



BIOLOGY

BOOKS - AAKASH SERIES

MOLECULAR BASIS OF INHERITANCE

Exercise I The Dna Replication And Transcription

1. Genetic material in most of the organisms

A. DNA

B. RNA

C. Both

D. None

Answer: A



Watch Video Solution

2. Genetic material in viruses like retro viruses

A. DNA

B. RNA

C. Both

D. None

Answer: B



Watch Video Solution

3. The length of DNA in bacteriophage $\phi \times 174$

A. 5386 bases

B. 48502 bp

C. 4.6×10^6 bp

D. 3.3×10^9 bp

Answer: A



Watch Video Solution

4. Haploid content of human DNA is

A. $5386 \text{ bp} \times 3.4A^0$

B. $48502 \text{ bp} \times 3.4A^0$

C. $4.6 \times 10^6 \text{ bp} \times 3.4A^0$

D. $3.3 \times 10^9 \text{ bp} \times 3.4A^0$

Answer: D



Watch Video Solution

5. Among the pyrimidines, this is common for both DNA and RNA

A. Uracil

B. Cytosine

C. Thymine

D. Both 1 and 3

Answer: B



Watch Video Solution

6. In a dinucleotide, number of ester bonds formed between the two nucleotides is

A. 1

B. 2

C. 3

D. 4

Answer: B



Watch Video Solution

7. Number of phosphodiester bonds in one turn of DNA

A. 16

B. 20

C. 18

D. 9

Answer: C



Watch Video Solution

8. These are projected inside from the poly nucleotide backbone

A. Nitrogenous bases

B. Sugars

C. Phosphates

D. All these

Answer: A



Watch Video Solution

9. Double Helix model for the structure of DNA was proposed by

- A. James Watson and Francis Crick
- B. Maurice Wilkins and Rosalind Franklin
- C. Francis Crick and Maurice Wilkins
- D. Rosalind Franklin and James Watson

Answer: A



Watch Video Solution

10. The number of bp in each turn of B-DNA helix is

A. 1

B. 10

C. 20

D. 5

Answer: B



Watch Video Solution

11. The central dogma in molecular biology was proposed by

A. Watson

B. Wilkins

C. Crick

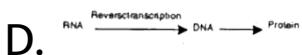
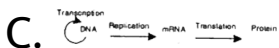
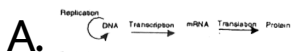
D. Franklin

Answer: C



Watch Video Solution

12. Central dogma of molecular biology was proposed by



Answer: A



Watch Video Solution

13. Reverse transcription occurs in

- A. Some viruses
- B. Some prokaryotes
- C. All viruses
- D. All organisms

Answer: A



Watch Video Solution

14. DNA is wrapped around the histone octamer to form

- A. Nuclein
- B. Nucleous
- C. Nucleosome
- D. Nucleus

Answer: C



15. Number of base pairs of DNA helix in a typical nucleosome

A. 200

B. 100

C. 500

D. 2000

Answer: A



16. In chromatin these are seen as beads-on-string

A. Genes

B. Nucleosomes

C. Centromeres

D. Centrioles

Answer: B



Watch Video Solution

17. Transcriptionally active chromatin is

A. Euchromatin

B. Heterochromatin

C. Both

D. None

Answer: A



Watch Video Solution

1. Griffith conducted his transformation experiments on

A. *Escherichia coli*

B. *Streptococcus pyogenes*

C. *Diplococcus pneumoniae*

D. *Streptomyces griseus*

Answer: C



Watch Video Solution

2. S. strain of Diplococcus is

A. Smooth, capsulated non virulent form
causing death in mice

B. Smooth, non-capsulated virulent form
causing no death in mice

C. Smooth, non-capsulated non virulent
form causing no death in mice

D. Smooth, capsulated virulent form
causing death in mice

Answer: D



Watch Video Solution

3. Explain: Monadelphous cohesion of stamens.



Watch Video Solution

4. O.T. Avery, MacLeod and McCarty identified this as the genetic material / active factor / transformation principle

A. DNA

B. RNA

C. Polysaccharide

D. Proteins

Answer: A



Watch Video Solution

5. Side by side experiments are conducted, to identify DNA as genetic material, unequivocally by

A. Griffith

B. O.T. Avery, MacLeod and McCarty

C. D. Hershey and M. Chase

D. Watson and Crick

Answer: C



Watch Video Solution

6. In their side by side experiments Hershey and Chase incorporated ^{35}S into

A. Bacterial DN

B. Protein capsid of phage

C. Cytoplasm of bacteria

D. Phage DNA

Answer: B



Watch Video Solution

7. Explain: Diadelphous cohesion of stamens.



Watch Video Solution

8. These molecules have the ability to direct their duplications

A. DNA and RNA

B. DNA and Proteins

C. RNA and proteins

D. DNA, RNA and proteins

Answer: A



Watch Video Solution

9. Reactive group of RNA is

A. Phosphate

B. Pentose

C. 2.-OH group

D. Nitrogen base

Answer: C



Watch Video Solution

10. RNA mutates faster than DNA because

A. RNA is more stable

B. RNA is unstable

C. RNA is noncatalytic

D. RNA is less reactive

Answer: B



Watch Video Solution

11. Viruses having RNA genome and shorter lifespan

A. Mutate and evolve slowly

B. Mutate slowly but evolve fastly

C. Mutate and evolve faster

D. Mutate fastly and evolve slowly

Answer: C



Watch Video Solution

12. The first evolved genetic material was/were

A. RNA

B. DNA

C. DNA

D. All these

Answer: A



Watch Video Solution

13. The essential life process (es) evolved around RNA is/are

A. Metabolism

B. Translation

C. Splicing

D. All these

Answer: D



Watch Video Solution

14. DNA resists changes by evolving a process of

A. Replication

B. Translation

C. Transcription

D. DNA Repair

Answer: D



Watch Video Solution

Exercise I Dna Replication

1. While proposing double helical structure for DNA, Watson and Crick proposed scheme for

- A. RNA transposition
- B. DNA replication
- C. DNA repair
- D. Translation

Answer: B



Watch Video Solution

2. During replication of DNA, the number of template strands is

A. 1

B. 2

C. 4

D. 3

Answer: B



Watch Video Solution

3. When a DNA molecule undergoes replication the number of new strands formed is

A. 1

B. 2

C. 4

D. None

Answer: B



Watch Video Solution

4. When a DNA molecule with one radioactive strand undergoes repeated replications in a medium without radioactivity for five times the number of radio labelled strands in the daughter DNA molecules

A. 2

B. 1

C. 16

D. 32

Answer: B



Watch Video Solution

5. Semiconservative replication of DNA was first shown in

A. *Drosophila melanogaster*

B. *Escherichia coli*

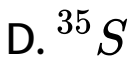
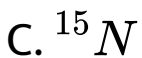
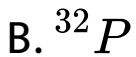
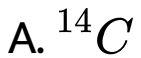
C. *Diplococcus pneumoniae*

D. *Neurospora crassa*

Answer: B



6. In their semiconservative experiment Meselson and Stahl used



Answer: C



7. Among the following characters, which one was not considered by Mendel in his experiments on pea ?

A. Heavy

B. Hybrid

C. Light

D. Both light and medium

Answer: B



Watch Video Solution

8. Taylor et al, conducted semicon servation experiments on

A. *Vicia faba*

B. *Vinca rosea*

C. *E. coli*

D. *Drosophila*

Answer: A



Watch Video Solution

9. The experiments that proved the DNA in chromosomes also replicate semiconservatively were conducted by

A. Hershey and Chase

B. Meselson and Stahl

C. Avery et al

D. Griffith

Answer: B



Watch Video Solution

10. In E.coli, complete DNA replication requires

A. 38 minutes

B. 20 minutes

C. 19 minutes

D. 3 minutes

Answer: C



Watch Video Solution

11. For long, DNA molecules, the replication occurs within a small opening of the DNA helix referred to as

- A. Origin site
- B. Replication fork
- C. Molecular scissors
- D. Molecular glue

Answer: B



Watch Video Solution

12. DNA dependent DNA polymerases catalyse polymerization of DNA in

A. Only 3. \rightarrow 5. direction

B. Only 5. \rightarrow 3. direction

C. Both direction

D. Irregular directions

Answer: B



Watch Video Solution

13. DNA replication is continuous

A. On the template with polarity 3. \rightarrow 5.

B. On the template with polarity 5. \rightarrow 3.

C. On both the templates

D. On none of the templates

Answer: A



Watch Video Solution

14. Molecular glue or gum is

A. DNAase

B. DNA polymerase

C. DNA ligase

D. DNA dependent RNA polymerase

Answer: C



Watch Video Solution

15. A failure in cell division after DNA replication results into

A. Haploidy

B. Diploidy

C. Polyploidy

D. Aneuploidy

Answer: C



Watch Video Solution

16. When cell division fails after S - phase (DNA replication) in a diploid cell, the ploidy is

- A. Haploid
- B. Diploid
- C. Tetraploid
- D. Triploid

Answer: C



Watch Video Solution

Exercise I Transcription

1. The process of copying genetic information from one strand of the DNA into RNA is termed as

A. Transcription

B. Translaton

C. Replication

D. Duplication

Answer: A



Watch Video Solution

2. In transcription

- A. The total DNA of an organism gets duplicated
- B. Only a segment of DNA is copied into RNA
- C. Only one of the strands of DNA is copied into RNA
- D. Both (2) and (3) occur

Answer: D



Watch Video Solution

3. RNA transcribed from the following segment of DNA is

3. - ATGCATGCATGC - 5. Template strand

5. - TACGTACGTACG - 3. Coding strand

A. 1)3. - ATGCATGCATGC - 5.

B. 2)5. - TACGTACGTACG - 3.

C. 3) 3. - AUGCAUGCAUGC - 5.

D. 4)5 - UACGUACGUACG - 3.

Answer: D



Watch Video Solution

4. In a transcription unit the terminator is located towards

- A. 3. - end of coding strand
- B. 5. - end of coding strand
- C. 3. - end of template strand

D. Upstream of the structural gene

Answer: A



Watch Video Solution

5. The DNA sequence that provides binding site for RNA polymerase in eukaryotes is

A. Regulator

B. Promoter

C. Terminator

D. Operator

Answer: B



Watch Video Solution

6. Presence of this in a transcription unit also defines the template and coding strands

A. Regulator

B. Promoter

C. Terminator

D. Operator

Answer: B



Watch Video Solution

7. This is usually defined as the end site of the process of transcription

A. Regulator

B. Promoter

C. Terminator

D. Operator

Answer: C



Watch Video Solution

8. Additional sequences of transcription unit

A. Regulator

B. Promotor

C. Terminator

D. Exons

Answer: A



Watch Video Solution

9. The structural gene in a transcription unit could be said as polycistronic

A. Mostly in prokaryotes

B. Mostly in eukaryotes

C. Both

D. None

Answer: A



Watch Video Solution

10. Reverse transcription is depicted as

A. DNA \rightarrow RNA \rightarrow Protein

B. RNA \rightarrow DNA \rightarrow Protein

C. RNA \rightarrow DNA \rightarrow RNA \rightarrow Protein

D. RNA \rightarrow Protein \rightarrow RNA

Answer: B



Watch Video Solution

11. This is the process by which the biological information contained in the base sequence of DNA is made available to the cell

- A. Gene suppression
- B. Gene regulation
- C. Gene expression
- D. Gene flow

Answer: C



Watch Video Solution

12. During transcription, the synthesizing mRNA grows in

- A. 3. → 5. direction on coding strand
- B. 3. → 5. direction on non coding strand
- C. 5. → 3. direction on noncoding strand
- D. 5. → 3. direction on coding strand

Answer: C



13. The strand of DNA which is complimentary to the template strand is

- A. Antisense strand
- B. Noncoding strand
- C. Sense strand
- D. Both 1 & 2

Answer: C



14. During transcription, when DNA unzips, this enzyme binds to one strand of DNA

A. RNase

B. DNA polymerase

C. DNase

D. RNA polymerase

Answer: D



Watch Video Solution

15. The synthesis of a polypeptide chain or a protein from mRNA is called

- A. Transcription
- B. Transformation
- C. Tranduction
- D. Translation

Answer: D



Watch Video Solution

16. N-terminus of polypeptide is related to

- A. 3.primed of mRNA
- B. 3. primed of coding strand
- C. 3. primed of template
- D. 5. primed of mRNA

Answer: D



Watch Video Solution

17. This type of RNA provides the template for protein synthesis

A. m RNA

B. t RNA

C. r RNA

D. s RNA

Answer: A



Watch Video Solution

18. This type of RNA carries the genetic code

A. mRNA

B. t RNA

C. r RNA

D. s RNA

Answer: A



Watch Video Solution

19. This type of RNA brings the amino acids and reads the genetic code

A. m RNA

B. t RNA

C. r RNA

D. sn RNA

Answer: B



Watch Video Solution

20. Which of the following RNA has structural and catalytic role in translation ?

A. m RNA

B. t RNA

C. r RNA

D. s RNA

Answer: C



Watch Video Solution

21. Transcription of RNA is initiated when DNA dependent RNA polymerase binds to

A. Operator

B. Regulator

C. Promoter

D. Terminator

Answer: C



Watch Video Solution

22. RNA polymerase on its own is capable of catalyzing the process of

- A. Elongation
- B. Initiation
- C. Termination
- D. All of the above

Answer: A



Watch Video Solution

23. Initiation of transcription is by

A. Only σ (sigma) factor

B. Only RNA polymerase

C. Only ρ (rho) factor

D. RNA polymerase when associated with σ
factor

Answer: D



Watch Video Solution

24. Termination of transcription is by

A. Only ρ factor

B. Only σ factor

C. RNA polymerase when associated with ρ
factor

D. RNA polymerase when associated with σ
factor

Answer: C



Watch Video Solution

25. Name the three RNA polymerases found in eukaryotic cells and mention their functions.

A. One

B. Two

C. Three

D. Four

Answer: C



Watch Video Solution

26. In eukaryotes, RNA polymerase II transcribes

A. r RNAs (28 S, 18 S and 5.8 S)

B. t RNA, 5S rRNA and sn RNA s

C. Heterogeneous nuclear RNA (hn RNA)

D. All these

Answer: A



Watch Video Solution

27. In eukaryotes RNA polymerase III is responsible for the transcription of

A. r RNAs (28 S, 18 S and 5.8 S)

B. t RNA, 5S rRNA and sn RNA s

C. Heterogenous nuclear RNA (hn RNA)

D. All these

Answer: B



Watch Video Solution

28. This RNA undergoes additional processing called as capping and tailing

A. sn RNA

B. 5 sr RNA

C. m RNA

D. hn RNA

Answer: D



Watch Video Solution

29. Explain: Polyadelphous cohesion of stamens.



Watch Video Solution

30. Most of the eukaryotic genes have stretches of bases that code for amino acids, which are called

A. Exons

B. Introns

C. Axons

D. Cistrons

Answer: A



Watch Video Solution

31. The stretches of eukaryotic genes which do not code for amino acids are called

A. Axons

B. Cistrons

C. Introns

D. Exons

Answer: C



Watch Video Solution

32. Eukaryotic genes are called

A. Split genes

B. Discontinuous genes

C. Continuous genes

D. Both 1 and 2

Answer: D



Watch Video Solution

33. The process of removal intron transcripts and joining of exon transcripts in the hnRNA is called

A. RNA polymerisation

B. RNA splitting

C. RNA splicing

D. RNA translation

Answer: C



Watch Video Solution

34. In eukaryotes, hn RNA transforms into mRNA by

A. 5. capping

B. Intron transcripts removal and exon transcripts joining

C. Polyadenylation at 3. end

D. All these steps

Answer: D



Watch Video Solution

35. In eukaryotes, mostly mRNA is

A. Bicistronic

B. Tricistronic

C. Monocistronic

D. Polycistronic

Answer: C



Watch Video Solution

36. Explain: The term Neoplasm.



Watch Video Solution

Exercise I Genetic Code

1. The following codon do not code for any amino acid are

A. UAA

B. UGA

C. UAG

D. All

Answer: D



Watch Video Solution

2. Anticodon occur in :

A. tRNA

B. DNA

C. mRNA

D. rRNA

Answer: A



Watch Video Solution

3. UAG is called

A. Ochre

B. Amber

C. Opal

D. Initiator

Answer: B



Watch Video Solution

4. *Name: a fungus* from which *Galic acid* is obtained.



Watch Video Solution

5. The initiator codon is

A. AUG

B. UAG

C. UAA

D. UGA

Answer: A



Watch Video Solution

6. Genetic code is same in all living organisms hence it is called

- A. Colinear
- B. Universal
- C. Unambiguous
- D. Commaless

Answer: B



Watch Video Solution

7. UAG (amber), UAA (ochre) and UGA (opal) codes serve as

- A. Initiator
- B. Terminator
- C. Degenerate
- D. Colinear

Answer: B



Watch Video Solution

8. The multiple codons specifying one amino acid are grouped together, hence codons are

- A. Degenerate
- B. Ordered
- C. Unambiguous
- D. Punctuationless

Answer: B



Watch Video Solution

9. AUG codes for

A. Valine

B. Glutamic acid

C. Phenyl alanine

D. Methionine

Answer: D



Watch Video Solution

10. Initiator codon in eukaryotes

A. GUG

B. AUG

C. UAG

D. UGA

Answer: B



Watch Video Solution

11. Initiator codon only in the prokaryotes

A. AUG

B. GUG

C. UGA

D. UAA

Answer: B



Watch Video Solution

12. Opal

A. UAA

B. UAG

C. GUG

D. UGA

Answer: D



Watch Video Solution

13. RNA codon for DNA codon ATG will be

A. AUG

B. UTG

C. UAC

D. TAC

Answer: C



Watch Video Solution

14. The arrangement of aminoacids in a polypeptide is determined by

A. DNA

B. r-RNA

C. S-RNA

D. t-RNA

Answer: A



Watch Video Solution

15. *Name:* a *microbe* used as a clot buster



Watch Video Solution

16. Codon is a triplet of nucleotides that code for

- A. One amino acid
- B. One nucleic acid
- C. One fatty acid
- D. One glucose molecule

Answer: A



Watch Video Solution

17. Initiator codons

A. AUA and UAG

B. UGA and AUG

C. UAA and AUG

D. AUG and GUG

Answer: D



Watch Video Solution

18. In eukaryotes, translation of mRNA into a polypeptide is initiated by

A. UGA

B. UAA

C. UAG

D. AUG

Answer: D



19. Which of the following pair have a double function?

A. AUG, GUG

B. UAA, UGA

C. UGA, GUG

D. UAA, AUG

Answer: A



20. Which one of the following codons codes for the same information as UGC?

A. UGU

B. UGA

C. UAG

D. UGG

Answer: A



Watch Video Solution

21. Codons that specify same amino acids are called

A. synonyms

B. autonyms

C. synergistic

D. antagonistic

Answer: A



Watch Video Solution

22. RNA and DNA were artificially synthesised "in vitro" by

- A. Ochoa and Nirenberg
- B. Ochoa and Kornberg
- C. Kornberg and Nirenberg
- D. Nirenberg and Khorana

Answer: D



Watch Video Solution

23. Nirenberg synthesized an m-RNA containing 34 poly-Adenine (A-A-A-A-A-A-A----) and found a polypeptide formed of 11 poly-lysine this proved that genetic code for lysine was

A. lone-adenine

B. AA doublet

C. AAA triplet

D. many adenines

Answer: C



Watch Video Solution

Exercise I Translation Gene Expression And Regulation

1. Translation in eukaryotes occurs

- A. In the nucleus
- B. On the ribosomes
- C. In the nucleolus
- D. In the Golgi complex

Answer: B



Watch Video Solution

2. The gene which synthesises repressor is

- A. Operator gene
- B. Regulator gene
- C. Promoter gene
- D. Structural gene

Answer: B



[Watch Video Solution](#)

3. Lac Operon model was proposed by

A. 1) Jacob-Monod

B. 2) Griffith-Avery

C. 3) Watson-Crick

D. 4) Beadle-Ephrussi

Answer: A



[Watch Video Solution](#)

4. The second step of the protein synthesis is referred to as

A. Transcription

B. Translation

C. Transversion

D. Transformation

Answer: B



Watch Video Solution

5. The complementary copy of RNA synthesized from DNA template is

A. t-RNA

B. r-RNA

C. m-RNA

D. TMV

Answer: C



Watch Video Solution

6. m RNA is formed from one strand of DNA.

This strand is called

A. Antisense

B. Sense

C. Cistron

D. Recon

Answer: A



Watch Video Solution

7. m RNA which translates the permease protein is transcribed by which structural gene

A. 1)Z

B. 2)A

C. 3)Y

D. 4)C

Answer: C



Watch Video Solution

8. Which is target for the attachment of repressor protein produced by the regulator gene?

A. Promoter

B. Inducer

C. Operator

D. Structural gene

Answer: C



Watch Video Solution

9. The stretches of eukaryotic genes which do not code for amino acids are called

A. Exons

B. Introns

C. Cistrons

D. Mutons

Answer: B



Watch Video Solution

10. In bacterium, permease is located in

- A. The cell wall
- B. The cell membrane
- C. The ribosomes
- D. The cytoplasm

Answer: B



Watch Video Solution

11. Which of the following is not known ?

A. Transacetylase

B. Permease

C. A. gene

D. Repressor protein

Answer: A



Watch Video Solution

12. Transcription by structural genes is catalysed by enzyme

A. RNase

B. RNA polymerase

C. DNA polymerase

D. Nuclease

Answer: B



Watch Video Solution

13. Inducer of Lac operon is

A. Repressor protein

B. Lactose

C. RNA polymerase

D. Permease

Answer: B



Watch Video Solution

14. Haemoglobin is a

A. Monomer

B. Dimer

C. Trimer

D. Tetramer

Answer: D



Watch Video Solution

15. The number of α polypeptides present in the haemoglobin

A. 4

B. 1

C. 2

D. 3

Answer: C



Watch Video Solution

16. With regard to mature mRNA in eukaryotes

A. Exons and introns do not appear in the
mature RNA

B. Exons appear but introns do not appear
in the mature RNA

C. Introns appear but exons do not appear
in the mature RNA

D. Both exons and introns appear in the
mature RNA

Answer: B



Watch Video Solution

17. In negative operon

- A. Inducer binds to repressor
- B. Inducer binds to corepressor
- C. Corepressor binds to aporepressor
- D. A repressor is not formed

Answer: C



Watch Video Solution

18. The genes that are responsible for directing the sequences of amino acids for a given protein are

A. Initiator

B. Operator

C. Regulator

D. Repressor

Answer: A



Watch Video Solution

19. Actual site of transcription initiation in Lac operon is

A. Promoter region

B. Operator

C. Inhibitor

D. Structural genes

Answer: A



Watch Video Solution

20. The genes which regulate the expression of other genes are

A. Constitutive genes

B. Regulated genes

C. Regulator genes

D. Operator gene

Answer: C



Watch Video Solution

21. An operon consists of

A. Structural genes

B. Operator gene

C. Promoter gene

D. All these

Answer: D



Watch Video Solution

22. Cistrons, that codes for a polypeptide, in an operon are called

A. Regulator genes

B. Structural genes

C. Promoter genes

D. Operator genes

Answer: B



Watch Video Solution

23. The region in an operon that controls the transcriptional activity is

- A. .Regulator. region
- B. Structural genes. region
- C. Operator-promoter. region
- D. .Inducer. region

Answer: C



Watch Video Solution

24. When operator of operon is off

- A. The structural genes cannot function
- B. The inducer cannot function
- C. The repressor protein cannot function
- D. The repressor gene cannot function

Answer: A



Watch Video Solution

25. Operator of operon is the target for the attachment of

A. Inducer substance

B. Repressor protein

C. RNA polymerase

D. Repressor gene

Answer: B



Watch Video Solution

26. In Lac operon this lies upstream to the operator region

A. Inducer

B. Structural gene

C. Promoter region

D. Regulator gene

Answer: C



Watch Video Solution

27. *Name:* an *enzyme* used for patients suffering from *heart* attack.



Watch Video Solution

28. The inducer of Lac operon binds to

- A. Repressor gene
- B. Repressor protein
- C. Operator gene
- D. Promoter gene

Answer: B



Watch Video Solution

29. In eukaryotes, mRNA containing genetic code is formed by

- A. Transcription from split genes
- B. Transcription from hn RNA
- C. RNA splicing from hn RNA
- D. RNA splicing from DNA

Answer: C



Watch Video Solution

30. Spliceosomes remove

- A. Introns from DNA
- B. Intron transcripts from mRNA
- C. Exon transcripts from hn RNA
- D. Intro ntranscripts from hn RNA

Answer: D



Watch Video Solution

31. Match List-I with List-II and select the correct option

List - I	List - II
I) ϕ x174	A) 3.3×10^9 bp
II) Lambda	B) 5386
III) <i>E. coli</i>	C) 48502 bp
IV) Human genome	D) 4.6×10^6 bp

A. $\begin{matrix} I & II & III & IV \\ B & C & D & A \end{matrix}$

B. $(I, II, III, IV), (B, C, A, D) : \}$

C. $\begin{matrix} I & II & III & IV \\ C & B & D & A \end{matrix}$

D. $\begin{matrix} I & II & III & IV \\ B & A & D & C \end{matrix}$

Answer: A



Watch Video Solution

32. Match List-I with List-II and select the correct option.

List - I**List - II**

- | | |
|------------------------|--|
| I) Friedrich Meischer | A) Double helical model of DNA |
| II) Wilkins & Franklin | B) X-ray diffraction data of DNA |
| III) Watson & Crick | C) $A + T \neq C + G$ |
| IV) Meselson & Stahl | D) Nuclein |
| V) Chargaff | E) Proved semi-conservative replication of DNA |

- | | I | II | III | IV | V |
|----|----------|-----------|------------|-----------|----------|
| 1) | D | A | B | E | C |
| 2) | D | B | A | C | E |
| 3) | C | B | A | E | D |
| 4) | D | B | A | E | C |

[Watch Video Solution](#)

33. Match List-I with List-II and select the correct option

List - I	List - II
I) RNA polymerase III	A) hn RNA
II) DNA polymerase	B) r RNAs
III) RNA polymerase II	C) t RNA
IV) RNA polymerase I	D) DNA

- A. *I II III IV*
C D B A
- B. *I II III IV*
C D A B
- C. *I II III IV*
D C A B
- D. *I II III IV*
A D C B

Answer: B



Watch Video Solution

34. Match the following and select the correct option

List - I

A) AUG

B) UAG

C) UGA

D) GUG

E) UAA

List - II

I) Amber

II) Initiator codon in prokaryotes only

III) Ochre

IV) Methionine

V) Opal

A B C D E

1) IV I V II III

2) II I V IV III

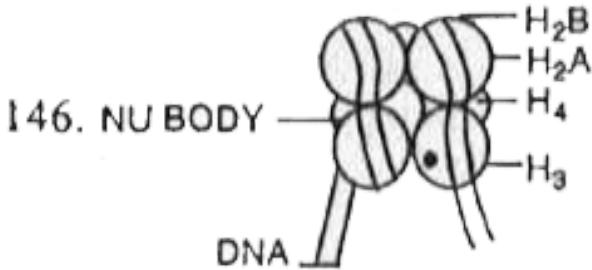
3) IV V I II III

4) IV III V II I



Watch Video Solution

Exercise I Diagram Based Questions



1.

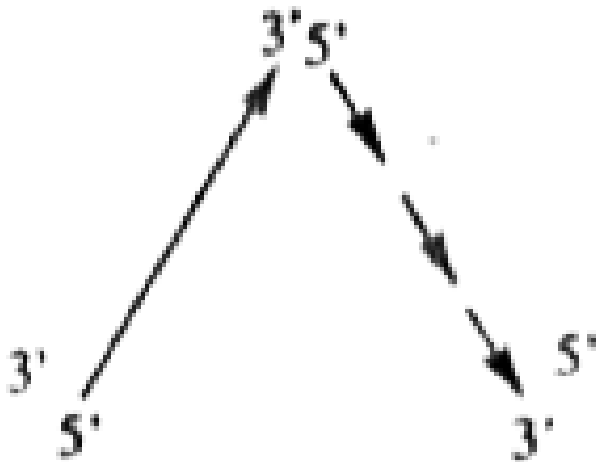
The figure is

- A. Nucleus
- B. Nucleolus
- C. Nucleosome
- D. Nuclein

Answer: C



Watch Video Solution



2. The diagram depicts

The diagram depicts

A. Transcription

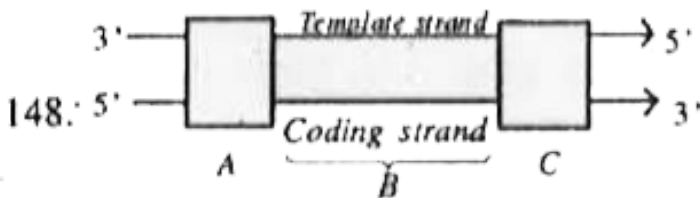
B. Replication

C. Reverse transcription

D. Translation

Answer: B

 **Watch Video Solution**



3.

.A. in the above transcription unit is

A. Promoter

B. Terminator

C. structural gene

D. Regulator

Answer: A



Watch Video Solution

4. Transcription unit

A. Promoter

B. Terminator

C. structural gene

D. Regulator

Answer: C

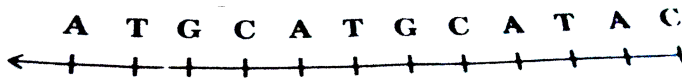


Watch Video Solution

5. (a) Write the RNA strand transcribed from the above transcription unit along with its polarity.

(b) Construct a complete transcription unit

with promotor and terminator on the basis of the hypothetical template strand given below :

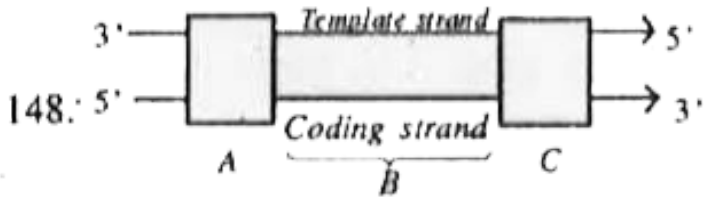


- A. Promoter
- B. Terminator
- C. structural gene
- D. Regulator

Answer: B



Watch Video Solution



6.

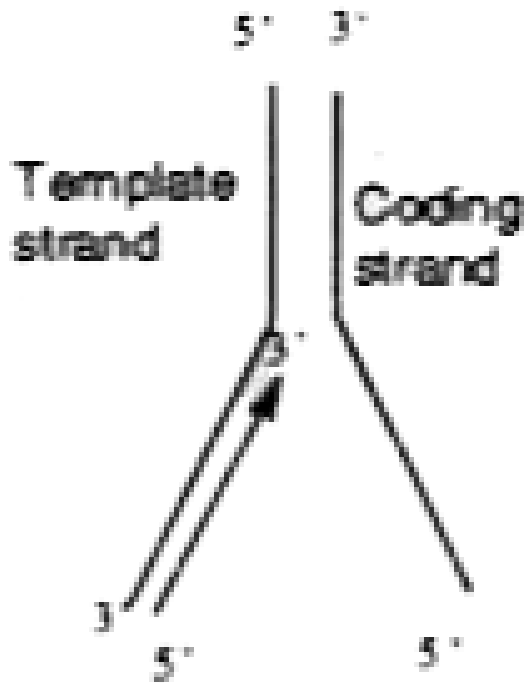
A. in the above transcription unit is

- A. Promoter
- B. Terminator
- C. structural gene
- D. Regulator

Answer: A



Watch Video Solution



7.

This diagram indicates

- A. DNA replication
- B. Reverse transcription
- C. Transcription

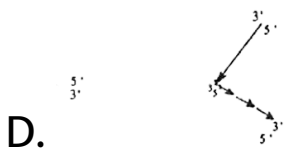
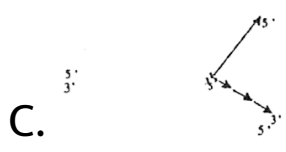
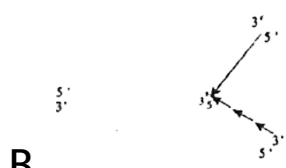
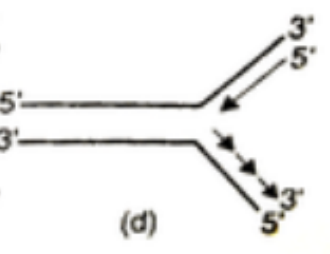
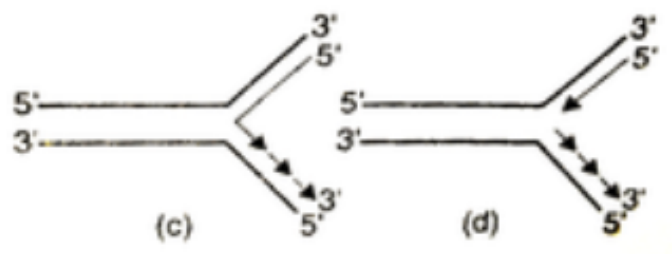
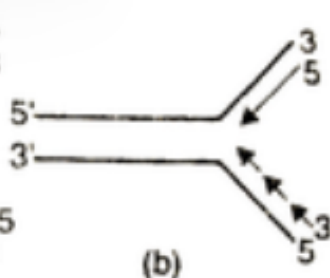
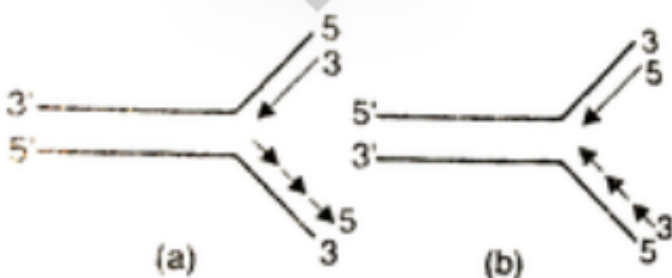
D. Translation

Answer: C



Watch Video Solution

8. Which one of the following correctly represents the manner of replication of DNA?



Answer: D



Watch Video Solution

Exercise I Human Genome Project

1. Largest human gene for .dystropin. has

A. 1.4 million bases

B. 30,000 bases

C. 2.4 million bases

D. 2968 bases

Answer: C



Watch Video Solution

2. Which of the following does not code for any proteins ?

A. Mini-satellite

B. Micro-satellite

C. VNTR

D. All the above

Answer: D



Watch Video Solution

3. DNA finger printing technique is based on

A. restriction endonuclease

B. polymorphism in repetitive DNA

C. Gel electrophoresis

D. Southern blotting technique

Answer: B



Watch Video Solution

4. The following are used as genetic markers

A. RFLPS

B. Repeated sequences

C. STRs

D. All the above

Answer: D



Watch Video Solution

5. In Human genonie project, the following is the most time consuming project

- A. Sequencing the human genome
- B. Physical mapping
- C. Genetic mapping
- D. Linkage mapping

Answer: A



6. The number of nucleotide base pairs in the haploid set of human chromosomes

- A. 1.5 billions
- B. 316.47 billions
- C. 3 billions
- D. 240 million

Answer: C



7. In view of importance of genetic research, the genome of this plant is analysed

A. *Lathyrus oderatus*

B. *Pisum sativum*

C. *Arabedopsis*

D. *Mimosa*

Answer: C



Watch Video Solution

8. Genes essential for coding proteins in human genome are nearly

A. 2 %

B. 28 %

C. 30 %

D. 1.2 %

Answer: A



Watch Video Solution

9. Expressed sequence tags. are useful in identifying

A. whole set of genome

B. coding and non-coding sequences

C. genes that are expressed as RNA

D. polymorphism in VNTR

Answer: C



Watch Video Solution

10. Nucleotide base pairs in an average gene

A. 1.5 millions

B. 3000

C. 2416

D. 260

Answer: B



Watch Video Solution

11. The chromosome with large number of genes known

A. 3rd

B. 2nd

C. 1st

D. X-chromosome

Answer: C



Watch Video Solution

12. Number of SNPs (snips) in the non coding DNA of human genome

A. 2.2 million

B. 1.4 million

C. 1 billion

D. 3 billion

Answer: B



Watch Video Solution

13. VNTR belongs to a class of satellite DNA which are referred to as

A. centromere

B. mini satellite

C. genes coding for proteins

D. SNP

Answer: B



Watch Video Solution

14. Who identified that the myoglobin gene contains many segments that vary in size and composition from individual to individual and developed the technique of DNA fingerprinting ?

A. Morgan

B. Jeffreys

C. Benzer

D. Henking

Answer: B





Watch Video Solution

15. Human chromosome 1 has many genes, nearly

A. 2.4 million genes

B. 2968 genes

C. 231 genes

D. 30,000 genes

Answer: B



Watch Video Solution

16. The complete sequencing of human genome was proposed in this year

A. 1985

B. 1995

C. 1986

D. 2003

Answer: C



Watch Video Solution

17. The human genome project was started in

A. October, 1990.

B. September, 1986

C. April, 2003

D. August, 1991

Answer: A



Watch Video Solution

18. The human genome project was completed in

A. 2002

B. 1990

C. 2003

D. 1986

Answer: C



Watch Video Solution

19. Genes that are expressed as RNA are called

A. ESTs

B. Micro-satellites

C. VNTRs

D. SNPs

Answer: A



Watch Video Solution

20. In human genome, 1.4 million locations in DNA are the single base differences, these are called

- A. Short tandem repeats
- B. Variable number tandem repeats
- C. Single nucleotide polymorphisms
- D. All the three

Answer: C



Watch Video Solution

21. Human Genome project was the thought of

A. Jean Dausset

B. Watson

C. Crick

D. None of these

Answer: A



Watch Video Solution

22. The genome map was produced under human genome project in

A. 1992

B. 1994

C. 1996

D. 2000

Answer: B



Watch Video Solution

23. Which of the following is not a goal of HGP

?

A. addressing on ELSI

B. storage of information in data bases

C. physical mapping of human genome

D. identification of non-protein coding
genes

Answer: D



Watch Video Solution

Exercise I Dna Finger Printing

1. DNA fingerprinting technique was discovered by

A. Wilmut

B. Jefferys

C. Eithoven

D. Kary Mullis

Answer: B



Watch Video Solution

2. The nucleotides represented in the DNA 5^1
_____ CA CA CA CA CA _____ 3^1 are called

A. Repetitive sequences

B. cDNA

C. r DNA

D. Retro DNA

Answer: A



Watch Video Solution

3. A DNA fragment is

A. Positively charged

B. A buffer

C. Negatively charged

D. Neutral

Answer: C



Watch Video Solution

4. The percentage of base sequences that are nearly identical among all humans is

A. 90 %

B. 80 %

C. 99.9 %

D. 89.9 %

Answer: C



Watch Video Solution

5. In human genome, this constitutes very large amount

- A. Protein coding DNA
- B. Non protein coding DNA
- C. Junk DNA
- D. Structural DNA

Answer: C



Watch Video Solution

6. In human genome, random variations occur as often as one in every 200 nucleotides, in this DNA

A. Unexpressed DNA

B. Expressed DNA

C. Structural DNA

D. None of these

Answer: A



Watch Video Solution

7. DNA finger printing involves

- A. Identification of differences in all regions of DNA sequence
- B. Identification of differences in some specific regions in DNA sequence
- C. Identification of similarities in any region of DNA sequence
- D. None of these

Answer: B



Watch Video Solution

8. Pickout the correct statement related to the DNA present in mini-satellites and microsatellites

A. These sequences code for some specific proteins

B. These sequences show very low degree of polymorphism

C. These sequences normally do not code
for any protein

D. These sequences never undergo any
mutations

Answer: C



Watch Video Solution

9. DNA sequences present in mini-satellites
and micro-satellites show high degree of
polymorphism due to

A. Natural selection

B. Sexual recombinations

C. Mutations

D. All the three

Answer: C



Watch Video Solution

10. The heritable mutations observed in a population at high frequency is referred to as

- A. DNA polymorphism
- B. Genetic recombinations
- C. RNA polymorphism
- D. None of these

Answer: A



Watch Video Solution

11. Alec J. Jeffreys discovered the fundamental technique involved in DNA finger printing, while he was studying the gene for

A. dystrophin

B. myoglobin

C. haemoglobin

D. tubulin

Answer: B



Watch Video Solution

12. In gel electrophoresis, the smallest DNA pieces travel

- A. longer distances
- B. shorter distances
- C. moderate distances
- D. none of these

Answer: A



Watch Video Solution

13. Pick out the correct statement from the following in relation to gel electrophoresis

A. The smallest DNA pieces travel the shorter distances

B. The larger DNA pieces are close to the top of the gel

C. The larger DNA pieces travel the longer distances

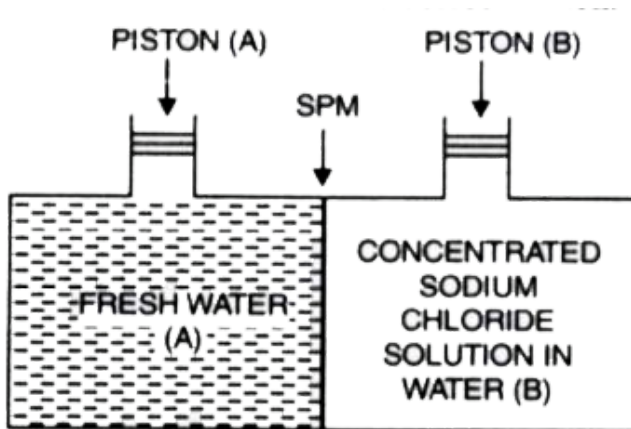
D. The shorter DNA pieces are close to the top of the gel

Answer: B



Watch Video Solution

14. Consider the Fig. and make the correct option.



A. A has more repeats than B

B. The number of repeats are same in both

A&B

C. A is close to the top of the gel

D. B has more repeats than A

Answer: D



Watch Video Solution

15. During DNA finger printing, the double stranded DNA is split into single stranded DNA by using

A. agarose gel

B. radioactive DNA probe

C. acidic chemicals

D. alkaline chemical

Answer: D



Watch Video Solution

16. The process of transfer of DNA pieces on to the surface of the nylon membrane is called

A. blotting

B. gel electrophoresis

C. autoradiography

D. isolation of DNA from the sample

Answer: A



Watch Video Solution

17. DNA finger printing is useful in

A. Taxonomical applications

B. Pedigree analysis

C. Anthropological studies

D. All the three

Answer: D



Watch Video Solution

18. The stable inheritance of a gene through generations is known as

A. DNA typing

B. Forensic analysis

C. Pedigree analysis

D. Anthropological studies

Answer: C



Watch Video Solution

19. This is used to establish, paternity or maternity with higher degree of certainty

A. Blood grouping

B. Serological tests

C. DNA finger printing

D. Pedigree analysis

Answer: C



Watch Video Solution

20. The property of a genetic marker

A. Polymorphism

B. Monomorphism

C. Always with a known function

D. Always a repetitive sequence

Answer: A



Watch Video Solution

21. Duplicated genes are

A. Encode closely related proteins

B. Are Identical proteins

C. Are Noncoding genes

D. Are Extragenic regions

Answer: A



Watch Video Solution

22. DNA fingerprint profile will be exactly same of :

- A. Siblings
- B. Offsprings
- C. Identical twins
- D. Fraternal twins

Answer: C



Watch Video Solution

Exercise II

1. Number of nucleosomes in a typical mammalian cell

A. 3.3×10^7

B. 1.65×10^9

C. 3.3×10^9

D. 1.65×10^9

Answer: A



Watch Video Solution

2. Segments of lagging strand formed during DNA synthesis are

- A. Polymerase fragment
- B. RNA fragment
- C. Okazaki fragments

D. Epimerase activity

Answer: C



Watch Video Solution

3. Who established that RNA can be genetic material?

A. Griffith

B. Conrat

C. Lederberg

D. Nirenberg and Mathaei

Answer: B



Watch Video Solution

4. Nucleotide arrangement in DNA can be seen by

A. X-ray crystallography

B. Electron microscope

C. Ultracentrifuge

D. Light microscope

Answer: A



Watch Video Solution

5. Nuclear DNA sends information for protein synthesis through

A. tRNA

B. mRNA

C. rRNA

D. All the above

Answer: B



Watch Video Solution

6. DNA synthesis can be specifically measured by estimating the incorporation of radio labelled

A. Uracil

B. Ribose sugar

C. Thymidine

D. Adenine

Answer: C



Watch Video Solution

7. Enzyme required for removing RNA primer during DNA replication is

A. Primase

B. Ligase

C. DNA polymerase I

D. DNA polymerase III

Answer: C



Watch Video Solution

8. Which one is involved in DNA repair?

A. Ligase

B. Primase

C. DNA polymerase III

D. DNA polymerase I

Answer: D



Watch Video Solution

9. Portion of gene which is transcribed but not translated is :-

A. Exon

B. Intron

C. Cistron

D. Codon

Answer: B



Watch Video Solution

10. In eukaryotes, hn RNA transforms into mRNA by

A. Nucleosomes

B. Spliceosomes

C. Mesosomes

D. Karyosomes

Answer: B



Watch Video Solution

11. Spliceosomes are associated with

A. DNA

B. hn RNA

C. mRNA

D. tRNA

Answer: B



Watch Video Solution

12. Antisense technology is use of

- A. Complementary RNA for stopping expression of a gene
- B. RNA polymerase for synthesis of DNA
- C. Cell displaying foreign synthesis of DNA

D. Tissue culture for obtaining somaclonal variations

Answer: A



Watch Video Solution

13. Translation is synthesis of

A. DNA over DNA

B. RNA over DNA

C. DNA over RNA

D. Protein over RNA

Answer: D



Watch Video Solution

14. To initiate translation, the mRNA first binds to

A. Smaller ribosomal sub unit

B. Larger ribosomal sub unit

C. Whole ribosome

D. No such specificity exists

Answer: A



Watch Video Solution

15. Consider the following nucleic acids 1. DNA, 2. r-RNA, 3. t-RNA, 4. m-RNA choose the correct sequence of their arrangement according to their participation in protein synthesis

A. a, b, c, d

B. b, c, d, a

C. c, b, a, d.

D. a, d, b, c

Answer: D



Watch Video Solution

16. The ribosomal binding loop of tRNA is

A. DHU loop

B. anticodon loop

C. T Ψ , C loop

D. III loop

Answer: C



Watch Video Solution

17. Which one of the following is most specific region of tRNA?

A. Amino acid attachment site

B. Amino acid recognition site

C. Codon recognition site

D. Ribosome recognition site

Answer: C



Watch Video Solution

18. In a polyribosome complex, the ribosome present towards 5'end of mRNA has

A. longest polypeptide chain

B. smallest polypeptide chain

C. all ribosomes have polypeptide chains of equal size

D. a chain without .met .

Answer: B



Watch Video Solution

19. Which of the following statements are true of all t-RNAs?

1. The 5'end has guanine residue
2. They are single chains.

3. The anticodon loop is identical.

4. The 3'-end base sequence is CCA.

Select the correct answer using the codes given below:-

Codes:-

A. a, b and c

B. a, c and d

C. a, b and d

D. b, c and d

Answer: C



20. Consider the following processes

1. Synthesis of t-RNA
2. Attachment of an amino acid to ATP.
3. Acetylation of amino acid attached to t-RNA.
4. Charging of t-RNA

Which of the above is/are the functions of aminoacyl-t-RNA synthetase?

A. a,b and c

B. a and c

C. b and d

D. d only

Answer: C



Watch Video Solution

21. Which of the following is the smallest RNA

?

A. mRNA

B. tRNA

C. Chromosomal RNA

D. Ribosomal RNA

Answer: B



Watch Video Solution

22. The first translated codon in any mRNA binds to an anticodon is

A. 3. UAC 5.

B. 5. UAC 3.

C. 3. UAU 5.

D. 5. CAU 3.

Answer: A



Watch Video Solution

23. Which of the following is not true for an anticodon ?

A. It consists of three nucleotides

B. It is the basic unit of the genetic code

C. It extends from one end of a tRNA molecule

D. t may pair with more than one codon, especially if it has the base inosine in its third position

Answer: B



Watch Video Solution

24. During protein synthesis, amino acid gets attached to tRNA with the help of

A. ribosomes, sigma and rho factors

B. mRNA

C. aminoacyl tRNA synthetase

D. tRNA

Answer: C



Watch Video Solution

25. The ribozyme acts as a catalyst for the formation of

A. ester bond

B. hydrogen bond

C. peptide bond

D. phosphodiester bond

Answer: C



Watch Video Solution

26. tRNA recognises amino acyl RNA synthetase by

A. T Ψ C loop

B. DHU loop

C. Anticodon

D. AA site

Answer: B



Watch Video Solution

27. In DNA model of Watson & Crick, the major grooves are site of

- A. binding of histone proteins
- B. binding of acidic proteins
- C. binding of RNA molecules
- D. binding of glycoproteins

Answer: B



Watch Video Solution

28. DNA absorb λ_{\max}

A. 600 Å (260 nm)

B. 7600 Å (760 nm)

C. 3900 Å (390 nm)

D. 3000 Å (300 nm)

Answer: A



Watch Video Solution

29. In DNA and RNA, pentose sugar has furanose ring. It is

A. aldose type

B. ketose type

C. pyranose

D. nonreducing type

Answer: A



Watch Video Solution

30. Eukaryotic mRNAs are associated with proteins to form ribonucleoprotein complexes. Some of these may remain in cytoplasm for a long time before being genetically expressed. Such complexes are called

- A. polysomes
- B. ribonucleoprotein fibres
- C. pro-oncogenes
- D. informosomes

Answer: D





Watch Video Solution

31. DNA strands are termed antiparallel because of

A. H-bonds

B. phospho-diester bonds

C. disulphide (S-S bnds)

D. none of the above

Answer: B



Watch Video Solution

32. The base sequence for a nucleic acid segment is given as GAG AGG GGA CCA. From this it can be concluded that it is a segment of a

- A. DNA strand
- B. mRNA strand
- C. tRNA strand
- D. Data insufficient

Answer: D



Watch Video Solution

33. Which is correct sequence according to increasing molecular weight?

A. RNA-DNA-rRNA

B. RNA-rRNA-DNA

C. rRNA-DNA-RNA

D. DNAS-tRNA-rRNA

Answer: B



34. A piece of nucleic acid used to find the sequence of bases in a gene, by forming a hybrid with it, is called

A. retrogene

B. vector

C. carrier

D. DNA probe

Answer: D



Watch Video Solution

35. In .Z. DNA, pitch of each turn of helix is

A. 34 Å

B. 340 nm

C. 250 nm

D. 45 Å

Answer: D



Watch Video Solution

36. Diameter and pitch per turn of helix of 'A' model of DNA is

A. 26 Å & 25 Å

B. 20 Å & 34 Å

C. 18 Å & 46 Å

D. 19 Å & 20 Å

Answer: A



Watch Video Solution

37. The double helical molecular model of DNA was given by Watson and Crick. But DNA is double stranded. was suggested by

A. Hershey and Chase

B. Wilkins and Franklin

C. Griffith

D. Avery

Answer: B



Watch Video Solution

38. Proteins that help to open up DNA helix in front of the replication fork in prokaryotes are

A. topoisomerases

B. unwindases (helicases)

C. polymerase I

D. exonucleases and endonuclease

Answer: B



Watch Video Solution

39. Eukaryotes differ from prokaryotes in the mechanism of DNA replication due to

A. number of origins of replication

B. semi discontinuous rather than semi continuous replication

C. use of DNA primer rather than RNA primer

D. unidirectional rather than bidirectional replication

Answer: A



Watch Video Solution

40. Which of the following genetic units moves from one chromosome to another or from one replicon to another and causes genetic changes?

A. Muton

B. Replicon

C. Transposon

D. Cistron

Answer: C



Watch Video Solution

41. If 50 heavy DNA (N^{15}) molecules are replicated 2 times in N^{14} medium

A. 100 half heavy and half light and 100 light DNA molecules

B. 100 heavy and 100 light DNA molecules

C. 50 heavy and 150 light DNA molecules

D. none of the above

Answer: A



Watch Video Solution

42. Taylor experiment on *Vicia faba* (faba bean) root tips using autoradiography demonstrates that

A. DNA replication is continuous

B. DNA replicates in discontinuous manner

C. Chromosomes show semiconservative replication of DNA

D. DNA replicates in conservative manner

Answer: C



Watch Video Solution

43. Which one of the following ratios is variable but constant for a species ?

A. $\frac{[A + T]}{[G + C]}$

B. $\frac{[A + G]}{[T + C]}$

C. $\frac{[A + U]}{[G + C]}$

D. none of these

Answer: A



Watch Video Solution

44. All the body cells are of same origin and therefore, have same genes, yet they differ in

structure and function because they
synthesize different

A. histones

B. ribosomes

C. mRNA molecule

D. tRNA molecules

Answer: C



Watch Video Solution

45. The wrong base if added, is removed and proper base is usually added during DNA replication by

- A. DNA polymerase I
- B. Ligase
- C. DNA polymerase II
- D. RNA primer

Answer: A



Watch Video Solution

46. RNA polymerase, discovered by Ochoa (1953) is a holoenzyme and has how many poly-peptide chains ?

A. 5

B. 2

C. 1

D. 4

Answer: A



Watch Video Solution

47. The number of start codons and stop codons in a genetic code are

A. $2 + 3 = 5$

B. $1 + 3 = 4$

C. $1 + 1 = 2$

D. 3

Answer: A



Watch Video Solution

48. If a triplet on template DNA is AAA, what will be the anticodon on tRNA

A. UUU

B. AAA

C. TTT

D. AUG

Answer: B



Watch Video Solution

49. Who suggested that diseases are caused by inborn errors of metabolism?

A. Beadle & Tatum

B. Rosa Franklin

C. Hershey & Chase

D. Archibald Garrod

Answer: D



Watch Video Solution

50. An auxotroph is

A. organism capable of growing on minimal
medium

B. capable of manufacturing all complex
food materials

C. primitive autotrophic organisms

D. nutritional mutant

Answer: D



Watch Video Solution

51. Which one of the following is not uniform in all DNA molecules?

A. The arrangement of sugar-phosphate groups

B. The pattern of the helix structure

C. The pairing of adenine with thymine and cytosine with guanine

D. The sequence of nitrogenous bases on a strand of DNA

Answer: D



Watch Video Solution

52. In many cells ribosomes occur in chains along messenger RNA. What is the advantage of this arrangement as compared to a situation in which ribosomes occur singly?

A. A greater variety of polypeptides can be produced

B. Polypeptides can be produced more rapidly

C. Fewer RNA molecules are used in protein synthesis

D. The probability of gene mutation occurring is less

Answer: B



Watch Video Solution

53. Which of the following statements is wrong?

A. Basic composition of DNA varies from one species to another

B. The DNA extracted from closely related species have similar base composition

C. DNA specimens isolated from different animals of the same species have the similar base composition

D. The base composition of DNA in a given species does not change with age of nutritional state

Answer: A



Watch Video Solution

54. Value (constant value) of Dna refers to

A. total amount of DNA per somatic cell

B. total amount of DNA/base pairs per genome

C. amount of DNA in autosomes

D. amount of DNA which is heritable and present in autosomes

Answer: B



Watch Video Solution

55. In tryptophan operon, the tryptophan acts as

- A. corepressor
- B. promoter
- C. apo-repressor
- D. operator

Answer: A



Watch Video Solution

56. Aporepressor is inactive repressor in Tryptophan repressible operon system. It is

- A. always protein
- B. may be protein or a nucleic acid
- C. a metabolite
- D. a substrate

Answer: A



Watch Video Solution

57. Pribnow box is involved in

A. Protein synthesis

B. DNA synthesis

C. RNA synthesis

D. DNA replication

Answer: C



Watch Video Solution

58. Transition mutation is due to replacement of

A. GC by TA

B. AT by CG

C. CG by GC

D. AT by GC

Answer: D



Watch Video Solution

59. Which step of translation does not consume high energy PO_4 bond ?

A. Translocation

B. tRNA activation

C. Amino acid activation

D. Peptidyl transferase reaction

Answer: D



Watch Video Solution

60. Repetitive DNA occurs in

A. satellite DNA

B. transposons

C. heteromeric region of Y chromosome

D. all of the above

Answer: D



Watch Video Solution

61. C-value paradox refers to the presence of

A. Less number of RNA polymerase than needed for RNA synthesis

B. Larger number of ribosomes than needed for polypeptide synthesis

C. Less number of t-RNA than needed for polypeptide formation

D. More DNA than needed for coding

Answer: D



Watch Video Solution

62. In lac operon, a helper protein that binds to the promotor and facilitates attachment of RNA polymerase and accelerates the rate of transcription. This protein is called

- A. Catabolite activator protein
- B. Inactive repressor protein
- C. Essential metabolic protein
- D. Amino acid activating enzyme

Answer: A



Watch Video Solution

63. Which antibiotic inhibits interaction between t RNA and m RNA during bacterial synthesis

A. Erythromycin

B. Neomycin

C. Sireptomycin

D. Tetracycline

Answer: B



Watch Video Solution

64. Consider the following statements

- a) A component of the nucleotide sequence that makes up the prokaryotic promoter is CAAT box
- b) A component of the nucleotide sequence that makes up the eukaryotic promoter is TATA box.

Which of the statements given above is/are correct?

A. a only

B. b only

C. Both a and b

D. Neither a nor b

Answer: B



Watch Video Solution

65. How many high-energy phosphate bond equivalents are utilized in the process of activation of amino acids for protein synthesis?

A. Four

B. Two

C. Ten

D. Three

Answer: B



Watch Video Solution

66. Which histone is absent in a nucleosome?

A. H_1

B. H_2

C. H_3A

D. H_4

Answer: A



Watch Video Solution

67. In E.coli, which of the following codons are recognized by the release factor RF_1 ?

A. UAG and UGA

B. UAA and UGG

C. UAG and UAA

D. UAG and UUA

Answer: C



Watch Video Solution

68. During DNA synthesis, both strands require an RNA primer to start elongation because it is an

A. RNA polymerase that synthesizes short stretches of RNA

B. RNA ATPase that synthesizes short stretches of complementary DNA

C. DNA polymerase that synthesizes short stretches of DNA

D. DNA ATPase that synthesizes short stretches of complementary RNA

Answer: A



Watch Video Solution

69. Many antibiotics inhibit prokaryotic translation without disrupting protein synthesis of the host cell. These antibiotics work via all of the following mechanisms EXCEPT

A. Antibiotics bind to the ribosomal 50S subunit to prevent translation

B. Antibiotics bind to the ribosomal 40S subunit to prevent translation

C. Antibiotics bind 70S ribosomes at similar sites and with similar efficacies

D. Antibiotics bind free ribosomes in the cytoplasm

Answer: B



Watch Video Solution

70. Which of the following is an example of a transversion?

A. Cytosine - guanine

B. Thymine - uracil

C. Adenine - guanine

D. Cytosine - thymine

Answer: A



Watch Video Solution

71. One gene-one enzyme relationship was established for the first time in

A. *Salmonella typhimurium*

B. *Escherichia coli*

C. *Diplococcus pneumoniae*

D. *Neurospora crassa*

Answer: D



Watch Video Solution

72. Gene regulation governing lactose operon of E.coli that involves the lac I gene product is

A. negative and inducible because repressor protein prevents transcription

B. negative and repressible because repressor protein prevents transcription

C. feedback inhibition because excess of β -galactosidase can switch off transcription

D. positive and inducible because it can be induced by lactose

Answer: A



Watch Video Solution

73. In tryptophan synthesis pathway, tryptophan acts as a corepressor. What is its role as a corepressor?

- A. It prevents transcription of the genes of the operon
- B. It binds to the promoter that blocks the attachment of RNA polymerase
- C. It binds to the tryptophan repressor to change it into its active form
- D. It binds to the operator gene at an allosteric site to switch off the operon

Answer: C



Watch Video Solution

74. The net electric charge on DNA and histones is

- A. both positive
- B. both negative
- C. negative and positive, respectively
- D. zero

Answer: C



Watch Video Solution

75. Wobble position means

- A. base pairing
- B. altered base on code
- C. third altered base on code
- D. none of the above

Answer: C



Watch Video Solution

76. Teminism is

A. a reverse central dogma

B. a central dogma of molecular biology

C. a circular flow of hereditary material

D. an effect of cytoplasm on functioning of

DNA

Answer: A



Watch Video Solution

77. The smallest unit of genetic material which upon mutation produce a phenotypic effect is

:-

A. recon

B. muton

C. nucleic acid

D. cistron

Answer: B



Watch Video Solution

78. Translocation involves

A. the movement of the tRNA from the A-site to the P-site due to movement of ribosome.

B. the movement of the mRNA strand one triplet length in the A-site

C. the release of the unattached tRNA from the E-site

D. All of the above

Answer: A



Watch Video Solution

79. Which of the following is not involved in the formation of a eukaryotic transcription initiation complex?

A. Transcription factors

B. snRNA

C. RNA polymerase-II

D. Promoter

Answer: B



Watch Video Solution

80. A prokaryote gene of 600 nucleotides long can code for a polypeptide chain of about, how many amino acids ?

A. 100

B. 200

C. 300

D. 600

Answer: B



Watch Video Solution

81. All of the following are transcribed from DNA except

A. exons

B. introns

C. rRNA

D. DNA

Answer: D



Watch Video Solution

82. Inducible enzymes are

A. usually involved in anabolic pathways

B. produced when a small molecule
(inducer) inactivates the repressor
protein

C. Produced when an activator molecule enhances the attachment of RNA polymerase with the operator

D. regulated by inherently inactive repressor molecules

Answer: B



Watch Video Solution

83. In *E. coli*, tryptophan switches off the *trp* operon by

A. inactivating the repressor protein

B. inactivating the gene for the first enzyme in the pathway by feedback inhibition

C. binding to the repressor and increasing the latter's affinity for the operator

D. binding to the operator

Answer: C



Watch Video Solution

84. The control of gene expression is more complex in eukaryotic cells because the

A. gene expression differentiates

specialized cells

B. the chromosomes are linear and more

numerous

C. operons are controlled by more than one promoter region

D. inhibitory or activating molecules may not help to regulate transcription

Answer: A



Watch Video Solution

85. What are proteasomes?

A. 1) Complexes of snRNA and proteins that excise introns

B. 2) Small, positively charged proteins that form the core of nucleosomes

C. 3) Enormous protein complexes that degrade unneeded proteins in the cell

D. 4) Complexes of transcription factors whose protein-protein interactions are required for enhancing gene transcription

Answer: B



Watch Video Solution

86. One gene-one polypeptide hypothesis was proposed by

- A. Linus Pauling
- B. V Ingram
- C. Beadle and Tatum
- D. Brenner

Answer: B



Watch Video Solution

87. A single anticodon can recognize more than one codon of m-RNA. This phenomenon is termed as

- A. Richmond and Lang effect
- B. gene flow hypothesis
- C. wobble hypothesis
- D. template hypothesis

Answer: C



Watch Video Solution

88. What becomes established from the wobble hypothesis?

A. Process of peptide chain elongation

B. Economy of the number of tRNA molecules

C. Process of peptide chain initiation

D. Process of peptide chain termination

Answer: B



Watch Video Solution

89. In a codon, wobbling is generally restricted to

- A. first N base
- B. third N base
- C. second N base

D. any base

Answer: C



Watch Video Solution

90. The contribution of cytoplasmic DNA in cell's total DNA is

A. 65 %

B. 1 – 5 %

C. 10 – 12 %

D. 0 – 0.5 %

Answer: B



Watch Video Solution

91. An antibiotic, which inhibits translation in eukaryotes is

A. chloromycetin

B. penicillin

C. puromycin

D. tetracycline

Answer: C



Watch Video Solution

92. Genes, which are inactive for long periods, have the tendency to be bound to

A. each other

B. methyl groups

C. actin and myosin

D. nucleolus

Answer: B



Watch Video Solution

93. Non-constitutive genes express themselves only when needed, are also called as

A. structural gene

B. promoter gene

C. house-keeping genes

D. luxury genes

Answer: D



Watch Video Solution

94. Cistron was called as functional gene in 1955 by

A. Bateson

B. Waldeyer

C. Benzer

D. Bailing

Answer: C



Watch Video Solution

95. When gene resemble functional genes, but donot produce functional substance are called

A. jumping gene

B. overlapping gene

C. pseudogene

D. non-functional gene

Answer: C



Watch Video Solution

96. In trp operon, the corepressor is

A. 1)tryptophan

B. 2)lactose

C. 3) β -galactoside

D. 4)glucose

Answer: A



Watch Video Solution

97. In both inducible and repressible systems, the synthesis of protein is controlled by

- A. operator gene through regulator gene
- B. regulator gene through operator gene
- C. promoter gene through regulator gene

D. operator gene through regulator and promoter genes

Answer: A



Watch Video Solution

98. Transcription is most similar to

A. 1) chemiosmosis

B. 2) DNA replication

C. 3) facilitated transport

D. 4)translation

Answer: B



Watch Video Solution

99. The terms cistron, recon and muton were proposed by

A. 1)Bateson

B. 2)J Lederberg

C. 3)S Benzer

D. 4)TH Morgan

Answer: C



Watch Video Solution

100. The expression of genes is regulated by

- A. metabolic conditions
- B. physiological conditions
- C. environmental conditions
- D. all of the above

Answer: D



Watch Video Solution

101. Who were the first to elucidate a transcriptionally regulated system?

- A. Fracois Jacob and Jacque Monod
- B. Alfred Hershey and Martha Chase
- C. Oswald Avery and MacLeod
- D. Severo Ochoa and Nirenberg

Answer: A



Watch Video Solution

102. Regulation of lac operon by repressor is called

- A. positive regulation
- B. negative regulation
- C. feed back regulation
- D. none of these

Answer: B



Watch Video Solution

103. RNA acted upon by enzyme

- A. ribozyme
- B. ribonuclease
- C. peptidal transferase
- D. All of these

Answer: B



[Watch Video Solution](#)

104. Who discovered retroviruses?

- A. HM Temin
- B. D Baltimore
- C. Both 1 and 2
- D. Crick

Answer: C



[Watch Video Solution](#)

105. Codes on mRNAs for proteins are

A. zig-zag

B. coplaner

C. colinear

D. none of these

Answer: C



Watch Video Solution

106. Barbara Mc Clintock is famous for her work on (discovery of transposons)

A. rice

B. wheat

C. maize

D. sugarcane

Answer: C



Watch Video Solution

107. Gene and cistron words are sometimes used synonymously because

- A. one gene contains one cistron
- B. one gene contains many cistrons
- C. one gene contains no cistrons
- D. one cistron contains many genes

Answer: A



Watch Video Solution

108. State: The composition of Biogas.



Watch Video Solution

109. Among the following characters, which one was not considered by Mendel in his experiments on pea ?

A. DNA with histone proteins of human mitochondrion

B. Circular genome of human

mitochondrion

C. Protein coding genes of human genome

D. Double helical genome of human golgi

complex

Answer: B



Watch Video Solution

110. The genome of human mitochondrion is with

A. 16, 159 bp

B. 2 billion bp

C. 19, 129 bp

D. 3.2 million bp

Answer: A



Watch Video Solution

111. Pickout the correct statement from the following

A. Mitochondrial genome is large than that of nuclear genome.

B. Mitochondrial genome is 300,000 times larger that of nucleus.

C. Nuclear genome is smaller than that of mitochondrial genome.

D. Nuclear genome is nearly 200,000 times larger than that of mitochondrion.

Answer: D



Watch Video Solution

112. Structural genomics includes

- A. Genetic mapping
- B. Physical mapping
- C. Sequencing
- D. All the three

Answer: D



Watch Video Solution

113. This field of genomics deals with the comprehensive analysis of functions of genes and non-gene sequences is

- A. Structural genomics
- B. Functional genomics
- C. Comparative genomics
- D. All the three

Answer: B



Watch Video Solution

114. Sub field of genomics that deals with the comparison of entire genomes of different species is

- A. Functional genomics
- B. Structural genomics
- C. Comparative genomics
- D. Comparative bioinformatics

Answer: C



Watch Video Solution

115. The comparative genomics enhances the understanding of

A. functions of each genome and their evolutionary relationships

B. functions of only one genome

C. non-functional genes of both the genomes

D. functions of some genes of each genome and their structural relationships.

Answer: A



Watch Video Solution

116. The successful completion of all original goals of the human genome project was announced by

A. National Human Genome Research
Institute

B. Human Genome Organisation

C. International Consortium of Human
Genome Project

D. Department of energy and National
Institutes of Health

Answer: C



Watch Video Solution

117. The percentage of gene containing regions in human genome, covered by HGP is about

A. 80 %

B. 90 %

C. 99 %

D. 100 %

Answer: C



Watch Video Solution

118. Nearly 100 genes of this plant are similar to disease causing genes of humans

A. *Pisum sativum*

B. *Mirabilis jalapa*

C. *Antirrhinum majus*

D. *Arabidopsis thaliana*

Answer: D



Watch Video Solution

119. Pickout the mis-match

A. *Escherichia coli* - 4.64 M bp

B. *Saccharomyces cerevisiae* - 12,067,280bp

C. *Caenorhabditis elegans* - 100.3 M bp

D. *Drosophila melanogaster* - 120 M bp

Answer: D



Watch Video Solution

120. 99% of genes of this animal are direct counter parts of the humans

A. *Rana tigrina*

B. *Mus musculus*

C. *Struthio camelus*

D. *Drosophila melanogaster*

Answer: B



Watch Video Solution

121. Non pathogenic, bisexual nematode is

A. *Caenorhabditis elegans*

B. *Loa loa*

C. *Enterobius vermicularis*

D. *Ancylostoma duodenale*

Answer: A



Watch Video Solution

122. In human genome, the intergenic regions contain

A. Gene related sequences

B. Intragenic DNA

C. Extragenic DNA

D. 1 & 3 are correct

Answer: D



Watch Video Solution

123. The percentage of extragenic DNA in human genome is about

A. 20 %

B. 80 %

C. 70 %

D. 30 %

Answer: C



Watch Video Solution

124. Structural DNA that organizes the structure of chromosome, is located in

- A. Centromere
- B. Telomere
- C. Satellites
- D. All the three

Answer: D



Watch Video Solution

Exercise II Dna Finger Printing

1. Any inherited physical or molecular characteristic that differs among individuals and is easily detectable in the laboratory is called

- A. Mini-satellites
- B. RNA polymorphs
- C. Coding DNA
- D. Genetic marker

Answer: D



Watch Video Solution

2. Generally the genetic markers are

A. 1) Genes

B. 2) DNA polymorphs

C. 3) DNA segments that have no coding
function

D. 4) All the three

Answer: D



Watch Video Solution

3. Read the following statements about genetic markers and pickout the incorrect one

A. The genetic markers must be polymorphic, so that they are useful in mapping.

B. The genetic markers may be genes or DNA segments that have no known coding function

C. DNA polymorphs have variations in their DNA sequences.

D. DNA polymorphs differ in their nucleotide sequences or constant number of randomly repeated sequences.

Answer: D



[Watch Video Solution](#)

4. The examples of DNA polymorphisms are

A. SNPs

B. STRs

C. VNTRs

D. All the three

Answer: D



[Watch Video Solution](#)

5. Mini-satellites are generally rich in

A. A-T pairs

B. G-C pairs

C. A-G pairs

D. T-C pairs

Answer: B



Watch Video Solution

6. Identify the correct statement in relation to micro-satellite

A. It occur in more than 1000 locations in human genome

B. It is 2 to 6 bp in length

C. It occur in all locations of human genome

D. It is 10 to 60 bp in length

Answer: B



7. Satellite DNA consists of

- A. large arrays of tandemly repeating non coding DNA
- B. small arrays of coding DNA
- C. moderate arrays of coding DNA
- D. large arrays of non-repeating, non-coding DNA

Answer: A



Watch Video Solution

8. Satellite DNA is the main component of

- A. telomeres
- B. centromeres
- C. long arms
- D. short arms

Answer: B



Watch Video Solution

9. Read the following statements about satellite DNA and pick out the correct one

A. 1) It is not found in centromeres

B. 2) It consists of non repetitive coding
DNA

C. 3) It is a structural constituent of hetero-
chromatin

D.4) It occurs in all locations of human genome

Answer: D



Watch Video Solution

10. Match of the following

A) Replication

1) Formation of RNA from DNA

B) Transcription

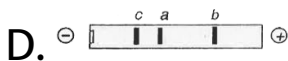
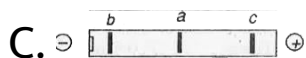
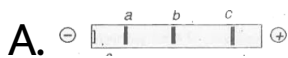
2) Synthesis of copy of DNA

C) Translation

3) Single strand of DNA

D) Template

4) Synthesis of proteins by RNA



Answer: C



Watch Video Solution

Exercise Iii Previous Aipmt Neet Questions

1. Which of the following is required as inducer(s) for the expression of lac operon?

A. Lactose and galactose

B. Glucose

C. Galactose

D. Lactose

Answer: D



Watch Video Solution

2. The two polypeptides of human insulin are linked together by:-

- A. Disulphide bridges
- B. Hydrogen bonds
- C. Phosphodiester bond
- D. Covalent bond

Answer: A



Watch Video Solution

3. Which one of the following is the starter codon?

A. UAG

B. AUG

C. UGA

D. UAA

Answer: B



Watch Video Solution

4. Which of the following is not required for any of the techniques of DNA fingerprinting available at present

A. DNA - DNA hybridization

B. Polymerase chain reaction

C. Zinc finger analysis

D. Restriction enzymes

Answer: C



Watch Video Solution

5. Which one of the following is not applicable to RNA

A. Chargaff's rule

B. Complementary base pairing

C. 5. phosphoryl and 3. hydroxyl ends

D. Heterocyclic nitrogenous bases

Answer: A



Watch Video Solution

6. Balbiani rings are sites of

A. RNA synthesis

B. Lipid synthesis

C. Nucleotide synthesis

D. Polysaccharide synthesis

Answer: A



Watch Video Solution

7. Satellite DNA is important because it

A. Codes for enzymes needed for DNA replication

B. Codes for proteins needed in cell cycle

C. Show high degree of polymorphism in population and also the same degree of polymorphism in an individual, which is heritable from parents to children

D. Does not code for proteins and is same
in all members of the population

Answer: C



Watch Video Solution

8. In sea urchin DNA, which is double stranded, 17% of the bases were shown to be cytosine. The percentages of the other three bases expected to be present in this DNA are

A. G 17%, A 16.5%, T 32.5%

B. G 17%, A 33%, T 33%

C. G 8.5%, A 50%, T 24.5%

D. G 34%, A 24.5%, T 24.5%

Answer: B



Watch Video Solution

9. DNA is not present in

A. 1) Ribosomes

B. 2)Nucleus

C. 3)Mitochondria

D. 4)Chloroplast

Answer: A



Watch Video Solution

10. Identify the correct order of organisation of genetic material from largest to smallest:

A. Chromosome, genome, nucleotide, gene

B. Chromosome, gene, genome, nucleotide

C. Genome, chromosome, nucleotide, gene

D. Genome, chromosome, gene, nucleotide

Answer: D



Watch Video Solution

11. Commonly used vectors for human genome sequencing are

A. T/A Cloning Vectors

B. T - DNA

C. BAC and VAC

D. Expression Vectors

Answer: C



Watch Video Solution

12. What is it that forms the basis of DNA fingerprinting ?

- A. The relative amount of DNA in the ridges and grooves of the fingerprints
- B. Satellite DNA occurring as highly repeated short DNA segments
- C. The relative proportions of purines and pyrimidines in DNA
- D. The relative difference in the DNA occurrence in blood, skin and saliva

Answer: B



Watch Video Solution

13. Which one of the following is wrongly matched?

A. Operon - Structural genes, operator and promoter

B. Transcription - Writing information from DNA to t-RNA

C. Translation - Using information in m-RNA to make protein

D. Repressor protein - Binds to operator to stop enzyme synthesis.

Answer: B



Watch Video Solution

14. The diagram shows an important concept in the genetic implication of DNA. Fill in the blanks A to C.

$DNA \xrightarrow{A} mRNA \xrightarrow{B} Protein \xrightarrow{\text{Proposed by } C}$

A. A-transcription B-translation C-Francis

Crick

B. A-translation B-extension C-Rosalind

Franklin

C. A-transcription B-replication C-James

Watson

D. A-translation B-transcription C-Erevin

Chargaff

Answer: A



Watch Video Solution

15. Which enzyme/s will be produced in a cell in which there is a nonsense mutation in the lac Y gene?

A. Transacetylase

B. Lactose permease and transacetylase

C. β -galactosidase

D. Lactose permease

Answer: C



Watch Video Solution

16. If one strand of DNA has the nitrogenous base sequence as ATCTG, what would be the complementary RNA strand sequence?

A. UAGAC

B. AACTG

C. ATCGU

D. TTAGU

Answer: A



Watch Video Solution

17. Removal of RNA polymerase III from nucleoplasm will affect the synthesis of

A. hn RNA

B. m RNA

C. r RNA

D. t RNA

Answer: D



Watch Video Solution

18. Which one of the following is not a part of a transcription unit of DNA?

- A. A terminator
- B. A promoter
- C. The structural gene
- D. The inducer

Answer: D



Watch Video Solution

19. Removal of introns and joining the exons in a defined order in a transcription unit is called:

A. inducing

B. slicing

C. splicing

D. looping

Answer: C



Watch Video Solution

20. Satellite DNA is useful tool in ;

A. Organ transplantation

B. Sex determination

C. Forensic science

D. Genetic engineering

Answer: C



Watch Video Solution

21. Which one of the following palindromic base sequences in DNA can be easily cut at about the middle by some particular restriction enzyme?

A. 5. _____ CGTTCG _____ 3.

3. _____ ATGGTA _____ 5.

B. 5. _____ GATATG _____ 3.

3. _____ CTAATA _____ 5.

C. 5. _____ GAATTC _____ 3.

3. _____ CTT AAG _____ 5.

D. 5. _____CACGTA_____ 3.

3. ___CTCAGT___ 5.

Answer: C



Watch Video Solution

22. Which one of the following has its own DNA ?

A. Mitochondria

B. Dictyosome

C. Lysosome

D. Peroxisome

Answer: A



Watch Video Solution

23. Satellite DNA is useful tool in ;

A. Genetic engineering

B. Organ transplantation

C. Sex determination

D. Forensic science

Answer: D



Watch Video Solution

24. What is not true for genetic code?

- A. A codon in mRNA is read in a non contiguous fashion
- B. It is nearly universal
- C. It is degenerate

D. It is unambiguous

Answer: A



Watch Video Solution

25. Whose experiments cracked the DNA and discovered unequivocally that a genetic code is a "triplet"?

A. Hershey and Chase

B. Morgan and Sturtevant

C. Beadle and Tatum

D. Nirenberg and Mathaei

Answer: A



Watch Video Solution

26. There is no DNA in

A. Mature RBCs

B. A mature spermatozoan

C. Hair root

D. An enucleated ovum

Answer: A



Watch Video Solution

27. Sickle cell anemia is

A. Caused by substitution of valine by glutamic acid in the beta globin chain of haemoglobin

B. Caused by a change in a single base pair
of DNA

C. Characterized by elongated sickle like
RBCs with a nucleus

D. An autosomal linked dominant trait

Answer: B



Watch Video Solution

28. The genetic defect-Adenosine Deaminase deficiency may be cured permanently by

A. Administering adenosine deaminase activators

B. Introducing bone marrow cells producing ADA into cells at early embryonic stages

C. Enzyme replacement therapy

D. Periodic infusion of genetically engineered lymphocytes having functional ADA cDNA

Answer: B



Watch Video Solution

29. What is not true for genetic code?

A. It is unambiguous

B. A codon in mRNA is read in a non contiguous fashion

C. It is nearly universal

D. It is degenerate

Answer: B



Watch Video Solution

30. In the DNA molecule

A. There are two strands which run antiparallel one in 5. → 3. direction and other in 3. → 5.

B. The total amount of purine nucleotides and pyrimidine nucleotides is not always equal

C. There are two strands which run parallel in the 5. → 3. direction

D. The proportion of adenine in relation to thymine varies with the organism

Answer: A



Watch Video Solution

31. Name: 3 types of biofertilisers with example.



Watch Video Solution

32. Differentiation of organs and tissues in a developing organism, is associated with

A. Developmental mutation

B. differential expression of genes

C. lethal mutations

D. deletion of genes

Answer: B



Watch Video Solution

33. During transcription, RNA polymerase holoenzyme binds to a gene promoter and

assumes a saddle-like structure. What is its DNA-binding sequence?

A. AATT

B. CACC

C. TATA

D. TTAA

Answer: C



Watch Video Solution

34. The length of DNA molecule greatly exceeds the dimensions of the nucleus in eukaryotic cell. How is this DNA accommodated

- A. Super-coiling in nucleosomes
- B. DNase digestion
- C. Through elimination of repetitive DNA
- D. Deletion non-essential genes

Answer: A



Watch Video Solution

35. The Okazaki fragments in DNA chain growth

A. Polymerize in the 3. to 5. direction and forms replication fork

B. Prove semiconservative nature of DNA replication

C. Polymerize in the 5. to -3. direction nad explain 3. to -5. DNA replication

D. Result one of transcription

Answer: C



Watch Video Solution

Exercise Iii Previous Aipmt Neet Questions Afmc

1. Removal of introns and joining the exons in a defined order in a transcription unit is called:

A. splicing

B. tailing

C. transformation

D. capping

Answer: A



Watch Video Solution

2. The functional unit of DNA molecule that codes for a particular gene product is

A. Cistron

B. Exon

C. Intron

D. Gene

Answer: A



Watch Video Solution

3. What is not true for genetic code?

- A. A codon in mRNA is read in a non contiguous fashion
- B. It is nearly universal
- C. It is degenerate
- D. It is unambiguous

Answer: A



Watch Video Solution

4. Sickle cell anaemia is :

- A. an autosomal linked dominant trait
- B. caused by substitution of valine by glutamic acid in the β -globin chain of haemoglobin
- C. caused by a change in base pair of DNA
- D. characterized by elongated sickle like RBCs with a nucleus

Answer: A



Watch Video Solution

5. A nutritionally wild type organisms, which does not required any additional growth supplement is known as

A. Phenotype

B. Holotype

C. Auxograph

D. Prototroph

Answer: D



Watch Video Solution

