

National Testing Agency

Question Paper Name: Biochemistry and Molecular Biology 10th November 2019 Shift 1
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Display Marks: Yes

Biochemistry and Molecular Biology

Group Number : 1
Group Id : 709597293
Group Maximum Duration : 0
Group Minimum Duration : 120
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Revisit allowed for edit? : No
Break time: 0
Group Marks: 100

Biochemistry and Molecular Biology

Section Id : 709597380
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: 709597480
Question Shuffling Allowed : Yes

Question Number : 1 Question Id : 70959726635 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Amylopectin contains-

- (a) α 1 \rightarrow 4 glycosidic bond
- (b) α 1 \rightarrow 6 glycosidic bond
- (c) Both α 1 \rightarrow 4 and α 1 \rightarrow 6 glycosidic bonds
- (d) β 1 \rightarrow 4 glycosidic bond

Question Number : 2 Question Id : 70959726636 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Peptidoglycan is an example of-

- (a) Homopolysaccharide
- (b) Heteropolysaccharide
- (c) Monosaccharide
- (d) Disaccharide

Question Number : 3 Question Id : 70959726637 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Vitamin D regulates the plasma level of -

- (a) Calcium and phosphate
- (b) Sodium and phosphate
- (c) Potassium and phosphate
- (d) Sodium and Calcium

Question Number : 4 Question Id : 70959726638 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Bowing of legs, protrusion of abdomen, increase of plasma alkaline phosphatase activity in children etc. are the symptoms of -

- (a) Rickets
- (b) Osteomalacia
- (c) Osteoporosis
- (d) Anaemia

Question Number : 5 Question Id : 70959726639 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 is unsaturated fatty acid?

- a. Palmitic acid
- b. Stearic acid
- c. Linoleic acid
- d. Acetic acid

Question Number : 6 Question Id : 70959726640 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Liquid form of triglycerides at room temperature are called

- a. Oils
- b. Solids
- c. Fats
- d. Suspensions

Question Number : 7 Question Id : 70959726641 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

High proportion of triglyceride is seen in

- a. LDL
- b. HDL
- c. Chylomicrons
- d. MDL

Question Number : 8 Question Id : 70959726642 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Sulphur containing vitamin is-

- (a) Biotin
- (b) Niacin
- (c) Retinol
- (d) Folic acid

Question Number : 9 Question Id : 70959726643 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 different amino acids are used in making proteins?

- a. 12
- b. 20
- c. 32
- d. 26

Question Number : 10 Question Id : 70959726644 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 covalent cross-links in proteins are sulfur–sulfur bonds that form between two amino acids with —SH (thiol) groups as side chains. Which amino acid has this side chain?

- a. Tryptophan
- b. Methionine
- c. Cysteine
- d. Phenylalanine

Question Number : 11 Question Id : 70959726645 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 2 strands in a DNA double helix is joined by

- a. Covalent bond
- b. Hydroge bond
- c. phⁿphodiester bond
- d. Electrostatic bond

Question Number : 12 Question Id : 70959726646 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 would be the anticodon if mRNA reads CGUC?

- (a) TCGA
- (b) AGCT
- (c) GCAG
- (d) AGCU

Question Number : 13 Question Id : 70959726647 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 the percentage of adenine in a DNA sample is 20%, what would be the percentage of other bases?

- a. T=30%, G=20%, C=30%
- b. T=20%, G=20%, C=40%
- c. T=20%, G=30%, C=30%
- d. T=40%, G=20%, C=20%

Question Number : 14 Question Id : 70959726648 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 pyrimidine replaces Thymine in case of RNA?

- (a) Uracil
- b) Cytosine
- c) Peudouridine
- d) Adedine

Question Number : 15 Question Id : 70959726649 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Some rRNA components perform which catalytic activity :

- (a) Peptidyl transferase
- b) Aminoacylase
- c) Synthetase
- d) Isomerase

Question Number : 16 Question Id : 70959726650 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Individuals suffering from _____ cannot be infected by malarial parasite

- a) Typhoid
- b) Sickle Cell Anemia
- c) Bacteremia
- d) Leukemia

Question Number : 17 Question Id : 70959726651 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Who discovered phagocytosis: -

- a. Louis Pasteur
- b. Elie Metchnikoff
- c. Joseph Lister
- d. Robert Koch

Question Number : 18 Question Id : 70959726652 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Blood cells developing in Lymphoid lineage:-

- a. Granulocytes
- b. T cells
- c. Monocytes
- d. Platelets

Question Number : 19 Question Id : 70959726653 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Immunological memory is a characteristic feature of

- a. Innate Immunity
- b. Native Immunity
- c. Inborne Immunity
- d. Adaptive immunity

Question Number : 20 Question Id : 70959726654 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 is exhibited by only adaptive immunity:-

- a. Antigenic specificity
- b. Destruction of pathogens
- c. Secretion of mucus
- d. Cleansing of conjunctiva with tears

Question Number : 21 Question Id : 70959726655 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Endogenous antigens stimulate:-

- a. T_C Cells
- b. B Cells
- c. T_H Cells
- d. T_S Cells

Question Number : 22 Question Id : 70959726656 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

MHC Class II molecules

- a. Are found on all cells
- b. Are found on APC's
- c. Usually display self antigens
- d. Are rarely found on any cells

Question Number : 23 Question Id : 70959726657 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 secrete antibodies:-

- a. T cells
- b. B cells
- c. Plasma cells
- d. Memory cells

Question Number : 24 Question Id : 70959726658 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 is bound to membrane of B cells

- a. IgG antibodies
- b. IgA antibodies
- c. IgE antibodies
- d. IgD antibodies

Question Number : 25 Question Id : 70959726659 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 complement component participates in B cell activation

- a. C₃
- b. C₇
- c. C₉
- d. C₄

Question Number : 26 Question Id : 70959726660 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 presents antigens, on MHC Class II molecules, to T cells?

- a. mast cells
- b. dendritic cells
- c. natural killer cells
- d. spleen cells

Question Number : 27 Question Id : 70959726661 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Immunogens usually are heavier than:-

- a. 50000 Daltons
- b. 10,000 Daltons
- c. 30000 Daltons
- d. 4000 Daltons

Question Number : 28 Question Id : 70959726662 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 molecule that can be covalently linked to a non-immunogenic antigen to make it an immunogen is called a

- a. Hapten
- b. Mitogen
- c. Carrier
- d. Adjuvant

Question Number : 29 Question Id : 70959726663 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

_____ isotype of antibodies are present in mucus:-

- a. IgM
- b. IgA
- c. IgG
- d. IgE

Question Number : 30 Question Id : 70959726664 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

β -mercaptoethanol cleaves _____ of the antibody molecule.

- e. di-sulphide bonds
- f. hydrogen bonds
- g. electrostatic bonds
- h. peptide bonds

Question Number : 31 Question Id : 70959726665 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Qualitative serological test determines the:

- a. Concentration of infectious agents in the serum.
- b. Presence or absence of infectious agents in the serum.
- c. Chemical nature of Antigens.
- d. Clinical status of patients.

Question Number : 32 Question Id : 70959726666 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Widal test is done for the detection of presence of

- a. *Proteus vulgaris*
- b. *Salmonella typhi*
- c. *Haemophilus influenzae*
- d. *Escherichia coli*

Question Number : 33 Question Id : 70959726667 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Gamma-emitting isotope such as ^{125}I or beta-emitting isotopes such as tritium (^3H) are used to label antigens in an immunodiagnostic technique known as

- a) RIA
- b) RHEA
- c) RID
- d) IFT

Question Number : 34 Question Id : 70959726668 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Autoimmune disease are

- a) Diseases caused by opportunistic pathogens.
- b) Diseases caused by an immune reaction against an individual's own tissues
- c) Sexually transmitted diseases
- d) Diseases caused due to fungal infections.

Question Number : 35 Question Id : 70959726669 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Antitumor antibodies enhance tumor growth because:-

- a. Antibodies destroy the tumor antigens
- b. Antibodies masks the tumor antigens
- c. Antibodies activate the cytotoxic T cells
- d. Antibodies activate the complements

Question Number : 36 Question Id : 70959726670 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 is not true for tumor associated transplantation antigens:-

- a. They are also present on normal cells
- b. They are present on cancer cells in high number
- c. They are only present on cancer cells
- d. They may be present on fetal cells

Question Number : 37 Question Id : 70959726671 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Range of osmolality adjusted for growing animal cell culture medium:

- a. 210-250 mOsm/kg
- b. 200-320 mOsm/kg
- c. 260-320 mOsm/kg
- d. 300-320 mOsm/kg

Question Number : 38 Question Id : 70959726672 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Pluripotent cells:-

- a. Can differentiate and form whole organism
- b. Cannot differentiate to form whole organism
- c. Can differentiate to form many different types of tissues and organs
- d. Cannot differentiate to form many different types of tissues and organs

Question Number : 39 Question Id : 70959726673 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Metastasis

- Formation of tumor *in-vivo*
- Movement of cancerous cells from one site to another to develop tumor
- Inhibiting the growth of cancerous cells
- Formation of tumor *in-vitro*

Question Number : 40 Question Id : 70959726674 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Select the correct statement for cell adhesion molecules:-

- Cell adhesion molecules are synthesized in lag phase and destroyed during subculturing
- Cell adhesion molecules are synthesized in death phase and destroyed during lag phase
- Cell adhesion molecules are synthesized during subculturing and destroyed in lag phase
- Cell adhesion molecules are synthesized in stationary phase and destroyed in lag phase

Question Number : 41 Question Id : 70959726675 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Virus mediated gene transfer technique is known as:

- Transformation
- Transduction
- Conjugation
- Translation

Question Number : 42 Question Id : 70959726676 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 _____ transfection, the transfected DNA is not integrated into host chromosome:-

- Transient
- Local
- Stable
- Intermediate

Question Number : 43 Question Id : 70959726677 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Hydroporation is a method of gene transfer which involves:-

- a. the use of hydrodynamic pressure to create pores in the cell membrane
- b. the use of water to cause plasmolysis
- c. the use of hydrochloric acid for plasmolysis
- d. the use of water to reduce pressure

Question Number : 44 Question Id : 70959726678 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 method widely used for transferring genes by associating the nucleic acid with lipids is known as:-

- a. Lipoidal transformation
- b. Liposome transformation
- c. Lipofection
- d. Lipidofection

Question Number : 45 Question Id : 70959726679 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

PBP stands for:

- a. Pharma - binding protein
- b. Phenol - binding protein
- c. Penicillin-binding protein
- d. Protein – binding phenol

Question Number : 46 Question Id : 70959726680 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Production of β -lactamase enzyme makes the bacteria resistant towards:-

- a. Streptomycin
- b. Penicillin
- c. Tetracycline
- d. Kanamycin

Question Number : 47 Question Id : 70959726681 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Glycopeptides comprise peptide antibiotics such as:

- a. Penicillin
- b. Streptomycin
- c. Vancomycin
- d. Tetracycline

Question Number : 48 Question Id : 70959726682 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Fluoroquinolones inhibit bacterial growth by:-

- a. Inhibition of the cell wall synthesis
- b. Inhibition of protein synthesis
- c. Inhibition of nucleic acid synthesis
- d. Inhibition of cell membrane function

Question Number : 49 Question Id : 70959726683 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 cells produced by therapeutic cloning are used to culture new tissue?

- a. Nerve cells
- b. Inner cell mass
- c. Muscle cells
- d. Transplant cells

Question Number : 50 Question Id : 70959726684 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 meant by cell line?

- a. Five or more stem cells in a row.
- b. Cells that can be maintained and grown in culture and display an immortal or indefinite life span.
- c. Cells that can be maintained and grown in a tissue and display an immortal or indefinite life span
- d. Cells growing in primary culture

Question Number : 51 Question Id : 70959726685 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Pluripotent cells can

- a. Give rise to nearly all the body tissues
- b. Divide indefinitely but cannot differentiate
- c. Be recovered from all the tissues of the body
- d. Form a complete functional organism

Question Number : 52 Question Id : 70959726686 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Induced pluripotent stem cells are

- a. Prepared by viral infection
- b. Derived from dead adult cells
- c. Derived by reprogramming of somatic cells
- d. Derived from zygote

Question Number : 53 Question Id : 70959726687 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 sequence of bases in a nucleic acid is expressed in the direction -

- a. 3' to 1'
- b. 3' to 5'
- c. 5' to 3'
- d. 5' to 1'

Question Number : 54 Question Id : 70959726688 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Diameter of DNA helix is -

- a. 20 Å
- b. 10 Å
- c. 30 Å
- d. 25 Å

Question Number : 55 Question Id : 70959726689 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 is unwound by:-

- a. DNA polymerase III
- b. RNA primase
- c. Helicase
- d. Isomerase

Question Number : 56 Question Id : 70959726690 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 leading strand of DNA is synthesized:-

- a. discontinuously in a 5' to 3' direction
- b. discontinuously in a 3' to 5' direction
- c. continuously in a 3' to 5' direction
- d. continuously in a 5' to 3' direction

Question Number : 57 Question Id : 70959726691 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 enzyme responsible for initiating the unwinding of double stranded DNA by nicking a single strand of DNA molecule is

- (a) gyrase
- (b) ligase
- (c) topoisomerase
- (d) polymerase

Question Number : 58 Question Id : 70959726692 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 Polymerase I is used in :

- a) Transcription
- b) Translation
- c) Replication
- d) Transformation

Question Number : 59 Question Id : 70959726693 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 RNA polymerase is responsible for transcription of eukaryotic genes that ultimately become proteins?

- a. RNA Polymerase I
- b. RNA Polymerase V
- c. RNA Polymerase II
- d. DNA Polymerase

Question Number : 60 Question Id : 70959726694 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Sigma factor is

- a. a subunit of mRNA
- b. a subunit of DNA
- c. a subunit of RNA polymerase
- d. a subunit of DNA polymerase

Question Number : 61 Question Id : 70959726695 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 ribozyme is:

- (a) Without sugar
- (b) With phosphate
- (c) With enzymatic properties
- (d) With antibiotic

Question Number : 62 Question Id : 70959726696 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 is the most common post transcriptional modification occurring in both mRNA and tRNA in eukaryotes?

- (a) Removal of introns by splicing
- (b) 5' Capping with 7-methyl guanosine
- (c) Removal of poly A tail before entering into the cytoplasm
- (d) Addition of poly A tail

Question Number : 63 Question Id : 70959726697 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 can freely diffuse through the nuclear pore complex (NPC) between the nucleus and the cytoplasm:-

- a. Molecules of size between 9 to 28 nm
- b. Molecules less than 9 nm in size
- c. Molecules of size between 29 to 36 nm
- d. Molecules of size above 29 to 36 nm

Question Number : 64 Question Id : 70959726698 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 RNA does not undergo post-transcriptional processing:

- a) 5S rRNA
- b) mRNA
- c) tRNA
- d) sRNA

Question Number : 65 Question Id : 70959726699 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 transposase gene encodes an enzyme that facilitate-

- a) viral replication within a genome
- b) general recombination
- c) site-specific integration of transposable elements
- d) independent viral replication

Question Number : 66 Question Id : 70959726700 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 transposon system has been used extensively as an insertional tag for identifying cancer genes?

- a) Ac/Dc element
- b) Sleeping beauty
- c) Ty1 element

Question Number : 67 Question Id : 70959726701 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Maize has ____ chromosomes.

- a) 12
- b) 10
- c) 8
- d) 9

Question Number : 68 Question Id : 70959726702 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

. Genetic code consists of

- (a) 2 letters
- (b) 3 letters
- (c) 4 letters
- (d) 6 letters

Question Number : 69 Question Id : 70959726703 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 initiator AUG in prokaryotes codes for

- (a) Valine
- (b) Methionine
- (c) Formyl methionine
- (d) Formaline

Question Number : 70 Question Id : 70959726704 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 most abundant type of RNA :

- a) mRNA
- b) rRNA
- c) tRNA
- d) sRNA

Question Number : 71 Question Id : 70959726705 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 prokaryotes, the ribosomal binding site on mRNA is called :

- a) Hogness sequence
- b) Shine-Dalgarno sequence
- c) Pribnow box
- d) Repeat sequence

Question Number : 72 Question Id : 70959726706 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Tetracycline blocks protein synthesis by

- a. Inhibiting peptidyl transferase
- b. Inhibiting translocase enzyme
- c. Inhibiting binding of aminoacyl tRNA to ribosome
- d. Inhibiting ribosome synthesis

Question Number : 73 Question Id : 70959726707 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 site of protein synthesis in the cell is

- a. Ribosome
- b. Cell membrane
- c. Mitochondria
- d. Nucleus

Question Number : 74 Question Id : 70959726708 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 the *lac* operon codes for the *lactose*-digesting enzymes?

- a. Repressor
- b. Promoter
- c. Structural genes
- d. Inducer

Question Number : 75 Question Id : 70959726709 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 mRNA molecule that yields two or more proteins.

- a. Monocistronic
- b. Operon
- c. Polycistronic
- d. Unicistronics

Question Number : 76 Question Id : 70959726710 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Proteins that block the passage of RNA polymerase are called:

- a. operons
- b. activators
- c. repressors
- d. enhancer

Question Number : 77 Question Id : 70959726711 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 epigenetic change in gene expression is an ----- change that does not involve any change in the nucleotide sequence of the gene.

- a) inherited
- b) mutational
- c) wild type
- d) rare

Question Number : 78 Question Id : 70959726712 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Kornberg used _____ to isolate the enzyme.

- a. PCR
- b. Column chromatography
- c. STRs
- d. Electrophoresis

Question Number : 79 Question Id : 70959726713 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 used in _____ :

- a. Sequencing
- b. Genotyping
- c. RFLP
- d. Cell multiplication

Question Number : 80 Question Id : 70959726714 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 are the subunits of DNA.

- a. Amino acids
- b. Nucleotides
- c. Monosaccharides
- d. Polyamines

Question Number : 81 Question Id : 70959726715 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 reagent is used for quantifying DNA

- a) Chloroform
- b) Diphenylamine
- c) CTAB
- d) DNS

Question Number : 82 Question Id : 70959726716 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 pBR 322, pBR stands for

- a) plasmid bacterial recombination
- b) plasmid bacterial replication
- c) plasmid Boliver and Rodriguez
- d) plasmid Bacillus Rhizobium

Question Number : 83 Question Id : 70959726717 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 cannot be used as a vector

- a) Plasmid
- b) Bacterium
- c) Phage
- d) Cosmid

Question Number : 84 Question Id : 70959726718 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 enzymes used to join two DNA molecules?

- a) Nucleases
- b) ligases
- c) polymerases
- d) helicases

Question Number : 85 Question Id : 70959726719 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 size of the virulent plasmid of *A. tumefaciens* is

- a) 40-80 kb
- b) 80-120 kb
- c) 200 ± 50 kb
- c) 100 ± 10

Question Number : 86 Question Id : 70959726720 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 piece of equipment, that introduces DNA into cells via DNA-coated micro projectiles is known as

- a) Laser
- b) Gene gun
- c) PCR machine
- d) DNA probe

Question Number : 87 Question Id : 70959726721 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 c-DNA?

- a) Circular DNA
- b) Complementary DNA
- c) cloned DNA
- d) coiled DNA

Question Number : 88 Question Id : 70959726722 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 expression vectors contain sequences for _____ and translation and cDNA of the gene of interest.

- a) Transcription
- b) Restriction sites
- c) Transformation
- d) Transduction

Question Number : 89 Question Id : 70959726723 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 western blotting, sample proteins are separated using:

- a) SDS electrophoresis
- b) Gel electrophoresis
- c) Nitrocellulose membrane
- d) Chromatography

Question Number : 90 Question Id : 70959726724 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Who invented western blotting technique?

- a) E.M Southern
- b) Towbin
- c) Alwine
- d) Lambert

Question Number : 91 Question Id : 70959726725 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 PCR technique was developed by

- A) Kary Mullis
- B) Kohler
- C) Milestein
- D) Lister

Question Number : 92 Question Id : 70959726726 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Polymerase chain reaction basically consists of

- A) two steps
- B) three steps
- C) four steps
- D) ten steps

Question Number : 93 Question Id : 70959726727 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

PCR technique can be used for:-

- a. Amplification of DNA
- b. Genetic recombination
- c. Cell multiplication
- d. None of these

Question Number : 94 Question Id : 70959726728 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 statement is most appropriate for Genetic manipulation:-

- a. Can help in developing new varieties of plant cells
- b. Can help in developing animal cells with special features
- c. Can help in developing microbial cells with enhanced productivity
- d. All the above can be done

Question Number : 95 Question Id : 70959726729 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

VRE stands for:-

- a. Vaccine Resistant E. coli
- b. Vancomycin Resistant Enterococci
- c. Vaccine Resistant Enterococci
- d. Vancomycin Resistant E. coli

Question Number : 96 Question Id : 70959726730 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Who developed the vaccine for Rabies

- a. Louis Pasteur
- b. Robert Koch
- c. Anton Von Leuwenhook
- d. Griffith

Question Number : 97 Question Id : 70959726731 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Uptake of naked DNA by animal cells is known as:-

- a. Translation
- b. Transcription
- c. Transfection
- d. Transformation

Question Number : 98 Question Id : 70959726732 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 are the four nitrogen bases for DNA?

- a. Uracil, Thymine, Adenine, and Guanine
- b. Cytosine, Thymine, Adenine, and Guanine
- c. Thymine, Adenine, Lytosine, and Guanine
- d. Thymine, Adenise, Guanine, and Cytosol

Question Number : 99 Question Id : 70959726733 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 strand grows continuously towards the replication fork?

- a. Lagging strand
- b. DNA strand
- c. Replicating strand
- d. Leading strand

Question Number : 100 Question Id : 70959726734 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Negative regulation of protein synthesis is accomplished by

- a. allosteric inhibition
- b. the binding of RNA polymerase to the promoter
- c. the binding of a repressor to the DNA
- d. the binding of a repressor to the RNA polymerase