

National Testing Agency

Question Paper Name: Microbial Cytology Physiology and Recombination DNA
Subject Name: Microbial Cytology Physiology and Recombination DNA
Creation Date: 2018-12-02 17:35:47
Duration: 180
Total Marks: 100
Display Marks: Yes
Share Answer Key With Delivery Engine: Yes
Actual Answer Key: Yes

Microbial Cytology Physiology and Recombination DNA

Group Number : 1
Group Id : 416529104
Group Maximum Duration : 0
Group Minimum Duration : 120
Revisit allowed for view? : No
Revisit allowed for edit? : No
Break time: 0
Group Marks: 100

Microbial Cytology Physiology and Recombination DNA

Section Id : 416529104
Section Number : 1
Section type : Online
Mandatory or Optional: Mandatory
Number of Questions: 100
Number of Questions to be attempted: 100
Section Marks: 100
Display Number Panel: Yes
Group All Questions: No

Sub-Section Number: 1
Sub-Section Id: 416529113
Question Shuffling Allowed : Yes

Question Number : 1 Question Id : 4165298206 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Enzyme that catalyze the hydrolysis of β -1,4 glycosidic bonds that link N-acetylglucosamine and N-acetylmuramic acid in the growing peptidoglycan cell wall

- Transpeptidase
- Autolysins
- Translocase
- Beta galactosidase

Question Number : 2 Question Id : 4165298207 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

FtsZ is an homologue of

- a) Myosin
- b) Actin
- c) Tubulin
- d) Intermediate filaments

Question Number : 3 Question Id : 4165298208 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Enzyme that hydrolyze the the β -1,4 glycosidic bonds that link N-acetylglucosamine and Nacetylmuramic acid is

- a) Autolysins
- b) Beta galactosidase
- c) Transpeptidase
- d) Translocase

Question Number : 4 Question Id : 4165298209 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Crescentin, an homologue of eukaryotic intermediate filaments protein is produced in

- a) Caulobacter crescentus
- b) Staphylococcus aureus
- c) Bacillus subtilis
- d) Escherichia coli

Question Number : 5 Question Id : 4165298210 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A protein that inhibits polymerization of Min C midcell

- a) Min D
- b) MinE
- c) Min D and Min E
- d) None

Question Number : 6 Question Id : 4165298211 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following bacteria have long generation time

- a) Treponema pallidum
- b) Bacillus subtilis
- c) Staphylococcus aureus
- d) Escherichia coli

Question Number : 7 Question Id : 4165298212 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

As the population of bacteria in _____ grows, it follows a pattern of stages, called a growth curve.

- a) closed system
- b) open system
- c) continuous culture
- d) none of the option

Question Number : 8 Question Id : 4165298213 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The _____ is most suitable and effective at low dilution rates.

- a) Chemostat
- b) Turbidostat
- c) Open system
- d) None of the option

Question Number : 9 Question Id : 4165298214 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Bacterial cultures composed of cells which are all present at the same stage of the bacterial cell cycle is known as

- a) Synchronous cultures
- b) Synchronous cultures
- c) Continuous cultures
- d) Asynchronous cultures

Question Number : 10 Question Id : 4165298215 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If nutrient levels or other environmental conditions change, it results in _____

- a) Balanced growth
- b) Unbalanced growth
- c) Synchronous growth
- d) Continuous growth

Question Number : 11 Question Id : 4165298216 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The pH optima range for the acidophiles is

- a) 0 - 5.5
- b) 2 - 7.0
- c) 0 - 7.0
- d) all of the options

Question Number : 12 Question Id : 4165298217 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The most common way to test an organism's oxygen sensitivity is to use a

- a) Simmon's citrate agar
- b) Nitrate broth
- c) Thioglycollate broth
- d) SIM agar

Question Number : 13 Question Id : 4165298218 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

An example of extreme halophile is

- a) Halobacterium salinarium
- b) Escherichia coli
- c) Staphylococcus aureus
- d) Vibrio fischeri

Question Number : 14 Question Id : 4165298219 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

_____ reduces oxygen to form hydrogen peroxide (H₂O₂), superoxide radical (O₂⁻) and hydroxy radical (OH⁻).

- a) Flavoprotein
- b) Glycoprotein
- c) Lipid
- d) None of the option

Question Number : 15 Question Id : 4165298220 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Treponema pallidum, the agent of syphilis is a typical example of

- a) Anaerobe
- b) Microaerophiles
- c) Aerotolerant
- d) Facultative aerobe

Question Number : 16 Question Id : 4165298221 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

_____ was able to produce toxin as low as pH 4.2.

- a) C.tetani
- b) B.anthraxis
- c) C. botulinum
- d) E.coli

Question Number : 17 Question Id : 4165298222 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Obligate aerobes must use _____ gas as a final electron acceptor to make cellular energy.

- a) hydrogen
- b) oxygen
- c) nitrogen
- d) water

Question Number : 18 Question Id : 4165298223 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A microbe that is a microaerophilic, mesophile would grow optimally at _____ and _____

- a) high O₂; 30°C
- b) low O₂; 20°C
- c) no O₂; 30°C
- d) low O₂; 37°C

Question Number : 19 Question Id : 4165298224 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Obligate anaerobes lack the following enzymes

- a) Catalase
- b) Peroxidase
- c) Superoxide dismutase
- d) All of the options

Question Number : 20 Question Id : 4165298225 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The primary sources of nitrogen for heterotrophs include all except which of the following?

- a) Glucose
- b) RNA
- c) Amino Acids
- d) Lipids

Question Number : 21 Question Id : 4165298226 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

.If a bacterial cell in a broth tube has a generation time of 40 minutes, how many cells will there be after 6 hours of optimal growth?

- a) 18
- b) 64
- c) 128
- d) 512

Question Number : 22 Question Id : 4165298227 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In direct count membrane filter technique, bacteria are stained with _____

- a) acridine orange
- b) acridine orange and DAPI
- c) crystal violet
- d) safranin

Question Number : 23 Question Id : 4165298228 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which method can be used in direct as well as in indirect method of measurement?

- a) Standard plate count
- b) Coulter counter
- c) Turbidity
- d) Membrane filter

Question Number : 24 Question Id : 4165298229 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The population will double in number during a specific length of time called the _____

- a) generation time
- b) doubling time
- c) growing time
- d) generation or doubling time

Question Number : 25 Question Id : 4165298230 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The _____ counting chambers can be used for counting prokaryotes.

- a) Petroff-Hausser
- b) Haemocytometer
- c) Micrometer
- d) Turbidimetric

Question Number : 26 Question Id : 4165298231 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The number of generations per unit time is

- a) Mean growth rate constant
- b) Number of generations
- c) Number of colonies formed.
- d) Mean cell mass.

Question Number : 27 Question Id : 4165298232 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which one of the following enzymes is responsible for conversion of glucose into glycogen

- a) Hexokinase I
- b) Hexokinase II
- c) Hexokinase III
- d) Hexokinase IV

Question Number : 28 Question Id : 4165298233 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

How many ATP molecules are generated when one molecule of glucose is converted to 2 molecules of pyruvate by EMP pathway?

- a) One
- b) Two
- c) Three
- d) Four

Question Number : 29 Question Id : 4165298234 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which one of the following is not a positive regulator of PFK-1?

- a) Fr 2, 6 bisphosphate
- b) AMP
- c) ADP
- d) Citrate

Question Number : 30 Question Id : 4165298235 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

What is the Km value of Glucokinase?

- a) 10mM
- b) 5mM
- c) 7mM
- d) 12 mM

Question Number : 31 Question Id : 4165298236 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which vitamin is not involved in PDH complex?

- a) vitamin B1
- b) vitamin B2
- c) vitamin B3
- d) vitamin B4

Question Number : 32 Question Id : 4165298237 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which one of the following molecules is not glucogenic?

- a) Pyruvate
- b) Lactate
- c) Acetyl CoA
- d) glycerol

Question Number : 33 Question Id : 4165298238 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Fermentation was discovered by

- a) Louis Pasteur
- b) Theodor Schwann
- c) Ernbden
- d) Nathan Doudoroff

Question Number : 34 Question Id : 4165298239 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Glucose to lactate to glycogen is called

- a) TCA cycle
- b) Glyoxalate cycle
- c) Cori cycle
- d) Urea cycle

Question Number : 35 Question Id : 4165298240 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which pathway is the source of NADPH?

- a) Glycolysis
- b) TCA cycle
- c) Pentose phosphate pathway
- d) Electron transport chain

Question Number : 36 Question Id : 4165298241 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Conversion of fumarate to malate is an example of

- a) Dehydration
- b) Hydration
- c) Isomerization
- d) Epimerization

Question Number : 37 Question Id : 4165298242 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Two important enzymes of pentose phosphate pathway are

- a) Isocitrate dehydrogenase & isocitrate lyase
- b) Transketolase&transaldolase
- c) Malate synthase & malate dehydrogenase
- d) Isocitrate dehydrogenase & Isocitrate lyase

Question Number : 38 Question Id : 4165298243 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

How many protons are transported from the matrix to the intermembrane space for the movement of one pair of electrons from NADH to O₂ through the ETC?

- a) 7
- b) 8
- c) 10
- d) 11

Question Number : 39 Question Id : 4165298244 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

How many protons should re-enter into the matrix from the intermembrane space for the synthesis of one molecule of ATP?

- a) 2
- b) 4
- c) 5
- d) 6

Question Number : 40 Question Id : 4165298245 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which molecule of the following acts as an uncoupler?

- a) Cyanide
- b) Antimycin A
- c) Oligomycin
- d) Dinitrophenol

Question Number : 41 Question Id : 4165298246 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Valinomycin acts as a

- a) K⁺ ionophore
- b) Ca⁺ ionophore
- c) Na⁺ ionophore
- d) Mg⁺ ionophore

Question Number : 42 Question Id : 4165298247 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Methanogens convert

- a) CO₂ to CH₄
- b) CO₂ to CH₃COO
- c) CO₂ to CH₃COCH₃
- d) CO₂ to CH₃CHO

Question Number : 43 Question Id : 4165298248 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Annamox is

- a) Aerobic ammonia oxidation
- b) Anaerobic ammonia oxidation
- c) Aerobic ammonia reduction
- d) Anaerobic ammonia reduction

Question Number : 44 Question Id : 4165298249 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which out of the followings is required as a coenzyme for the transamination reactions?

- a) coenzyme A
- b) pyridoxal phosphate
- c) folic acid
- d) cobalamine

Question Number : 45 Question Id : 4165298250 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the followings is a common nitrogen acceptor for all reactions involving transaminases?

- a) α -ketoglutarate
- b) pyruvate
- c) oxaloacetate
- d) acetoacetate

Question Number : 46 Question Id : 4165298251 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A 3 month-old child is being evaluated for vomiting and an episode of convulsions, Laboratory results show Hyperammonemia and Orotic aciduria. Which of the following enzyme defect is likely to be there?

- a) Glutaminase
- b) Arginase
- c) Argininosuccinic acid synthase
- d) Ornithine Transcarbamoylase

Question Number : 47 Question Id : 4165298252 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

What is the role of tetrahydrofolate and S-adenosyl methione in metabolism?

- a) The transfer of electrons
- b) The transfer of one-carbon units
- c) Both act as reductants
- d) Both act as oxidizers

Question Number : 48 Question Id : 4165298253 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Pectic acid is the polymer of

- a) Galactouronic acid
- b) Glucouronic acid
- c) Sulphosalicylic acid
- d) Mannuronic acid

Question Number : 49 Question Id : 4165298254 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The function of cell membrane includes

- a) To transduce signal
- b) To transport some molecule
- c) It maintains the osmolarity on either site of the membrane
- d) All of the option

Question Number : 50 Question Id : 4165298255 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The cell wall was invented by

- a) Robert Hooke
- b) Albert Einstein
- c) Bruce Ames
- d) Joshua Lederberg

Question Number : 51 Question Id : 4165298256 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Shorter pilli is called

- a) Fimbriae
- b) Capsule
- c) Flagella
- d) Slime layer

Question Number : 52 Question Id : 4165298257 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The function of chloroplast is to mediate

- a) Photosynthesis
- b) The respiration
- c) Heat regulation
- d) protection against Reactive Oxygen Species.

Question Number : 53 Question Id : 4165298258 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The Lysosome has pH

- a) 4.8
- b) 7.2
- c) 5.6
- d) 8.5

Question Number : 54 Question Id : 4165298259 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The Golgi body is called as

- a) Suicide bags of the cell
- b) Stomach of the cell
- c) Post office of the cell
- d) Powerhouse of the cell

Question Number : 55 Question Id : 4165298260 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The centrioles helps to generate

- a) Mitotic spindle
- b) Cilia
- c) Flagella
- d) Endospore

Question Number : 56 Question Id : 4165298261 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

----- are negatively charged phospholipids in the membrane

- a) PC and PS
- b) PS and PI
- c) PS and PE
- d) PE and PC

Question Number : 57 Question Id : 4165298262 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Presence of cholesterol in the membrane give rises to -----

- a) Low fluidity
- b) Absence of fluidity
- c) Intermediate fluidity
- d) Greater fluidity

Question Number : 58 Question Id : 4165298263 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Bacteriorhodopsin is an example of ----- protein

- a) Integral membrane
- b) Peripheral
- c) Cholesterol
- d) Lipid-like

Question Number : 59 Question Id : 4165298264 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

TritonX and SDS are example of -----

- a) Polysaccharides
- b) Lectin
- c) Fats
- d) Detergents

Question Number : 60 Question Id : 4165298265 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Assymetry of membrane protein can be studied by ----- labelling of the membrane.

- a) Associated
- b) Vectorial
- c) Stain
- d) Detergent

Question Number : 61 Question Id : 4165298266 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

EFGR is an example of ----- protein

- a) Channel
- b) GPI-Anchored
- c) Cell-adhesion
- d) Receptor

Question Number : 62 Question Id : 4165298267 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Aquaporins mainly acts as ----- channels

- a) Ion
- b) Water
- c) Glucose
- d) Sucrose

Question Number : 63 Question Id : 4165298268 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

cAMP gated channels is a good example of ----- ion channel

- a) Voltage-gated
- b) Ion-gated
- c) Light gated
- d) Ligand gated

Question Number : 64 Question Id : 4165298269 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Nobel prize was awarded to ----- for restriction enzymes

- a) Hamilton Smith, Werner Arber and Daniel Nathans
- b) Watson and Crick
- c) Rosalind Franklin
- d) Joshua Lederberg

Question Number : 65 Question Id : 4165298270 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Dephosphorylation of vector is done to -----

- a) Avoid self-ligation of vector
- b) Avoid self-ligation of insert
- c) Facilitate cloning
- d) Restrict cloning

Question Number : 66 Question Id : 4165298271 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Two different restriction endonucleases flanking the gene are used to -----

- a) Facilitate directional cloning
- b) Facilitate simple cloning
- c) Promote cloning
- d) Promote cloning

Question Number : 67 Question Id : 4165298272 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The longest human chromosome is

- a) Chromosome 1
- b) Chromosome 7
- c) X Chromosome
- d) Chromosome 14

Question Number : 68 Question Id : 4165298273 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

DNA quadruplex is formed of

- a) Adenine
- b) Guanine
- c) Thymine
- d) Cytosine

Question Number : 69 Question Id : 4165298274 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

matK is tool for DNA barcoding in

- a) Bacteria
- b) Plants
- c) Animal
- d) Virus

Question Number : 70 Question Id : 4165298275 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

MspI is able to cleave at -----

- a) Methylated cytosines
- b) Methylated adenine
- c) Unmethylated cytosines
- d) Unmethylated adenine

Question Number : 71 Question Id : 4165298276 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

cDNA is produced from mRNA through the enzyme

- a) Reverse transcriptase
- b) Alkaline phosphatase
- c) Ligase
- d) S1 nuclease

Question Number : 72 Question Id : 4165298277 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

What is the shape of M13 bacteriophage?

- a) Cubic
- b) Icosahedron
- c) Filamentous
- d) Spherical

Question Number : 73 Question Id : 4165298278 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

What is the nature of M13 genome?

- a) ds DNA
- b) ss DNA
- c) dsRNA
- d) ssRNA

Question Number : 74 Question Id : 4165298279 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which part of bacterial cell acts as receptor for M13?

- a) Pilus
- b) LPS
- c) Proteins on membrane
- d) Flagella

Question Number : 75 Question Id : 4165298280 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Restriction enzymes

- a) Present in bacteria and are involved in host restriction system
- b) They are able to cleave viral DNA inside bacterium
- c) They are enzymes involved in defense against bacteriophages
- d) All of these

Question Number : 76 Question Id : 4165298281 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Restriction enzymes are capable of carrying on internal cuts is called

- a) Restriction exonuclease
- b) Restriction endonuclease
- c) S1 nuclease
- d) Phosphatase

Question Number : 77 Question Id : 4165298282 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The sticky ends of DNA can be joined by

- a) DNA polymerase
- b) DNA ligase
- c) RNA polymerase
- d) Restriction endonuclease

Question Number : 78 Question Id : 4165298283 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

PR and PL are ----- and ----- promoters

- a) Inducible weak
- b) Constitutive weak
- c) Constitutive weak
- d) Constitutive, strong

Question Number : 79 Question Id : 4165298284 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

----- gene codes for λ repressor

- a) cI
- b) cII
- c) cIII
- d) Hfl

Question Number : 80 Question Id : 4165298285 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

PRE is a weak promoter because it has a very poor -----sequence

- a) -10
- b) -35
- c) UP element
- d) -10 and -35

Question Number : 81 Question Id : 4165298286 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

T4 bacteriophage can resist restriction system of bacteria due to the presence of

- a) Hydroxymethyltransferase
- b) Serine transferase
- c) Methyl transferase
- d) Phosphatase

Question Number : 82 Question Id : 4165298287 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Methyl donor of methylation reaction of modification system is carried out in the presence of

- a) S-adenosyl methionine
- b) ATP
- c) Mg²⁺
- d) Homocysteine

Question Number : 83 Question Id : 4165298288 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Southern blotting was discovered by

- a) Edward Southern
- b) Lederberg
- c) Robert Kornberg
- d) Maurice Wilkins

Question Number : 84 Question Id : 4165298289 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Disadvantages of plasmids as cloning vectors

- a) cannot accept large fragments
- b) sizes range from 0-10 kb
- c) standard methods of transformation are inefficient
- d) none of the option

Question Number : 85 Question Id : 4165298290 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

To create lambda replacement vector: the nonessential region are deleted. This is called the

- a) Stuffer fragment
- b) Additional fragment
- c) Subtractive fragments
- d) Subtractive fragments

Question Number : 86 Question Id : 4165298291 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Vectors usually contain easily scored ----- that allowed the selection of host cells that have taken up the foreign DNA.

- a) Physical Marker
- b) Genetic marker or genes
- c) Inserts
- d) Restriction enzymes

Question Number : 87 Question Id : 4165298292 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Identification of host cells containing recombinant DNA requires-----

- a) Genetic selection
- b) Screening
- c) Both i and ii
- d) None of the options

Question Number : 88 Question Id : 4165298293 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The starting point for α -complementation is the E. coli M15 mutant which has a deletion of residues 11-41 in the ----- gene and shows no β -galactosidase activity.

- a) lacZ
- b) lacY
- c) lacA
- d) LacB

Question Number : 89 Question Id : 4165298294 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In a ----- cells are grown under conditions in which only transformed cells can survive; all other cells die.

- a) Screening
- b) Selection
- c) Series
- d) Marker

Question Number : 90 Question Id : 4165298295 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

----- technique amplifies a specific DNA sequence from a complex mixture.

- a) Polymerase Chain Reaction
- b) Cloning Reaction
- c) Blotting Reaction
- d) Colony Hybridization.

Question Number : 91 Question Id : 4165298296 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

----- is the technique for the specific identification of RNA molecules

- a) Southern blot
- b) Northern blot
- c) Western blot
- d) South-Western blot

Question Number : 92 Question Id : 4165298297 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The chain termination or dideoxy method of DNA sequencing was developed by

- a) Fired. Sanger
- b) A. M. Maxam and W. Gilbert
- c) Watson Crick
- d) Maurice Wilkins

Question Number : 93 Question Id : 4165298298 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A genetically engineered version of bacteriophage T7 DNA polymerase that lacks all traces of exonuclease activity is known as:

- a) Sequenase
- b) Taq DNA polymerase
- c) Pfu DNA polymerase
- d) Klenow polymerase

Question Number : 94 Question Id : 4165298299 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Because dideoxynucleotides lack -----, these nucleotides cannot serve as acceptors for 5'-nucleotide addition in the polymerization reaction.

- a) 5'OH groups
- b) 3'-OH groups
- c) 3'-OH groups
- d) 3' phosphate groups

Question Number : 95 Question Id : 4165298300 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

During Pyrosequencing, each time a nucleotide is incorporated, ----- is released.

- a) Pyrophosphate
- b) Phosphate
- c) Hydroxyl group
- d) Orthophosphate

Question Number : 96 Question Id : 4165298301 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

DNA fingerprinting is used in

- a) Forensics
- b) Immunology
- c) Genetics
- d) Cell biology

Question Number : 97 Question Id : 4165298302 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

DNA fingerprinting is based on the application of

- a) VNTR
- b) LINES
- c) SINES
- d) Unique sequence

Question Number : 98 Question Id : 4165298303 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Klenow polymerase is derived from

- a) DNA pol I
- b) DNA pol II
- c) DNA pol III
- d) Ligase

Question Number : 99 Question Id : 4165298304 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

To prevent bacterial contamination, one should add

- a) Amphotericin B to the growth media
- b) Penicillin-streptomycin
- c) Sterile filter the growth media
- d) Autoclaving the growth media

Question Number : 100 Question Id : 4165298305 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Autoclaving the growth media

- a) 7.4
- b) 6.2
- c) 7.2
- d) 5