

National Testing Agency

Question Paper Name: Molecular Biology
Subject Name: Molecular Biology
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

Molecular Biology

Group Number : 1
Group Id : 41652944
Group Maximum Duration : 0
Group Minimum Duration : 120
Revisit allowed for view? : No
Revisit allowed for edit? : No
Break time: 0
Group Marks: 100

Molecular Biology

Section Id : 41652944
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: 41652945
Question Shuffling Allowed : Yes

Question Number : 1 Question Id : 4165293566 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 is normally a stretch of DNA that codes for a type of-----

- a) Protein
- b) Amino acids
- c) RNA
- d) DNA

Question Number : 2 Question Id : 4165293567 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 a set of blueprints needed to construct other components of cells, such as -----molecules.

- a) Carbohydrate and Lipid
- b) Nucleic acid and Lipid
- c) Proteins and RNA
- d) Carbohydrate and Nucleic acid

Question Number : 3 Question Id : 4165293568 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 can be separated on the basis of their molecular weight by using -----

- a) Native PAGE
- b) Sequencing gel
- c) SDS-PAGE
- d) PFGE

Question Number : 4 Question Id : 4165293569 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Hershey and Chase clearly demonstrated that DNA is the genetic material using radio isotopes of

- a) ^{32}P
- b) ^{35}S
- c) ^{32}P and ^{35}S
- d) ^{14}C

Question Number : 5 Question Id : 4165293570 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Nucleotides which are building blocks of DNA are made up of

- a) Phosphate, nucleobase and pentose sugar
- b) Nucleobase and sugar
- c) Nucleobase
- d) Pyrimidine

Question Number : 6 Question Id : 4165293571 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 _____ in nature.

- a) acidic
- b) basic
- c) amphoteric
- d) neutral

Question Number : 7 Question Id : 4165293572 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-DNA is formed under conditions of

- a) High humidity
- b) Low humidity
- c) High ionic strength
- d) High concentration of sodium ions

Question Number : 8 Question Id : 4165293573 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 repeating unit of Z-DNA is

- a) Dinucleotide
- b) Nucleotide
- c) Trinucleotide
- d) Nucleoside

Question Number : 9 Question Id : 4165293574 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Triplex DNA is formed through

- a) Watson-Crick Base Pairing
- b) Hydrogen bonding
- c) Hoogsteen base Pairing
- d) Hydrophobic bonds

Question Number : 10 Question Id : 4165293575 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Catalytic RNA is also known as

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

Question Number : 11 Question Id : 4165293576 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 hypothesis of "RNA world" was put forward by

- a) Carl Woese
- b) Har Gobind Khorana
- c) David Baltimore
- d) Thomas Cech

Question Number : 12 Question Id : 4165293577 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 secondary structure of RNA adopts ____ helix

- a) B form
- b) Z form
- c) A form
- d) C form

Question Number : 13 Question Id : 4165293578 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 location of sno RNA is

- a) Nucleolus
- b) Nucleus
- c) Cytoplasm
- d) Ribosome

Question Number : 14 Question Id : 4165293579 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 RNA rich in unusual bases is

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

Question Number : 15 Question Id : 4165293580 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

16S rRNA occurs in

- a) 23S ribosomal subunit
- b) 30S ribosomal subunit
- c) 50S ribosomal subunit
- d) 40S ribosomal subunit

Question Number : 16 Question Id : 4165293581 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 chemically more stable than RNA because of the presence of

- a) Ribose
- b) Pentose
- c) 2-deoxy D ribose
- d) Hexose

Question Number : 17 Question Id : 4165293582 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Tautomerism is shown by

- a) Nucleobases
- b) Pentose sugar
- c) Phosphate
- d) Dexoy ribose sugar

Question Number : 18 Question Id : 4165293583 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 glycosidic bonds found in nucleosides is

- a) α configuration
- b) β configuration
- c) anti-configuration
- d) syn configuration

Question Number : 19 Question Id : 4165293584 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Z in Z DNA stands for

- a) Zipper
- b) Zeta
- c) Zepto
- d) Zig zag

Question Number : 20 Question Id : 4165293585 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Hairpin structures is present in

- a) A DNA
- b) B DNA
- c) tRNA
- d) Z DNA

Question Number : 21 Question Id : 4165293586 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-DNA refers to the
- a) Short squat form
 - b) Thin linear form
 - c) Zig zag form
 - d) Normal hydrate form

Question Number : 22 Question Id : 4165293587 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Palindromic sequences in DNA lead to the formation of

- a) Hairpins
- b) Triplex DNA
- c) Cruciform structures
- d) Slipped DNA

Question Number : 23 Question Id : 4165293588 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Triplex DNA using synthetic oligonucleotides was first discovered by

- a) Alexander Rich
- b) Watson and Crick
- c) Rosalind Franklin
- d) Maurice Wilkins

Question Number : 24 Question Id : 4165293589 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Telomeres are rich in

- a) Quadruplex DNA
- b) Triplex DNA
- c) Cruciform
- d) Hairpins

Question Number : 25 Question Id : 4165293590 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 supercoiling is brought by

- a) Topoisomerase I
- b) Topoisomerase II
- c) DNA helicase
- d) DNA polymerase

Question Number : 26 Question Id : 4165293591 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Pseudoknots are a common feature of

- a) RNA
- b) DNA
- c) snRNA
- d) siRNA

Question Number : 27 Question Id : 4165293592 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Quaternary structure of DNA involves

- a) Chromatin structure
- b) Chromosome structure
- c) Ribosome formation
- d) Spliceosome formation

Question Number : 28 Question Id : 4165293593 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Lambda phage was discovered by:

- a) Esther Lederberg
- b) Joshua Lederberg
- c) Edward and Jenner
- d) Beadle and Tatum

Question Number : 29 Question Id : 4165293594 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 term 'virus' was derived from "contagiumvivumfluidum" used to describe mosaic disease of tobacco was given by :

- a) Esther Lederberg
- b) Joshua Lederberg
- c) Arthur Kornberg
- d) Beijerinck

Question Number : 30 Question Id : 4165293595 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

One gene-One enzyme hypothesis was formulated by scientists using:

- a) Neurosporacrassa
- b) Saccharomyces cerevesiae
- c) Schizosaccharomycespombe
- d) Aspergillusniger

Question Number : 31 Question Id : 4165293596 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Example of Unicellular Fungi:

- a) Molds
- b) Yeasts
- c) Mushroom
- d) Fungi imperfecti

Question Number : 32 Question Id : 4165293597 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 known as Budding Yeast

- a) *Neurosporacrassa*
- b) *Schizosaccharomycespombe*
- c) *Saccharomyces cerevesiae*
- d) *Aspergillus niger*

Question Number : 33 Question Id : 4165293598 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Ashbya gossypii is a -----

- a) Mold
- b) Yeast
- c) Mushroom
- d) Fungi imperfecti

Question Number : 34 Question Id : 4165293599 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Flowering plants are known as:

- a) Cryptogamia
- b) Phanerogamia
- c) Gymnosperms
- d) Angiosperms

Question Number : 35 Question Id : 4165293600 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Pteridophytes :

- a) Have distinct roots
- b) Have distinct shoots
- c) Are nonvascular plants
- d) Do not have distinct roots

Question Number : 36 Question Id : 4165293601 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Plant kingdom can be classified in----- groups depending on their ability of production of flowers.

- a) two
- b) three
- c) four
- d) five

Question Number : 37 Question Id : 4165293602 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Animal kingdom can be initially divided into -----groups.

- a) two
- b) three
- c) four
- d) five

Question Number : 38 Question Id : 4165293603 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 closest living invertebrate relative of the vertebrates

- a) Amphimedon queenslandica
- b) Branchiostoma floridae
- c) Drosophila
- d) Euprymna scolopes

Question Number : 39 Question Id : 4165293604 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 the first multicellular organism whose genome was completely sequenced in 1996.

- a) Drosophila
- b) Hydra
- c) Rhesus monkey
- d) C. elegans

Question Number : 40 Question Id : 4165293605 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 first bird genome to be sequenced.

- a) Chicken
- b) Zebra finch
- c) Sparrow
- d) Parrot

Question Number : 41 Question Id : 4165293606 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 fact, Bacteria and Archaea have been on Earth for about

- a) 4.5 billion years
- b) 3.7 billion years
- c) 2 million years
- d) 1 million years

Question Number : 42 Question Id : 4165293607 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 E. coli, the DNA occupies about -----of the total volume of the cell

- a) Half
- b) One third
- c) One fourth
- d) One fifth

Question Number : 43 Question Id : 4165293608 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Nearly-----of the E. coli genome originated from horizontal transfers

- a) 10%
- b) 30%
- c) 20%
- d) 40%

Question Number : 44 Question Id : 4165293609 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 average E. coli protein contains slightly more than----- residues

- a) 300 amino acid
- b) 100 amino acid
- c) 200 amino acid
- d) 400 amino acids

Question Number : 45 Question Id : 4165293610 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 E. coli, the DNA occupies about -----of the total volume of the cell.

- a) Half
- b) One third
- c) One fourth
- d) One fifth

Question Number : 46 Question Id : 4165293611 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 was first discovered by

- a) Arthur Kornberg
- b) Roger Kornberg
- c) Robert Kornberg
- d) Thomas Kornberg

Question Number : 47 Question Id : 4165293612 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 helicase is that

- a) it forms the DNA double helix
- b) it unwinds the DNA
- c) it adds new nucleotides
- d) it forms bonds between nucleotides

Question Number : 48 Question Id : 4165293613 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 fragments is obtained from

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

Question Number : 49 Question Id : 4165293614 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Semi conservative replication of DNA was first demonstrated in

- (a) Salmonella typhi
- (b) Klebsiella pneumoniae
- (c) Escherichia coli
- (d) Drosophila melanogaster

Question Number : 50 Question Id : 4165293615 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 synthesizes the daughter strands during DNA replication?

- a) DNA primase
- b) helicase
- c) RNA polymerase
- d) DNA polymerase

Question Number : 51 Question Id : 4165293616 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Mode of DNA replication in E. coli is

- (a) Semiconservative and unidirectional
- (b) Conservative and bidirectional
- (c) Semiconservative and bidirectional
- (d) Conservative and unidirectional

Question Number : 52 Question Id : 4165293617 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 DNA damage repair was first demonstrated in

- a. Photoreactivation
- b. Excision repair
- c. Alkyltransferase
- d. None of the options

Question Number : 53 Question Id : 4165293618 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 mismatch repair system utilizes

- a. Hemimethylation
- b. Full methylation
- c. Both a and b
- d. None of the options

**Question Number : 54 Question Id : 4165293619 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

NHEJ is

- a. Non homologous end joining
- b. Non hazardous end joining
- c. Non humorous end joining
- d. Non homologous end junction.

**Question Number : 55 Question Id : 4165293620 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

DSB is

- a. Double site break
- b. Double side break
- c. Dual strand break
- d. Double stranded DNA break

**Question Number : 56 Question Id : 4165293621 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

Chi site sequence is

- a. AGTGGGCTC
- b. GCGCTGGTGG
- c. ACTGGTGG
- d. ATGCATGC

**Question Number : 57 Question Id : 4165293622 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

Lex A is required for

- a. Photorepair
- b. SOS repair
- c. Recombination repair
- d. None of the options

**Question Number : 58 Question Id : 4165293623 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

Mutation causes

- a. Aging
- b. Apoptosis
- c. Cancer
- d. All of the options

**Question Number : 59 Question Id : 4165293624 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

RNA polymerase I transcribes -----

- a) rRNA
- b) mRNA
- c) tRNA
- d) mitochondrial RNA

**Question Number : 60 Question Id : 4165293625 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 strand that is actually being copied during transcription is termed the -----

- a) Template strand
- b) Coding strand
- c) Non template strand
- d) Sense strand

Question Number : 61 Question Id : 4165293626 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Genes described as -----encode products required for basic cellular functions, and so are continually expressed.

- a) Inducible
- b) Repressible
- c) Continuous
- d) Constitutive

Question Number : 62 Question Id : 4165293627 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 eukaryotes the TATA box, which is usually about-----upstream from a transcriptional start site.

- a) 25 basepairs
- b) 35 basepairs
- c) 45 base pairs
- d) 20 basepairs

Question Number : 63 Question Id : 4165293628 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 rapidly growing bacterial cells upto -----of the cells energy and ----- of the cell's dry weight are dedicated to protein synthesis:

- a) 80%, 50%
- b) 50%, 80%
- c) 20%, 40%
- d) 40%, 20%

Question Number : 64 Question Id : 4165293629 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Synthesis of a single protein requires the coordinated action of well over ----- proteins and RNAs.

- a) 20
- b) 100
- c) 40
- d) 60

Question Number : 65 Question Id : 4165293630 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

----- demonstrated that prior to their incorporation into proteins, amino acids are attached to a class of RNA molecules called transfer RNAs

- a) James Watson
- b) Francis Crick
- c) Paul C. Zamecnik and Mahlon B. Hoagland
- d) Roger D Kornberg

Question Number : 66 Question Id : 4165293631 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 minimum set of different tRNA molecules needed to read all 61 codons is -----

- a) 20
- b) 61
- c) 31
- d) 64

Question Number : 67 Question Id : 4165293632 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 30S subunit contains the -----rRNA

- a) 16S
- b) 23S
- c) 5S
- d) 28S

Question Number : 68 Question Id : 4165293633 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 initiation, a charged tRNA enters the P site directly. This event requires a special tRNA known as the-----

- a) initiator tRNA
- b) elongation tRNA
- c) Termination tRNA
- d) None of the options

Question Number : 69 Question Id : 4165293634 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Ribosome recycling factor mimics a -----

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

Question Number : 70 Question Id : 4165293635 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Stop codons are recognized by proteins called ----- that activate the hydrolysis of the polypeptide from the peptidyl tRNA.

- a) release factors (RFs)
- b) ribosome recycling factors
- c) termination factors
- d) stopping factors

Question Number : 71 Question Id : 4165293636 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Internal Ribosome Entry Sites (IRES) sequences were first found in -----

- a) Plants
- b) Bacteria
- c) Fungi
- d) Viruses

Question Number : 72 Question Id : 4165293637 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 make up about -----of the organic matter in a cell

- a) One third
- b) Three fourth
- c) Two-third
- d) One fifth

Question Number : 73 Question Id : 4165293638 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 bacteria, ribosomes are taken out of service during -----phase

- a) Stationary
- b) Log
- c) Death
- d) Lag

Question Number : 74 Question Id : 4165293639 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 inactive ribosomes exist as -----

- a) Monomers
- b) Dimers
- c) Tetramers
- d) Octamers

Question Number : 75 Question Id : 4165293640 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

There are approximately -----translocases per E. coli cell.

- a) 500
- b) 200
- c) 50
- d) 5000

Question Number : 76 Question Id : 4165293641 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

This overall flow of information in biological cells from DNA to RNA to protein is known as -----

- a) Transcription
- b) Translation
- c) Central dogma of molecular biology
- d) Replication

Question Number : 77 Question Id : 4165293642 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

There are -----amino acids in proteins

- a) 10
- b) 15
- c) 5
- d) 20

Question Number : 78 Question Id : 4165293643 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 eukaryotes the proteome may be -----than the genome.

- a) Smaller
- b) Larger
- c) Equal
- d) None of these

Question Number : 79 Question Id : 4165293644 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Peptidyl-tRNA is bound in the -----

- a) A site
- b) E site
- c) M site
- d) P site.

Question Number : 80 Question Id : 4165293645 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Deacylated tRNA exits via the -----

- a) A site
- b) E site
- c) M site
- d) P site

Question Number : 81 Question Id : 4165293646 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 overall reaction rate of transcription by bacterial RNA polymerase is:

- a) ~10 nucleotides/second at 37°C
- b) ~40 nucleotides/second at 37°C
- c) ~250 nucleotides/second at 37°C
- d) ~25 nucleotides/second at 37°C

Question Number : 82 Question Id : 4165293647 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 regulatory sequence before (upstream from) the coding sequence is called the:

- a) Five prime untranslated region (5'UTR).
- b) Three prime untranslated region (3'UTR).
- c) Five prime untranscribed region (5'UTR).
- d) Three prime untranslated region (3'UTR).

Question Number : 83 Question Id : 4165293648 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 RNA polymerase core enzyme are —

- a) 500 KD single subunit complexes
- b) 500 kD multisubunit complexes
- c) 50 KD multisubunit complexes
- d) 1000 KD single subunit complexes

Question Number : 84 Question Id : 4165293649 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

E.coli has three transcription termination factors: -----

- a) Rho (ρ), Tau (τ), and Nus A
- b) Rho (ρ), Sigma (σ), and Nus A
- c) Rho (ρ), Tau (τ), and Sigma (σ)
- d) Rho (ρ), Sigma (σ), and rut

Question Number : 85 Question Id : 4165293650 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 bacteria such as *Escherichia coli*, about ----- of the 4,000 genes are expressed at any given time:

- a) 1,000
- b) 100
- c) 200
- d) 500

Question Number : 86 Question Id : 4165293651 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 bacteria such as *E. coli*, two alternative sigma factors that control the heat shock response are:

- a) RpoD and RpoN
- b) RpoH and RpoE
- c) RpoD and RpoS
- d) RpoS and RpoN

Question Number : 87 Question Id : 4165293652 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 operon model for regulating bacterial genes was first proposed by:

- a) Watson and Crick
- b) Barbara Mclintok
- c) Sanger
- d) François Jacob and Jaques Monod

Question Number : 88 Question Id : 4165293653 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

IPTG (iso-propyl-thiogalactoside) is known as:

- a) a gratuitous inducer
- b) a repressor
- c) an activator
- d) a promoter

Question Number : 89 Question Id : 4165293654 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 two most important regulatory genes of λ are:

- a) *ci* and *cro*
- b) *ci* and *cII*
- c) *cII* and *cIII*
- d) *cII* and *cro*

Question Number : 90 Question Id : 4165293655 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

P_R and P_L are -----and-----promoters

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

Question Number : 91 Question Id : 4165293656 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Lytic growth in λ precedes when

- a) P_R and P_L remain switched off, while P_{RM} is kept switched on.
- b) P_R and P_L remain switched on, while P_{RM} is kept switched off.
- c) P_R and P_L remain switched on, and P_{RM} is also kept switched on.
- d) P_R , P_L and P_{RM} are switched off.

Question Number : 92 Question Id : 4165293657 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

----- genecodes for λ repressor.

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

Question Number : 93 Question Id : 4165293658 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 presence of H-NS ----- gene expression

- a) represses
- b) activates
- c) silences
- d) Neutralizes

Question Number : 94 Question Id : 4165293659 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

NtrC has ----- activity and works from DNA sites far from the gene.

- a) GTPase
- b) ATPase
- c) Nuclease
- d) Kinase

Question Number : 95 Question Id : 4165293660 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

CAP acts at more than -----genes in E.coli.

- a) 1
- b) 20
- c) 30
- d) 100

Question Number : 96 Question Id : 4165293661 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 two activators of ara operon are:

- a) Ara C and cAMP
- b) Ara O_1 and Ara O_2
- c) Glucose and lactose
- d) None of these

Question Number : 97 Question Id : 4165293662 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 the presence of----- MerR activates the merT gene.

- a) Arabinose
- b) Galactose
- c) Mercury
- d) Glucose

Question Number : 98 Question Id : 4165293663 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 complete genome sequence of *E.coli* is about:

- a) 200 μm
- b) 2000 μm
- c) 1300 μm
- d) 5000 μm

Question Number : 99 Question Id : 4165293664 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 genome of *E.coli* contain.

- a) 40 genes
- b) 4,403 genes
- c) 400 genes
- d) 1,000 genes

Question Number : 100 Question Id : 4165293665 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

----- medium in which all the components are known

- a) Complex
- b) Defined
- c) Differential
- d) Enrichment