2. 35/4

3. 37/4

4. 33/4

Question Number : 10 Question Id : 2999653730 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

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Find the numerical value of $y(0.2)$ by solving the differential equation

$$\frac{dy}{dx} = x + y^2, \quad y(1) = 1, \quad h = 0.2$$

using the 2^{nd} order Runge-Kutta method.

Options :

1. 1.516

2. 1.526

3. 1.616

4. 1.626

Question Number : 11 Question Id : 2999653731 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which one of the following technologies can be used to investigate DNA-protein interactions?

Options :

1. Yeast two hybrid system

2. Northern Blotting Assay

3. Gel shift assay

4. Southern Blotting Assay

Question Number : 12 Question Id : 2999653732 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The most abundant lipid in plasma membrane is _____.

Options :

1. Cholesterol

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2. Glycolipid

3. Phospholipid

4. Sterol

Question Number : 13 Question Id : 2999653733 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The group of antibiotics that inhibit protein synthesis by acting on 30S ribosome is

Options :

1. Aminoglycosides

2. Tetracyclines

3. Glycopeptides

4. Polymixins

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Question Number : 14 Question Id : 2999653734 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The mole fraction-wise composition of the Watson strand of a given duplex DNA is [A] = 0.30 & [G] = 0.25. What will be the [A], [G], [C] & [T] for the Crick strand for this DNA?

Options :

1. 0.30, 0.25, 0.25, 0.30

2. 0.30, 0.25, 0.30, 0.25

3. 25, 0.30, 0.25, 0.30

4. 0.30, 0.30, 0.25, 0.25

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Question Number : 15 Question Id : 2999653735 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Bacterial lipopolysaccharide is characterized by _____.

Options :

1. Phospholipid

2. Ribitol teichoic acid

3. Glycolipids

4. Ketodeoxyoctonate

Question Number : 16 Question Id : 2999653736 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Patients should be vaccinated annually for influenza with which of the following vaccines?

Options :

1. immune serum globulin

2. killed virus vaccine

3. inactivated virus vaccine

4. live virus vaccine

Question Number : 17 Question Id : 2999653737 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Penicillin-resistant bacteria produce lactamase, which inactivates penicillin by

Options :

1. esterifying the carboxyl group

2. oxidizing S atom

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3. hydrolyzing the side chain

4. hydrolyzing the C-N bonds

Question Number : 18 Question Id : 2999653738 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Barrel-shaped *arthroconidia* are characteristic of which one of the following fungi?

Options :

1. *E.floccosum*

2. *C.immitis*

3. *P.verrucosa*

4. *M.canis*

Question Number : 19 Question Id : 2999653739 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Tinea versicolor is caused by which of the following?

Options :

1. *E.floccosum*

2. *M.furfur*

3. *M.canis*

4. *E.werneckii*

Question Number : 20 Question Id : 2999653740 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

If overall Del factor for a microbial spore is 32.2 and specific death rate is 2.54/min, then holding time is _____.

Options :

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1. 81.79 min

2. 12.68 min

3. 0.079 min

4. 1.268 min

Question Number : 21 Question Id : 2999653741 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Biogas is a mixture of _____.

Options :

1. $H_2 + CO_2$

2. $CH_4 + CO_2$

3. $N_2 + CO_2$

4. $N_2 + CO_2 + H_2$

Question Number : 22 Question Id : 2999653742 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

BLOSUM matrices are used for _____.

Options :

1. Multiple sequence alignment

2. Pairwise sequence alignment

3. Phylogenetic analysis

4. Domain and motif analysis

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Question Number : 23 Question Id : 2999653743 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Cardiolipin is a major component of _____.

Options :

1. Plasma Membrane

2. Nuclear Membrane

3. Inner Mitochondrial Membrane

4. Golgi Membrane

Question Number : 24 Question Id : 2999653744 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following reaction does not consume or produce NADPH?

Options :

1. Reduction of oxidized glutathione

2. Oxidative phosphorylation

3. Synthesis of steroids

4. Conversion of glucose-6-PO_4 to 6-phosphogluconolactone

Question Number : 25 Question Id : 2999653745 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Enzyme catalyzed hydrolysis of proteins produces amino acid of the form

Options :

1. D

2. DL

3. L

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4. Racemic

Question Number : 26 Question Id : 2999653746 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In the flagellar membrane which enzyme catalyses ATP?

Options :

1. Cytoplasmic dyenin

2. Asconic dyenin

3. Kinesis

4. Myosin

Question Number : 27 Question Id : 2999653747 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following reagents would be most useful in determining the N-terminal amino acid of a polypeptide?

Options :

1. trypsin

2. carboxypeptidase

3. phenylisothiocyanate

4. cyanogen bromide

Question Number : 28 Question Id : 2999653748 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A competitive inhibitor _____.

Options :

1. increases the K_m of an enzyme

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2. decreases the K_m of an enzyme

3. increases both V_{max} and K_m of enzyme

4. decreases the K_m but increases the V_m of enzyme

Question Number : 29 Question Id : 2999653749 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The mirror image of right handed α-helix with all L-amino acids will appear as

Options :

1. left handed α-helix with all L-amino acids

2. left handed α-helix with all D-amino acids

3. right handed α-helix with all L-amino acids

4. right handed α-helix with all D-amino acids

Question Number : 30 Question Id : 2999653750 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Vitamin-D is derived from which of the following precursors by the action of UV light?

Options :

1. 7-dehydrocholesterol

2. lanosterol

3. glycocholate

4. squalene epoxide

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Question Number : 31 Question Id : 2999653751 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The effect of reversible competitive inhibitor can be nullified by _____.

Options :

1. increasing the product concentration

2. increasing the substrate concentration

3. increasing the temperature

4. decreasing the substrate concentration

Question Number : 32 Question Id : 2999653752 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Plastome is _____.

Options :

1. Plasmalemma protein

2. Plasmid

3. An organellar genome

4. Phagemid

Question Number : 33 Question Id : 2999653753 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

About what proportion of mitochondrial proteins are encoded by nuclear DNA?

Options :

1. More than 95%

2. 50%

3. 1%

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4. 1.5%

Question Number : 34 Question Id : 2999653754 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The largest class of introns which are found in nuclear mRNA primary transcript is

Options :

1. Spliceosomal introns

2. Group I introns

3. Group II introns

4. Group IV introns

Question Number : 35 Question Id : 2999653755 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following processes require energy?

Options :

1. Ligation

2. Transformation

3. Restriction digestion

4. Hybridization

Question Number : 36 Question Id : 2999653756 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A test cross to determine the genotype of smooth yellow seed (both dominant characters) has to be performed. The required phenotype of seed to be used should be

Options :

1. smooth yellow

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2. wrinkled green

3. smooth green

4. wrinkled yellow

Question Number : 37 Question Id : 2999653757 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which application of genetics has the greatest impact on the wellbeing of humans to date?

Options :

1. plant breeding

2. animal breeding

3. genetic engineering

4. *In vitro* fertilization

Question Number : 38 Question Id : 2999653758 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Human DNA (3×10^6) is replicated in 5 hr at a rate of 1 kb/min. The number of origin of replications utilized are _____.

Options :

1. 1

2. 3

3. 300

4. 10000

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Question Number : 39 Question Id : 2999653759 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following is a set of discontinuous variations?

Options :

1. blood groups, sex

2. hair colour, intelligence

3. height, excellence in mathematics

4. skin colour, mechanical skills

Question Number : 40 Question Id : 2999653760 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

DnaB protein helps in _____.

Options :

1. Recognizing ori sequence

2. Unwinding DNA helix

3. Synthesizing primers

4. Relieving torsional strain generated by DNA unwinding

Question Number : 41 Question Id : 2999653761 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The adapters that allow translation of the four letter nucleic acid language into the 20 letter protein language are called

Options :

1. Aminoacyl trna synthatases

2. Transfer RNAs

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3. Ribosomal RNAs

4. Messenger RNAs

Question Number : 42 Question Id : 2999653762 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following is not a second messenger for signal transduction?

Options :

1. Calcium ions

2. Nitric oxide gas

3. ATP

4. Cyclic AMP

Question Number : 43 Question Id : 2999653763 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The equation for the elution volume of a solute in an effluent can be written as (where V is the elution volume of a substance, V_0 void volume, k_D distribution constant and V_i internal water volume)

Options :

1. $V = V_0 + k_D V_i$

2. $V = V_0 / V_i$

3. $V = V_0 - k_D V_i$

4. $V / V_0 = k_D V_i$

Question Number : 44 Question Id : 2999653764 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

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Penicillin –G antibiotic act up on _____.

Options :

1. Cell wall of Gram-positive bacteria

2. Cell wall of Gram-negative bacteria

3. Cell wall of both Gram positive & Gram-negative bacteria

4. Cell wall of *Mycobacterium*

Question Number : 45 Question Id : 2999653765 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following vectors does not contain an origin of replication from a yeast chromosome?

Options :

1. yCp

2. YAC

3. Yep

4. YRp

Question Number : 46 Question Id : 2999653766 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the pigments give tomato and carrots their colour?

Options :

1. Chlorophyll

2. Lycopene and lutein

3. Carotene and lycopene

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4. Carotene and lutein

Question Number : 47 Question Id : 2999653767 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

What is the length of a motif, in terms of amino acids residue?

Options :

1. 30-60

2. 10-20

3. 70-90

4. 1-10

Question Number : 48 Question Id : 2999653768 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Cellulase enzyme is used in _____.

Options :

1. Pulp and paper industry

2. Dairy industry

3. Plastic industry

4. Leather industry

Question Number : 49 Question Id : 2999653769 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Recombinant Chymosin is used in _____.

Options :

1. Bread making

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2. Cheese manufacturing

3. Curdling process

4. Jam making

Question Number : 50 Question Id : 2999653770 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Carbenicillin is effective against

Options :

1. *Pseudomonas aeruginosa*

2. *E.coli*

3. *Arthobacter sp.*

4. *Xanthomonas sp.*

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Question Number : 51 Question Id : 2999653771 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In encapsulation method, microcapsules are mainly made up of _____.

Options :

1. nylon

2. cellulose

3. glass

4. fiber

Question Number : 52 Question Id : 2999653772 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The recovery of petroleum is facilitated by _____.

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Options :

1. aliginate

2. xanthan gum

3. pollulan

4. gellan

Question Number : 53 Question Id : 2999653773 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In secondary metabolism two distinct phases-trophophase and idiophase refer respectively to _____.

Options :

1. growth and production phase

2. early and late phase

3. primary and secondary metabolism

4. lag phase and log phase

Question Number : 54 Question Id : 2999653774 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Enzyme papain is used with success to _____.

Options :

1. increase meat production

2. leaven bread

3. ripen papaya fruit

4. tenderize meat

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Question Number : 55 Question Id : 2999653775 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The principle of Chromatography is based on the _____.

Options :

1. different rate of movement of the solute in a column

2. separation of one solute from other constituents by being captured on the adsorbent

3. different rate of movement of the solvent in the column

4. density of the particles

Question Number : 56 Question Id : 2999653776 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which RNA polymerase has single sub-unit?

Options :

1. *E. coli*

2. T7

3. λ phage

4. *Bacillus subtilis*

Question Number : 57 Question Id : 2999653777 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Co-immuno-precipitation (Co-IP) is routinely performed to detect _____.

Options :

1. RNA-DNA interaction

2. RNA-RNA interaction

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3. DNA-DNA interaction

4. Protein-protein interaction

Question Number : 58 Question Id : 2999653778 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The virus commonly used to infect cell culture for the production of interferon is:

Options :

1. Corona virus

2. Sendai virus

3. Polio virus

4. Small pox virus

Question Number : 59 Question Id : 2999653779 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following is not a component of structured model?

Options :

1. Genetic compartment

2. synthetic compartment

3. external substrate

4. Internal compartment

Question Number : 60 Question Id : 2999653780 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

During 1953, Sanger determined the amino acid sequence for which of the following proteins?

Options :

1. casein

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2. insulin

3. hemoglobin

4. heat shock protein

Question Number : 61 Question Id : 2999653781 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In a single step, which of the following technique yields highly purified enzymes?

Options :

1. gel filtration

2. affinity chromatography

3. ion exchange chromatography

4. thin layer chromatography

Question Number : 62 Question Id : 2999653782 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

During T-DNA transfer, the 5'end of the T-DNA is attached to _____.

Options :

1. VirD2

2. VirD1

3. Vir E1

4. VirE2

Question Number : 63 Question Id : 2999653783 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

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The protein structural motif domain- helix loop helix are contained by all of the following except_____.

Options :

1. Scleraxis
2. Neurogenins
3. Transcription Factor 4
4. Leucine zipper

Question Number : 64 Question Id : 2999653784 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The biological material which is most commonly used in biosensors is _____.

Options :

1. antibodies
2. nucleic acids
3. enzymes
4. lectins

Question Number : 65 Question Id : 2999653785 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The factors affecting K_La values in fermentation vessels are the following except

Options :

1. The air flow rate employed
2. The degree of agitation
3. The rheology properties of the medium

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4. The presence of chelating agents

Question Number : 66 Question Id : 2999653786 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In fed batch culture, catabolite repression can be overcome by _____.

Options :

1. removal of waste material

2. addition of nutrients in small interval

3. addition of nutrients only in the beginning

4. removal of culture fluid

Question Number : 67 Question Id : 2999653787 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

An immobilized enzyme being used in a continuous Plug Flow Reactor exhibits an effectiveness factor (Η) of 1.2. The value of Η being greater than one could be apparently due to one of the following reasons. Identify the correct reason.

Options :

1. The enzyme follows substrate inhibited kinetics with internal pore diffusion limitation

2. The enzyme experiences external film diffusion limitation

3. The enzyme follows sigmoidal kinetics

4. The immobilized enzyme is operationally unstable

Question Number : 68 Question Id : 2999653788 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

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In the growth curve graph, in which the biomass is plotted against time the slope represents _____.

Options :

1. Specific growth rate

2. Specific death rate

3. Substrate concentration

4. Biomass concentration

Question Number : 69 Question Id : 2999653789 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The respiratory coefficient for the following reaction

$aCH_mO_n + bO_2 + cNH_3 \rightarrow dCH_\alpha O_\beta N\gamma + eH_2O + fCO_2$ is defined as _____.

Options :

1. f/a

2. e/b

3. b/f

4. f/b

Question Number : 70 Question Id : 2999653790 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In which of the following cases of microbial growth lag phase usually does not occur?

Options :

1. if inoculum is taken from stationary phase culture and inoculated into same medium.

2. inoculum consists of damaged cells, inoculated into the same medium

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3. inoculum is transferred from a rich culture medium to a poor one

4. if an exponentially growing culture is inoculated into the same medium under the same conditions of growth

Question Number : 71 Question Id : 2999653791 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In SDS electrophoresis, proteins are separated on basis of _____.

Options :

1. Charge

2. Mass

3. 3D structure

4. Isoelectric point

Question Number : 72 Question Id : 2999653792 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The intraparticle mass transfer resistance can affect the rate of enzyme reaction, if enzymes are immobilized by

Options :

1. Crosslinking using multifunctional reagents

2. Copolymerization or microencapsulation

3. Adsorption

4. Covalent interaction

Question Number : 73 Question Id : 2999653793 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

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What is the disadvantage of amplification of using PCR over natural cloning?

Options :

1. In PCR, there is no proof reading activity

2. In PCR, small fragments can't be amplified

3. There is an A incorporated in PCR products, which makes cloning difficult

4. PCR takes more time as compared to natural cloning

Question Number : 74 Question Id : 2999653794 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Transgenic cattle milk containing human proteins which may help in the treatment of

Options :

1. Rheumatoid arthritis

2. Huntington's disease

3. Emphysema

4. Polio

Question Number : 75 Question Id : 2999653795 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Bacterial genes cys E and cys M are used in _____.

Options :

1. Gene farming

2. increase of body growth

3. improving wool production

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4. disease diagnosis

Question Number : 76 Question Id : 2999653796 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The production of Synthetic seeds is done by encapsulating somatic embryo with

Options :

1. Sodium alginate

2. Sodium nitrate

3. Sodium acetate

4. Sodium sulphate

Question Number : 77 Question Id : 2999653797 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In vitro fusion of isolated protoplasts to form a hybrid cell is commonly referred to

Options :

1. cell hybridization

2. plant cell hybridization

3. somatic hybridization

4. cybridization

Question Number : 78 Question Id : 2999653798 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Stable transformation of plants is reliably obtained by _____.

Options :

1. silicon carbide whisker

2. electroporation

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3. agrobacterium plasmid integration

4. microinjection

Question Number : 79 Question Id : 2999653799 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

To obtain virus free plants which among the following is preferred?

Options :

1. Micro propagation

2. Shoot tip culture

3. Root tip culture

4. Grafting

Question Number : 80 Question Id : 2999653800 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Multiplication of genetically identical copies of a cultivar by asexual reproduction is known as _____.

Options :

1. aclonal propagation

2. clonal propagation

3. vegetative propagation

4. polyclonal propagation

Question Number : 81 Question Id : 2999653801 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The function of Interference RNA to prevent a gene from functioning is also known as

Options :

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1. Reverse transcription

2. Epigenetics

3. PTGS (Post Transcriptional Gene Silencing)

4. RNA splicing

Question Number : 82 Question Id : 2999653802 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Choose the incorrect statement for the method homopolymer tailing.

Options :

1. The first step is the RNA: DNA hybrid synthesis

2. Terminal transferase is used for addition of nucleotides on 3' end

3. Terminal transferase adds only at DNA strands

4. The DNA strand is now having known sequence at 3' end

Question Number : 83 Question Id : 2999653803 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Epithelial tissue is characterized by each of these traits, except that

Options :

1. It lacks blood vessels

2. It functions in secretion, absorption and excretion

3. Epithelial cells are loosely packed and have much intercellular material

4. It is anchored to a basement membrane

Question Number : 84 Question Id : 2999653804 Question Type : MCQ Display Question Number : Yes Is

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

The loop region is single stranded while synthesizing cDNA. It can be cleaved by using which enzyme?

Options :

1. Exonuclease

2. S1 nuclease

3. RNaseH

4. DNase

Question Number : 85 Question Id : 2999653805 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

What is the name of the cell line of the human embryonic lung?

Options :

1. HeLa

2. MDA MB 231

3. HCT 116

4. MRC-5

Question Number : 86 Question Id : 2999653806 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which cloning technique is used to clone the whole organism?

Options :

1. DNA cloning

2. Reproductive cloning

3. Gene cloning

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4. Therapeutic cloning

Question Number : 87 Question Id : 2999653807 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Vaccines prepared from toxins and chemicals are _____.

Options :

1. Cellular vaccines

2. Sub-cellular vaccines

3. Attenuated vaccines

4. Heterologous vaccines

Question Number : 88 Question Id : 2999653808 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Sendai virus enter host cell by _____.

Options :

1. Phagocytosis

2. receptor mediated endocytosis

3. cell fusion

4. endocytosis

Question Number : 89 Question Id : 2999653809 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following organs is used for IFN production?

Options :

1. lymph nodes

2. kidney

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3. spleen

4. thymus

Question Number : 90 Question Id : 2999653810 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Multiple Ovulation and Embryo Transfer (MOET) is a method of _____.

Options :

1. birth control in humans

2. cloning in sheep

3. hybridization in cattle

4. fish cultivation

Question Number : 91 Question Id : 2999653811 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Often PCR can be performed in order to confirm whether an insert is present in the plasmid. Cells are taken directly and PCR is performed, this type of PCR is known as:

Options :

1. direct PCR

2. colony PCR

3. quantitative PCR

4. in-situ PCR

Question Number : 92 Question Id : 2999653812 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

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When linkers are combined with other features such as a selectable marker and antibiotic resistance, it is called as _____.

Options :

1. Cassette

2. Modified linker

3. Adaptors

4. Induced linker

Question Number : 93 Question Id : 2999653813 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The particle gun method consists of which of the following steps?

Options :

1. The DNA of interest is absorbed onto micro projectile beads

2. These beads are often made of aluminum

3. The explosion in a gun propels a macro projectile forward which in turn propels micro projectile beads

4. The macro projectiles and micro projectiles both cross the perforated plate and hit the target tissue behind it

Question Number : 94 Question Id : 2999653814 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The primary purpose of the adaptive immune system is to _____.

Options :

1. block all pathogens from entering the body

2. cure allergic reactions

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3. kill tumor cells

4. protect from disease upon reinfection with a specific pathogen

Question Number : 95 Question Id : 2999653815 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The membrane attack complex consists of _____.

Options :

1. OH

2. Colicins

3. C3, b3b, Bb

4. C5b,6,7,8,9

Question Number : 96 Question Id : 2999653816 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Restriction enzymes

Options :

1. Play no role in bacteria

2. Cleave DNA at highly specific recognition sequences

3. Are made only by eukaryotic cells

4. Add methyl groups to specific DNA sequences

Question Number : 97 Question Id : 2999653817 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

When the B-cell fails in the maturation process, it will die by what mechanism?

Options :

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1. Senescence

2. Phagocytosis

3. Pinocytosis

4. Apoptosis

Question Number : 98 Question Id : 2999653818 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

One of the principal functions of the complement is to _____.

Options :

1. cross link allergens

2. binding of antibodies attached to the cell surfaces leading to cell lysis

3. release histamine

4. help phagocytosis

Question Number : 99 Question Id : 2999653819 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In the normal human being the concentration(s) of various antibodies in the serum is (are) in the order

Options :

1. IgA > IgM > IgE >IgG

2. IgM > IgA > IgG >IgE

3. IgE > IgG > IgM >IgA

4. IgG > IgA > IgM >IgE

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Question Number : 100 Question Id : 2999653820 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

T_{H2} response result in the production of _____.

Options :

1. phagocytes

2. TC cells

3. inflammatory cytokines

4. antibodies

Question Number : 101 Question Id : 2999653821 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following does not protect body surfaces?

Options :

1. Skin

2. Mucus

3. Gut microflora

4. Salivary amylase

Question Number : 102 Question Id : 2999653822 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The mononuclear phagocyte system does not include _____.

Options :

1. Endothelial cells

2. Kidney mesangial cells

3. Kupffer cells

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4. Lymph node medullary macrophages

Question Number : 103 Question Id : 2999653823 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Neutrophil defensins are _____.

Options :

1. Anti-toxins

2. Peptide antibiotics

3. Enzymes

4. Glycolipids

Question Number : 104 Question Id : 2999653824 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The principle of Sanger's method relies on _____.

Options :

1. use of chemicals for base specific cleavage

2. use of dNTPs for chain termination

3. use of ddNTPs for chain termination

4. use of 32P chain termination

Question Number : 105 Question Id : 2999653825 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The restriction – modification system of bacteria exists to

Options :

1. protect bacteria from invading foreign DNA

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2. help bacterial chromosome to replicate

3. encourage recombination of new genetic material

4. promote conjugation

Question Number : 106 Question Id : 2999653826 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A plasmid cloning vector should contain all of the following sequences except

Options :

1. Origin of replication

2. Inducible promoter

3. Selectable marker gene

4. Multiple cloning site

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Question Number : 107 Question Id : 2999653827 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Genetically engineered bovine (bST), sometimes called rbST (recombinant bovine somatotropin) or rbGH (recombinant bovine growth hormone) are used in the

Options :

1. Therapeutic drugs

2. Agriculture

3. Dairy industry

4. DNA fingerprinting

Question Number : 108 Question Id : 2999653828 Question Type : MCQ Display Question Number : Yes Is

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

Positional cloning approach exploits information

Options :

1. About the position of the restriction sites

2. On the status of its expression

3. On the location of the gene in the genome

4. About the position of promoter relative to MCS

Question Number : 109 Question Id : 2999653829 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Highest capacity vector is

Options :

1. Cosmid

2. Yeast artificial chromosome

3. Bacteriophage vector

4. Yeast integrative vector

Question Number : 110 Question Id : 2999653830 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The First recombinant drug produced is _____.

Options :

1. Insulin

2. tPA

3. Tetracycline

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4. Penicillin

Question Number : 111 Question Id : 2999653831 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No 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 : 2999653832 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Proteomics is the study of _____.

Options :

1. set of proteins

2. set of proteins in a specific region of the cell

3. entire set of expressed proteins in a cell

4. set of genes

Question Number : 113 Question Id : 2999653833 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In India, for which of the following, the genome sequencing program is initiated?

Options :

1. Pigeon pea

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2. Humans

3. Rice

4. Tomato

Question Number : 114 Question Id : 2999653834 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following organisms has similar number of operons to that of a bacteria?

Options :

1. *Arabidopsis*

2. *Drosophila*

3. *C. Elegans*

4. Mouse

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Question Number : 115 Question Id : 2999653835 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

What is PROSITE?

Options :

1. A database of protein structures

2. A database of protein motifs

3. A database of interacting proteins

4. A search tool

Question Number : 116 Question Id : 2999653836 Question Type : MCQ Display Question Number : Yes Is

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

Which of the following is a retrieval system?

Options :

1. PyMol

2. Mfold

3. Entrez

4. DALI

Question Number : 117 Question Id : 2999653837 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The Needleman-Wunsch algorithm is developed for _____.

Options :

1. Local pairwise sequence alignment

2. Global pairwise sequence alignment

3. Multiple sequence alignment

4. Structural alignment

Question Number : 118 Question Id : 2999653838 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The collaboration between EBI and SIB results in which of the complementary databases?

Options :

1. TrEMBL

2. SWISS-PROT

3. PIR

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4. PROSITE

Question Number : 119 Question Id : 2999653839 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which among the following is a complied programming language?

Options :

1. AWK

2. PERL

3. Bash Script

4. FORTAN

Question Number : 120 Question Id : 2999653840 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The goal of _____ is to determine the location of specific genes within the genome.

Options :

1. cloning

2. annotation

3. proteomics

4. mapping

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