Question Paper Preview

Question Paper Name: Bio Technology 11th May 2018 Shift1
Subject Name: Bio Technology
Duration: 120

Bio Technology

Display Number Panel: Yes
Group All Questions: No

Question Number : 1 Question Id : 2203604201 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If A is a n x n matrix then the det(adj A) =

Options :

1. $n(\det A)$

2. $\det(A)$

3. $\det(A)$

4. $(\det A)^{n-1}$

Question Number : 2 Question Id : 2203604202 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The values of p and q so that the system $2x + 3y + 5z = 9, 7x + 3y - 2z = 8$ *and* $2x + 3y - pz = q$ has unique solution, are

Options :

1. $p = 5, q = 9$

2. $p = q = 5$

3. $p = 5, q \neq 9$

4. $p \neq 5$ and q is any number

Question Number : 3 Question Id : 2203604203 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

$$\lim_{x \to 0} \frac{ln(1+x)}{x} =$$

Options :

1. 0

2. ∞

3. 2

4. 1

Question Number : 4 Question Id : 2203604204 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If f is a function defined on $(-\pi, \pi)$, then its Fourier coefficient a_n = _____.

Options :

1. $\frac{1}{\pi}\int_{-\pi}^{\pi} f(x)\cos nx$

2. $\frac{1}{\pi}\int_{-\pi}^{\pi} f(x)\sin nx dx$

3. 0

4. $\frac{2}{\pi}\int_{0}^{\pi} f(x)dx$

Question Number : 5 Question Id : 2203604205 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The order and the degree of the differential equation $\left[1 + \left(\frac{dy}{dx}\right)^2\right]^3 = c^2\left(\frac{d^2y}{dx^2}\right)^2$ is

Options :

1. $2,3$

2. $1,2$

3. 2,2

4. 3,2

Question Number : 6 Question Id : 2203604206 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The complementary function for $(D^2 - 2D + 1)y(t) = sint$ is

Options :

1. $c_1e^{-t} + c_2e^{t}$

2. $c_1e^{-2t} + c_2e^{2t}$

3. $(c_1 + c_2t)e^{t}$

4. $(c_1 + c_2t)$

Question Number : 7 Question Id : 2203604207 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following statement is NOT correct?

Options :

1. If $P(A/B) = P(A)$ then $P(B/A) = P(B)$

2. If $P(B/A) = P(B)$ then $P(\overline{B}/A) = P(\overline{B})$

3. $P(\overline{B}) = 1 - P(B)$

4. If $A = B$ then $P(A/B) = 0$

Question Number : 8 Question Id : 2203604208 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If a random variable X assumes the values -1, 0 and 1 with probabilities $\frac{1}{3}, \frac{1}{3}$ and $\frac{1}{3}$ respectively, then the standard deviation of $5X + 1$ is

Options :

1. 1.08

2. 2.08

3. 3.08

4. 4.08

Question Number : 9 Question Id : 2203604209 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

By Euler's method the approximate solution for the ordinary differential equation $\frac{dy}{dx} = f(x, y)$ subject to $y(x_0) = y_0$ at $x_1 = x_0 + h$ is

Options :

1. $y_1 = y_0 + hf(x_0, y_0)$

2. $y_1 = y_0 + h^2 f(x_0, y_0)$

3. $y_1 = y_0 + f(x_0, y_0)$

4. 0

Question Number : 10 Question Id : 2203604210 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The condition for convergence of the iterative scheme $x_n = \phi(x_{n-1}), n = 1, 2, \ldots$ is

Options :

1. $|\phi(x_{n-1})| < 1$

2. $|\phi'(x_{n-1})| > 1$

3. $|\phi'(x_{n-1})| < 1$

4. $|\phi(x_{n-1})| > 1$

Question Number : 11 Question Id : 2203604211 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The physical nature of genome is studied under

Options :

1. Structural genomics

2. Comparative genomics

3. Proteo genomics

4. Functional genomics

Question Number : 12 Question Id : 2203604212 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Indian soil is mainly deficient of

Options :

1. Sulphur

2. Zinc

3. Nitrogen

4. Magnesium

Question Number : 13 Question Id : 2203604213 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The flow of genetic material in microbial cells usually takes place from

Options :

1. RNA through DNA to protein

2. Protein through RNA to DNA

3. DNA through RNA to protein

4. Protein through DNA to RNA

Question Number : 14 Question Id : 2203604214 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The conversion of nitrite to nitrate is carried out by

Options :

1. Nitrosomonas

2. Nitrosococcus

3. Nitrobacter

4. Clostridium

Question Number : 15 Question Id : 2203604215 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

AIDS causing virus belongs to

Options :

1. Retroviridae

2. Rhabdoviridae

3. Adnoviridae

4. Hepadnaviridae

Question Number : 16 Question Id : 2203604216 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Due to breakdown and collapse of _____ lung tissue is destroyed.

Options :

1. Bronchioles

2. Microtrachea

3. Alveoli

4. Eustachian tubes

Question Number : 17 Question Id : 2203604217 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The rate of photosynthesis is maximum in

Options :

1. Blue light

2. Red light

3. Green light

4. Violet light

Question Number : 18 Question Id : 2203604218 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

When acetate is the sole source of carbon for some microorganisms, the cycle which is used, is called

Options :

1. Pentose phosphate pathway

2. Glycolytic pathway

3. Glyoxylate pathway

4. Oxaloacetate pathway

Question Number : 19 Question Id : 2203604219 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following viruses has not been associated with human cancer ?

Options :

1. Hepatitis C virus

2. Hepatitis B virus

3. Varicella-Zoster virus

4. Herpes simplex virus type 2

Question Number : 20 Question Id : 2203604220 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Process of mating through which two bacterial cells transfer their DNA, one cell act as host and other as recipient, is known as

Options :

1. Transduction

2. Transformation

3. Conjugation

4. Mating

Question Number : 21 Question Id : 2203604221 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

First discovered amino acid is

Options :

1. Asparagine

2. Aspartate

3. Glutamate

4. Glutamine

Question Number : 22 Question Id : 2203604222 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

An enzyme useful in dissolving blood clots in heart attack patients is

Options :

1. Cholesterol

2. Thrombin

3. Tissue plasminogen activate

4. Progesterone

Question Number : 23 Question Id : 2203604223 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Chlorophylls are pigments soluble in

Options :

1. Organic solvents

2. Inorganic solvents

3. Organic solutes

4. Inorganic solutes

Question Number : 24 Question Id : 2203604224 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Bulk transport of large quantities of materials into cell is referred as

Options :

1. Active transport

2. Diffusion

3. Bulk transport

4. Endocytosis

Question Number : 25 Question Id : 2203604225 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

ATP and NADH inhibit

Options :

1. Isocitrate hydrogenase

2. Isocitrate dehydrogenase

3. Pyruvate dehydrogenase

4. Pyruvate hydrogenase

Question Number : 26 Question Id : 2203604226 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Functions which are performed by cell surface membrane do not include

Options :

1. Exchange of nutrients

2. Exchange of waste materials

3. Enable Mitosis

4. Receive hormone messages

Question Number : 27 Question Id : 2203604227 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of these techniques could be used to separate molecules according to their differential solubility in a given solvent?

Options :

1. Electrophoresis

2. Chromatography

3. Ultracentrifugation

4. Filtration

Question Number : 28 Question Id : 2203604228 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Polysaccharides are synthesized in plants by which of the following processes?

Options :

1. Reduction

2. Oxidation

3. Hydrolysis

4. Condensation

Question Number : 29 Question Id : 2203604229 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Cholesterol is essential for normal membrane functions because it

Options :

1. Plugs up the cardiac arteries of older men

2. Cannot be made by higher organisms

3. Spans the thickness of the bilayer

4. Keeps membranes fluid

Question Number : 30 Question Id : 2203604230 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Acetylcholine receptor ion channel is an example of

Options :

1. Gated ion channel

2. Receptor enzymes

3. Membrane protein

4. Nuclear protein

Question Number : 31 Question Id : 2203604231 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which reaction in DNA replication is catalyzed by DNA ligase?

Options :

1. Addition of new nucleotides to the lagging strand

2. Addition of new nucleotides to the leading strand

3. Base pairing of the template and the newly formed DNA strand

4. Formation of a phosphodiester bond between the 3'-OH of one of okazaki fragments and the 5'-phosphate of the next on the lagging strand

Question Number : 32 Question Id : 2203604232 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the cyclins have /has essential functions in S-phase of cell cycle?

Options :

1. A-type

2. B-type

3. D-type

4. Both B and D types

Question Number : 33 Question Id : 2203604233 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

DNA binding protein is detected by using which technique

Options :

1. Western blotting

2. South-western blotting

3. Eastern blotting

4. Northern blotting

Question Number : 34 Question Id : 2203604234 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Increase in number of copies of genes is called

Options :

1. Gene duplication

2. Gene amplification

3. Gene cloning

4. Gene location

Question Number : 35 Question Id : 2203604235 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

All newly synthesized polynucleotide strands must be initiated by

Options :

1. RNA polymerase

2. DNA polymerase

3. gyrase

4. helicase

Question Number : 36 Question Id : 2203604236 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Specific chromosomal locations from where replication begins are called as

Options :

1. Locus

2. Origin of replication

3. Loci

4. Chromosomal arms

Question Number : 37 Question Id : 2203604237 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

An extra finger in humans is rare but is due to a dominant gene. When one parent is normal and the other parent has an extra finger but is heterozygous for the trait, what is the probability that the first child will be normal?

Options :

1. 0%

2. 25%

3. 50%

4. 75%

Question Number : 38 Question Id : 2203604238 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Crossing over in meiosis occurs in

Options :

1. Diplotene

2. Leptotene

3. Pachytene

4. Diakinesis

Question Number : 39 Question Id : 2203604239 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The DNA of an elephant and the DNA of a mango tree will probably differ in all of the following

Options :

1. Sequence of DNA nucleotides

2. Length of DNA molecules

3. Number of DNA molecules

4. Kinds of nucleotides utilized in forming DNA

Question Number : 40 Question Id : 2203604240 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is added to the 3'-end of many eukaryotic mRNAs after transcription?

Options :

1. Introns

2. A poly A tail

3. A cap structure, consisting of a modified G nucleotide

4. the trinucleotide 5'-CCA

Question Number : 41 Question Id : 2203604241 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Probiotics are

Options :

1. Cancer inducing agents

2. Safe antibiotics

3. New kind of food allergens

4. Live microbial food supplement

Question Number : 42 Question Id : 2203604242 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The technique electrophoresis, for the separation of charged molecules was developed by

Options :

1. Tswett

2. Svedberg

3. Tiselius

4. Sanger

Question Number : 43 Question Id : 2203604243 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Antibodies are separated by the

Options :

1. Differential centrifugation

2. Zonal centrifugation

3. Electrophoresis

4. Isopycnic centrifugation

Question Number : 44 Question Id : 2203604244 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The main carbon source used in penicillin production is

Options :

1. Glucose

2. Lactose

3. Maltose

4. Sucrose

Question Number : 45 Question Id : 2203604245 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Tower fermentor is mainly used for _____ production.

Options :

1. Wine

2. Beer

3. Enzyme

4. Vitamin

Question Number : 46 Question Id : 2203604246 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

When dissolved oxygen is lower than the critical concentration, viable cell concentration declines because of

Options :

1. Incomplete glutamine oxidation

2. Hyper glutamine oxidation

3. Hyper glutamate oxidation

4. Accumulation of ammonia

Question Number : 47 Question Id : 2203604247 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following precursor is used for Penicillin G production?

Options :

1. Phenyl carbamic acid

2. Ammonium sulphate

3. Ammonium chloride

4. Phenyl acetic acid

Question Number : 48 Question Id : 2203604248 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

An enzyme catalyses a reaction by

Options :

1. Decreasing the energy of the substrate

2. Decreasing the activation energy of the reaction

3. Decreasing the product stability

4. Increasing the activation barrier of the reaction

Question Number : 49 Question Id : 2203604249 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A biological process is involved in the _____ treatment of industrial effluent.

Options :

1. Primary

2. Secondary

3. Tertiary

4. Quaternary

Question Number : 50 Question Id : 2203604250 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is not used as an antifoaming agent?

Options :

1. Lard oil

2. Silicone derivatives

3. Vegetable oil

4. Citric acid

Question Number : 51 Question Id : 2203604251 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 important antibiotic producing strain?

Options :

1. *Saccharomyces*

2. *Aspergillus*

3. *Streptomyces*

4. *Penicillium*

Question Number : 52 Question Id : 2203604252 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Dextran is composed of

Options :

1. Glucans (polymers of glucose)

2. Pentasaccharide containing glucose, mannose and glucuronic acid with acetate and pyruvate

3. Polymer of mannuronic acid and glucuronic acid

4. Two glucose, one glucuronic, one ucoronic acid and one rhamnose molecule

Question Number : 53 Question Id : 2203604253 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following cannot be used as adsorbent in Column adsorption chromatography?

Options :

1. Silica gel

2. Activated alumina

3. Magnesium oxide

4. Potassium permanganate

Question Number : 54 Question Id : 2203604254 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Mixing in an anaerobic sludge blanket reactor is due to

Options :

1. Rapid change in water temperature throughout the reactor

2. Swimming of microbes

3. Release of gases by the microbial populations

4. DNA prolifing

Question Number : 55 Question Id : 2203604255 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The *Candida* species require fermentation equipment lined with plastic because they are extremely sensitive to

Options :

1. Traces of cobalt

2. Traces of nickel

3. Traces of iron

4. Traces of zinc

Question Number : 56 Question Id : 2203604256 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The rate limiting step in the movement of oxygen from the gas phase in a bubble to the cell is the movement of oxygen molecules through

Options :

1. Gas liquid interface

2. Bubble boundary layer

3. Bulk liquid

4. Gas phase

Question Number : 57 Question Id : 2203604257 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A higher K_s value of Monod's equation means

Options :

1. Greater affinities to substrate

2. Lower affinities to substrate

3. Unaffected with the substrate bonding

4. Lower dissociation constant value

Question Number : 58 Question Id : 2203604258 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The specific growth rate (μ) is defined as

Options :

1. The concentration of biomass in the reactor

2. Rate of increase of total biomass in a reactor

3. The rate of individual cells division or increase in their biomass

4. The rate of cell death

Question Number : 59 Question Id : 2203604259 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following nitrogen sources are used for industrial process?

Options :

1. n-butane

2. Yeast extracts

3. Corn steep liquor

4. Dextrin

Question Number : 60 Question Id : 2203604260 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Media containing spore and thermolabile constituents are sterilized by

Options :

1. Pasteurization

2. UV radiation

3. Dry heat

4. Tyndallization

Question Number : 61 Question Id : 2203604261 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following organism is utilized to obtain commercial L-lysine by direct method?

Options :

1. *Micrococcus glutamicus*

2. Mutated strain of *Micrococcus glutamicus*

3. *Brevibacterium aminogenes*

4. Mutated strain of *Brevibacterium aminogenes*

Question Number : 62 Question Id : 2203604262 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Surface renewal theory predicts that the mass transfer coefficient is

Options :

1. Directly proportional to the square root of the molecular diffusivity

2. Inversely proportional to the square root of the molecular diffusivity

3. Directly proportional to the cube root of the molecular diffusivity

4. Indirectly proportional to the cube root of the molecular diffusivity

Question Number : 63 Question Id : 2203604263 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A continuous culture in which growth rate is limited by the rate of nutrient supply is termed as

Options :

1. Turbidostat

2. Chemostat

3. Autostat

4. Photostat

Question Number : 64 Question Id : 2203604264 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Microbially produced streptokinase is used to

Options :

1. Remove spots from laundry products

2. Dissolve clots for patients with coronary blockages

3. Clarify fruit juice

4. Breakdown starch molecules into smaller sugars

Question Number : 65 Question Id : 2203604265 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Water insoluble enzymes can be prepared by using multifunctional agents that are bifunctional in nature and have

Options :

1. Low molecular weight

2. High molecular weight

3. High equivalent weight

4. Low reactivity

Question Number : 66 Question Id : 2203604266 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following helps in controlling the rate of flow by raising/lowering its position

Options :

1. Gate

2. Piston

3. Globe

4. Needle

Question Number : 67 Question Id : 2203604267 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

For scaling-up of bioreactors, which of the following parameters is assumed constant?

Options :

1. Air flow

2. Diameter of the impeller

3. Speed of the agitator

4. Volumetric mass transfer coefficient

Question Number : 68 Question Id : 2203604268 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In which of the following bioreactors, the higher level of foaming is possible?

Options :

1. Continuous stirred tank bioreactor

2. Air lift bioreactor

3. Fluidized bioreactor

4. Packed bed bioreactor

Question Number : 69 Question Id : 2203604269 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The most plausible explanation for a sudden increase of the respiratory quotient (RQ) of a microbial culture is that

Options :

1. Cells are dying

2. Yield of biomass is increasing

3. The fermentation rate is increasing relative to respiration rate

4. The maintenance rate is decreasing

Question Number : 70 Question Id : 2203604270 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In a plug flow reactor, the highest concentration of substrates is exposed to the cells that

Options :

1. Are near the effluent or exit of the reactor

2. Are located near entrance of feed

3. Are in the mid way along the reactor

4. Are near the wall of the reactor

Question Number : 71 Question Id : 2203604271 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Elicitors are the molecules that

Options :

1. Induce cell division

2. Stimulate production of secondary metabolites

3. Stimulate hairy root formation that accumulate secondary metabolites

4. Induce cell death

Question Number : 72 Question Id : 2203604272 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A major application of embryo culture is in

Options :

1. Clonal propogation

2. Production of embryoids

3. Overcoming hybridization barriers

4. Induction of somaclonal variations

Question Number : 73 Question Id : 2203604273 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Seedless watermelons are obtained by

Options :

1. Haploidy

2. Vegetative propagation

3. Triploidy

4. Gibberellin application

Question Number : 74 Question Id : 2203604274 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is the best for production of virus free plants?

Options :

1. Embryo culture

2. Meristem culture

3. Ovule culture

4. Anther culture

Question Number : 75 Question Id : 2203604275 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which breeding method uses a chemical to strip the cell wall of plant cells of two sexually incompatible species?

Options :

1. Mass selection

2. Protoplast fusion

3. Transformation

4. Transpiration

Question Number : 76 Question Id : 2203604276 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Neutralized activated charcoal is occasionally added to young regenerating cultures to

Options :

1. Remove toxic phenolics produced by the stressed plant cell

2. Help in nutritional uptake

3. Promote the growth

4. Maintain the pH of the medium

Question Number : 77 Question Id : 2203604277 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The proteins that forms the walls of the microtubules are

Options :

1. Actin

2. Tubulin

3. Pectin

4. Hydroxyproline

Question Number : 78 Question Id : 2203604278 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Transmission of a gene from male parent to female child to male grand child is known as

Options :

1. Holandric inheritance

2. Quantitative inheritance

3. Criss-cross inheritance

4. Maternal inheritance

Question Number : 79 Question Id : 2203604279 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Following are produced by animal cells in culture and help the cell to adhere to culture dish except

Options :

1. Glycoprotein

2. Collagen

3. Phospholipase A

4. Hyaluronic acid

Question Number : 80 Question Id : 2203604280 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which benchmark cell line verification is not recommended by ATCC

Options :

1. STR analysis

2. Growth curve analysis

3. DNA sequencing

4. Mycoplasma detection

Question Number : 81 Question Id : 2203604281 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In animal cell culture, the addition of serum to media is essential for providing

Options :

1. Growth factors

2. Amino acid for protein synthesis

3. Nucleotide for DNA synthesis

4. Fatty acids for lipid synthesis

Question Number : 82 Question Id : 2203604282 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

After subculture, the growth factor which inhibits the root development is

Options :

1. Inositol

2. Gibberllins

3. Auxins

4. Cytokinins

Question Number : 83 Question Id : 2203604283 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The technique, mainly used for the diagnosing birth defects in the fetus by means of needle, is called

Options :

1. Amniocentesis

2. Ectogensis

3. Transplantation

4. Transgenics

Question Number : 84 Question Id : 2203604284 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

When dissolved oxygen is lower than the critical concentration, viable cell concentration declines because of

Options :

1. Incomplete glutamine oxidation

2. Hyper glutamine oxidation

3. Hyper glutamate oxidation

4. Accumulation of ammonia

Question Number : 85 Question Id : 2203604285 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Enucleation of the cells can be achieved by treating the cells with

Options :

1. Polyethylene glycol

2. Cytochalasin B

3. Ethylene glycol

4. Ethyl alcohol

Question Number : 86 Question Id : 2203604286 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Accumulation of lactate leads to

Options :

1. Increase in pH and maintain the cell viability

2. No alteration in pH and cell viability

3. Neutralization in pH and maintain the cell viability

4. Reduction in the pH of culture hence loss of cell viability

Question Number : 87 Question Id : 2203604287 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The human fibroplast is a classical example of

Options :

1. Stabilized primary cell line

2. Established cell lines

3. Primitive cell lines

4. Established secondary cell lines

Question Number : 88 Question Id : 2203604288 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In mammals, histamine is secreted by

Options :

1. Lymphocytes

2. Mast cells

3. Fibroblasts

4. Histiocytes

Question Number : 89 Question Id : 2203604289 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Cell death is caused by shear force in a sparged bioreactor is due to bubble formation and bursting of gas can be taken care by the addition of

Options :

1. Carotenoids

2. Surfactants

3. Flavinoids

4. Antibiotics

Question Number : 90 Question Id : 2203604290 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The DNA molecule to which the gene of interest is integrated for cloning is called

Options :

1. Carrier

2. Transformer

3. Vector

4. Ligand

Question Number : 91 Question Id : 2203604291 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Transfer of antibodies from mother to fetus is an example of

Options :

1. Naturally acquired active immunity

2. Naturally acquired passive immunity

3. Artificially acquired active immunity

4. Artificially acquired passive immunity

Question Number : 92 Question Id : 2203604292 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

How many disulfide bonds are there in a typical immunoglobulin molecule?

Options :

1. 28

2. 6-9

3. 2-5

4. 10-20

Question Number : 93 Question Id : 2203604293 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Classical pathway of complement system is activated by

Options :

1. Antibody-antigen complexes

2. Antigen

3. Antigenic peptide

4. Antigens bound to MHC

Question Number : 94 Question Id : 2203604294 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Non specific host defences is known as

Options :

1. Acquired immunity

2. Innate immunity

3. Adaptive immunity

4. Passive immunity

Question Number : 95 Question Id : 2203604295 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

One principal function of complement is to

Options :

1. bind antibodies attached to cell surfaces and to lyse these cells

2. inactivate perforins

3. mediate the release of histamine

4. phagocytize antigens

Question Number : 96 Question Id : 2203604296 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is the protein produced by host cells infected by viruses?

Options :

1. Interferon

2. Histamine

3. Antiserum

4. Vaccine

Question Number : 97 Question Id : 2203604297 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In order to initiate an adaptive immune response, antigenic peptide must be presented to antigen-specific T cells. Which one type of cell presents this antigen to T cells?

Options :

1. Dendritic cell

2. Epithelial cell

3. Neutrophil

4. Plasma cell

Question Number : 98 Question Id : 2203604298 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Cancer cells often have reduced amounts of cell surface proteins, including class I MHC antigens. Which of the following cells of the immune system can exploit this property to kill cancer cells?

Options :

1. Cytotoxic T-cells

2. Natural killer cells

3. Helper T-cells

4. Macrophages

Question Number : 99 Question Id : 2203604299 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 feature of a secondary immune response to an antigen, when compared to the first response to the same antigen?

Options :

1. The antibody is generated faster

2. More antibody is produced

3. The antibody produced has greater affinity for the antigen

4. Antibody is generated without T-cell help

Question Number : 100 Question Id : 2203604300 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

CD8 is a marker of

Options :

1. An activated macrophage

2. Helper T-cells

3. B-cells

4. Cytotoxic T-cells

Question Number : 101 Question Id : 2203604301 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The first drug produced using recombinant DNA technology is used to treat

Options :

1. Hemophilia

2. Dwarfism

3. Heart attack

4. Diabetes

Question Number : 102 Question Id : 2203604302 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A PCR cycle consists of

Options :

1. Denaturation, primer annealing and elongation

2. Denaturation, initiation and elongation

3. Primer annealing, elongation and termination

4. Initiation, elongation and termination

Question Number : 103 Question Id : 2203604303 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In order to accept foreign gene cut plasmids, foreign genes must be

Options :

1. Electrically shocked

2. Heat shocked

3. Both (1) and (2)

4. Exposed to pressure

Question Number : 104 Question Id : 2203604304 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A nonsense mutation may result to

Options :

1. An abnormal elongation of a polypeptide

2. A large deletion within the reading frame of a gene

3. A premature termination of the synthesis of a polypeptide

4. Modification of mRNA

Question Number : 105 Question Id : 2203604305 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Any DNA molecule that has the ability to replicate in an appropriate host cell, to which the desired gene are integrated for cloning, is called as

Options :

1. Plasmid

2. Linker

3. Vector

4. Adapter

Question Number : 106 Question Id : 2203604306 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Selective degradation of single stranded DNA is carried out by the enzyme

Options :

1. Nuclease

2. Ribonuclease

3. SI nuclease

4. Deoxy ribonuclease

Question Number : 107 Question Id : 2203604307 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is the final product of the RNaseH method?

Options :

1. Blunt ended dsDNA

2. Staggered dsDNA at both ends

3. Staggered dsDNA at 3′ end

4. Staggered dsDNA at 5′ end

Question Number : 108 Question Id : 2203604308 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following does not belong to local alignment algorithm?

Options :

1. Negative score is set to 0

2. In initialization step first row and first column are set to 0

3. Score can be negative

4. In traceback step, beginning is with the maximum score, it ends when 0

Question Number : 109 Question Id : 2203604309 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

How many 3 tuples are possible for the following amino acid sequence (MADCMWDISEASE)

Options :

1. 4

2. 5

3. 11

4. 12

Question Number : 110 Question Id : 2203604310 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

When electric current is applied through gel, large molecules move

Options :

1. faster

2. slowly

3. at same speed

4. is blocked

Question Number : 111 Question Id : 2203604311 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A compound that has desirable properties to become a drug is called

Options :

1. Lead

2. Find

3. Fit drug

4. Fit compound

Question Number : 112 Question Id : 2203604312 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

An example of a derived protein structure database is

Options :

1. Pfam

2. SCOP

3. GEO

4. Prosile

Question Number : 113 Question Id : 2203604313 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

GCG and FASTA programs provide default information on

Options :

1. Gap additions

2. Alignment scores

3. Score penalties

4. Gap penalties

Question Number : 114 Question Id : 2203604314 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Loop Modeling Step is essential while modeling the protein because of

Options :

1. Insertion of gaps

2. Modification of gaps

3. Deletion of gaps

4. Closing the gaps

Question Number : 115 Question Id : 2203604315 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Two sequences are said to be homologous if:

Options :

1. Both diverged from a common ancestor

2. Their alignments share 30% identity or more

3. They belong to the same fold family

4. They have converged to share similar functional properties

Question Number : 116 Question Id : 2203604316 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Sequence comparisons do not provide information on?

Options :

1. Gene relationships

2. Function history

3. Evolutionary history

4. Gene locations

Question Number : 117 Question Id : 2203604317 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 : 118 Question Id : 2203604318 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Functional unit of DNA that specifies synthesis of one polypeptide is

Options :

1. Codon

2. Cistron

3. Muton

4. Recon

Question Number : 119 Question Id : 2203604319 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Jumping genes are called as

Options :

1. Transposons

2. Transduction

3. Plasmon

4. Intron

Question Number : 120 Question Id : 2203604320 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Software used for construction of biological network is

Options :

1. Modeller

2. Gromacs

3. Cytoscape

4. Rosatta