BIOLOGY

BOOKS - SURA BIOLOGY (TAMIL ENGLISH)

CHROMOSOMAL BASIS OF INHERITANCE

Evaluation

1. An allohexaploidy contains

A. Six different genomes

B. Six copies of three different genomes

C. Two copies of three different genomes

D. Six copies of one genome

Answer: C

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2. The A and B genes are 10 cM apart on a chromosome. If an AB/ab heterozygote is test crossed to ab/ab, how many of each progeny

class would you expect out of 100 total progeny?

A. 25 AB, 25 ab, 25 Ab, 25 aB

B. 10 AB, 10 ab

C. 45 AB, 45 ab

D. 45 AB, 45 ab, 5 Ab, 5aB

Answer: C

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3. Which of the following sentences are correct?

1. The offspring exhibit only parental combinations due to incomplete linkage.

2. The linked genes exhibit some crossing over in complete linkage.

3. The separation of two linked genes are possible in incomplete linkage.

4. Crossing over is absent in complete linkage.

A. 1 and 2

B. 2 and 3

C. 3 and 4

D. 1 and 4

Answer: C

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4. Accurate mapping of genes can be done by three point test cross because increases

A. Possibility of single cross over

B. Possibility of double cross over

C. Possibility of multiple cross over

D. Possibility of recombination frequency

Answer: B

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5. Due to incomplete linkage in maize, the ratio of parental and recombinants are

A. $50:50$

B. $7:1:1:7$

C. $96.4 : 3.6$

D. $1 : 7 : 7 : 1$

Answer: B

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6. Genes G S L H are located on same chromosome. The recombination percentage is between Land G is 15%, Sand Lis 50%, H and S are 20%. The correct order of genes is

A. GHSL

B. SHGL

C. SGHL

D. HSLG

Answer: C

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7. The point mutation sequence for transition, transition, transversion and transversion in DNA are

A. A to T, T to A, C to G and G to C

B. A to G, C to T, C to G and T to A

C. C to G, A to G, T to A and G to A

D. G to C, A to T, T to A and C to G

Answer: B

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8. If haploid number in a cell is 18. The double monosomic and trisomic number will be

A. 34 and 37

B. 34 and 35

C. 37 and 35

D. 17 and 19

Answer: A

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9. Changing the codon AGC to AGA represents

A. missense mutation

B. nonsense mutation

C. frameshift mutation

D. deletion mutation

Answer: A

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10. Asserlion (A) : Gamma rays are generally use to induce mutation in wheat varieties.

Reason (R) : Because they carry lower energy to non-ionize electrons from atom

A. A is correct. R is correct explanation of A

B. A and R are correct. R is not correct explanation of A

C. A is correct. R is wrong explanation of A

D. A and R are wrong

Answer: C

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11. How many map units separate two alleles A and B if the recombination frequency is 0.09?

A. 900 cM

B. 90 cM

C. 9 cM

D. 0.9 cM

Answer: C

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12. When two different genes came from same parent they tend to remain together.

What is the name of this phenomenon?

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13. When two different genes came from same parent they tend to remain together.

Draw the cross with suitable example.

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14. When two different genes came from same parent they tend to remain together.

Write the observed phenotypic ratio.

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15. If you cross dominant genotype PV /PV male Drosophila with double recessive female and obtain F_1 hybrid. Now you cross F_1 male with double recessive female.

Draw the cross with correct genotype.

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16. If you cross dominant genotype PV /PV male Drosophila with double recessive female and obtain F_1 hybrid. Now you cross F_1 male with double recessive female.

Draw the cross with correct genotype.

Watch Video Solution

17. If you cross dominant genotype PV /PV male Drosophila with double recessive female

and obtain F_1 hybrid. Now you cross F_1 male with double recessive female.

Draw the cross with correct genotype.

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18. 

What is the name of this test cross?

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19. 

How will you construct gene mapping from the above given data?

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20. What is the difference between missense and nonsense mutation?

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21. 

From the above figure identify the type of mutation and explain it.

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22. Write the salient features of Sutton and Boveri concept.

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23. Explain the mechanism of crossing over.

Watch Video Solution

24. Write the steps involved in molecular mechanism of DNA recombination.

Watch Video Solution

25. How is Nicotiana exhibit self-incompatibility? Explain its mechanism.

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26. How sex is determined in monoeciou plants ? Write their genes involved in it.

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27. What is gene mapping? Write its uses.

Watch Video Solution

28. Draw the diagram of different types of aneuploidy.

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29. _____ is the first man made cereal.

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Botany Long Version Questions Long Version Evaluation

1. Which one of the following pairs of codons is correctly matched with their function or the signal for the particular amino acid?

A. UUA, UCA - Leucine

B. GUU, GCU - Alanine

C. UAG, UGA- Stop

D. AUG, ACG - Start/ Methionine

Answer: C

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2. Removal of introns and joining of exons in a defined order during transcription is called

A. Splicing

B. Looping

C. Inducing

D. Slicing

Answer: A

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

A. ATCGU

B. TTAGU

C. UAGAC

D. AACTG

Answer: A

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4. Removal of RNA polymerase III nucleoplasm will affect the synthesis of

A. rRNA

B. tRNA

C. hnRNA

D. mRNA

Answer: B

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5. DNA dependent RNA polymerase catalyzes transcription on one strand of the DNA which is called the

A. Alpha strand

B. Anti strand

C. Template strand

D. Coding strand

Answer: C

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6. Which of the following correctly represents the flow of genetic information?

A. DNA $\rightarrow$ RNA $\rightarrow$ Protein

B. RNA $\rightarrow$ DNA $\rightarrow$ Protein

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

D. Protein $\rightarrow$ RNA $\rightarrow$ DNA

Answer: A

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7. Initiation codon is

A. UUU

B. UGA

C. AUG

D. UAG

Answer: C

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8. A eukaryotic gene contains two kinds of base sequences which of these plays an important role in protein synthesis?

A. Introns

B. Exons

C. Both a and b

D. None of the above

Answer: B

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9. Codon - anticodon interactions occur by

A. Covalent bond

B. Electrostatic interactions

C. Hydrogen bonds

D. Hydrophobic interaction

Answer: C

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10. Which of the following RNA polymerases is responsible for the transcription of protein coding genes in eukaryotes?

A. RNA Pol I

B. RNA Poly II

C. RNA Pol III

D. RNA Pol IV

Answer: B

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11. How are RNA molecules transported out of the nucleus

A. Passive diffusion through the membrane

B. Through membrane pores in an energy independent process

C. Through membrane pores in an energy dependent process

D. Through a channel in the membrane that leads to the endoplastic

reticulation

Answer: C

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12. During translation the codon in mRNA is actually "read" by

A. The A site in the ribosomes

B. The P site in the ribosomes

C. The anticodon in at RNA

D. The anticodon is an amino acid

Answer: C

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13. A complex of ribosome attached to a single strand of RNA is known as

A. Polysome

B. Polymer

C. Polypeptide

D. Okazaki fragment

Answer: A

14. Which of the following is the start codon

A. AUG

B. UGA

C. UAA

D. UAG

Answer: A

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15. What is true about tRNA?

A. It binds with an amino acid at its 3' end.

B. It has 5 double stranded regions.

C. It has a codon at one end which recognizes the anticodon of mRNA.

D. It looks like clover leaf in the 2D structure.

Answer: D

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16. Which one of the following hydrolysis internal phosphodiester bonds in a polynucleotide chain?

A. Lipase

B. Exonuclease

C. Endonuclease

D. Protease

Answer: B

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17. DNA element with ability to change position is called

A. Cistron

B. Transposon

C. Intron

D. Recon

Answer: B

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18. Spliceosomes are not found in cells of

A. Plants

B. Fungi

C. Animals

D. Bacteria

Answer: D

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19. During DNA replication Okazaki fragments are used to elongate

A. The leading strand towards replication fork

B. The lagging strand towards replication fork

C. The leading strand away from replication fork

D. The lagging strand away from replication fork

Answer: D

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20. What is DNA repair.

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21. What is replication fork?

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22. Write about the energetics of DNA replication.

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23. What is TATA box?

Watch Video Solution

24. What is alternative splicing?

Watch Video Solution

25. What is coding strand?

Watch Video Solution

26. What are the enzymes involved in DNA replication in eukaryotes?

Watch Video Solution

27. Differentiate coding and non coding strand.

Watch Video Solution

28. What are splicesomes?

Watch Video Solution

29. What is meant by capping and tailing?

Watch Video Solution

30. What is RNA editing?

Watch Video Solution

31. Explain the process of DNA replication in eukaryotes.

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32. With reference to the given diagram correctly match the following pairs.

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33. What attributes make Arabidopsis a suitable model plant for molecular genetic research?

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34. Describe the molecular mechanism of RNA modification.

Watch Video Solution

35. Explain ribosomal translocation in protein synthesis.

Watch Video Solution

36. Describe transposons.

Watch Video Solution

37. Describe RNA editing in plants.

Watch Video Solution

Additional Questions And Answers Choose The Correct Answer

1. _____ was the first to suggest occurrence of distinct pairs of chromosomes.

A. Sutton

B. Boveri

C. Montgomery

D. Morgan

Answer: C

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2. The number of chromosomes is a diploid cell of Drosophila is _____

A. 6

B. 8

C. 10

D. 12

Answer: B

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3. Number of chromosomes (2n) in Ophioglossum is.....

A. 8

B. 34

C. 1262

D. 48

Answer: C

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4. ___ discovered that crossing over is completely absent in some species of male drosophila.

A. Morgan

B. Bridges

C. Bateson

D. Reginald

Answer: B

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5. Incomplete linkage was reported in _____

A. Drosophila

B. Neurospora

C. Maize

D. Paddy

Answer: C

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6. The term crossing over was coined by

A. Flemming

B. Morgan

C. Reginald

D. De Vries

Answer: B

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7. The number of chromosomes in a diploid cell of papaya is

A. 26

B. 18

C. 40

D. 38

Answer: B

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8. Chemical mutagenesis was first reported by

A. H.J. Muller

B. C. Auerbach

C. Stadler

D. Morgan

Answer: B

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9. Trisomy was first reported by

A. Morgan

B. Blackeslee

C. Stadler

D. De Vries

Answer: B

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10. Cynodon Dactylon (doob grass) is a natural

_____

A. Allopolyploid

B. Autotetraploid

C. Autotriploid

D. Hexaploid

Answer: C

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11. Sharbati sonora is a mutant got by using_____

A. Nitrous acid

B. X-ray

C. gamma ray

D. MMS

Answer: C

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12. Castor Aruna is a mutant variety of castor developed for _____

A. Pest resistance

B. high yield

C. Disease resistance

D. early maturity

Answer: D

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13. The enzyme _____ breaks the covalent bonds in DNA and removes positive supercoiling during replication.

A. Ligase

B. Topoisomerase

C. Polymerase

D. Resriction endonuclease

Answer: B

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14. _____ is required for transcription

A. TATA box

B. DNA Polymerase

C. Okazaki fragments

D. All the above

Answer: A

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15. AUG code is for .....

A. Cysteine

B. Methionine

C. Valine

D. Leucine

Answer: B

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16. Jumping genes was reported in_____

A. Neurospora

B. Drosophila

C. Polymerase

D. Maize

Answer: D

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17. _____ has been used in space research.

A. Maize

B. Arabidopsis

C. Drosophila

D. Pea

Answer: B

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18. A mutation which reduces normal function is called ____ mutation

A. null

B. ectopic

C. Hypermorphic

D. Hypomorphic

Answer: D

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19. _____ is not a mutation involving nucleotide substitution.

A. Insertion

B. Missense

C. Transition

D. Deletion

Answer: D

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20. Roux postulated that ___ of a cell are responsible for transferring heredity.

A. chromosomes

B. allele

C. chromophore

D. gamete

Answer: A

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21. The number of linkage groups in maize is ____

A. 15

B. 20

C. 25

D. 10

Answer: D

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22. Crossing over occurs during ____ stage of meiosis.

A. pachytene

B. tetrad

C. metaphase-1

D. metaphase-II

Answer: A

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23. One map unit in a genetic map is calle _____

A. centimorgan

B. centi meter

C. millimeter

D. meter

Answer: A

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24. Self sterility caused by multiple alleles has been reported in _____

A. pea

B. drosophila

C. maize

D. nicotiana

Answer: D

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25. A plant in which environment plays a role in sexual determination is

A. pea

B. maize

C. equisetum

D. sphaerocarpos

Answer: C

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26. Sex determination in papaya is controlled by _____ alleles.

A. two

B. three

C. four

D. five

Answer: B

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27. Most of the mutations seen in sex determination of maize are due to defects in _____ synthesis.

A. gibberellins

B. protein

C. anthocyanin

D. polypeptide

Answer: A

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Additional Questions And Answers Identify The Correct Statements

1. Identify the incorrect statements from the below

(I) Incomplete linkage 1:1:1:1 ratio is not obtained in test cross.

(II) Synaptonemal complex prevents crossing over in Drosophila.

(III) Crossing over is the reason for incomplete linkage.

(IV) The horizontal cut will not create recombinants according to Robin Holliday.

A. I, II and IV

B. I and IV

C. III and IV

D. I, III and IV

Answer: D

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2. Identify the correct statement(s) forn the below

(I) In papaya sex chromosomes look like autosomes.

(II) Aneuploidy is represented as 4n .

(III) Herbert Taylor proved the process of

transcription experimentally.

(IV) Caffeine is a comutagen

A. I, II and IV

B. I and IV

C. III and IV

D. I, II and III

Answer: B

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3. Identify the correct statements from the below

(I) Ribosomes are molecular machines helping in transcription

(II) Polyadenylation occurs in pre mRNA

(III) Introns are non amino acid coding sequences

(IV) Silencer sequences are DNA sequences that inhibit transcription.

A. I and III

B. I and IV

C. I, III and IV

D. II and III

Answer: C

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4. Which of the following sentences are correct?

(I) Gibberellins play a role in sex determination in maize.

(II) Multiple alleles determine self sterility in

Nicotiana.

(III) Crossing over leads to non-separation of linked genes.

(IV) In incomplete linkage, crossing over is observed.

A. I and IV

B. II and III

C. I, II and IV

D. II, III and IV

Answer: C

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5. Identify the correct statements from the below

(I) Experimental evidences of transcription was given by Herbert Taylor

(II) Inversion was first reported in drosophila.

(III) Sharbati Sonora, is the work of Dr.M.S.Swaminathan

(IV) Increase in temperature reduces the rate of mutation.

A. I and IV

B. II and III

C. II, III and IV

D. III and IV

Answer: C

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Additional Questions And Answers Choose The Correct Pair

1. In a genetic cross having recessive epistatis, F2 phenotypic ratio would be

A. 9:6:1

B. 15:1

C. 9:3:4

D. 12:3:1

Answer: C

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2. On selfing a plant of F1 generation with genotype "AABbCC". the genotypic ratio in F2 generation will be

A. 3:1

B. 1:1

C. 9:3:3:1

D. 27:9:9:9:3:3:3:1

Answer: A

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3. Single cross Genetic map

Allen Nicotiona -sex determination

Recombination Robin Holliday

Papaya n = 17

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4. Knockout Loss of gene

Transition A $\rightarrow$ T

Transversion A $\rightarrow$ G

Missense Change in amino mutation acid

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Additional Questions And Answers Choose The Incorrect Pair

1. Caffeine Comutagen

UV rays mutagen

Muller Drosophila mutations

Monosomy 2n + 1

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2. Trisomy Datura

Triploid Banana

Triticale High valine

Translocation non-homologous chromosome

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3. Okazaki 5' $\rightarrow$ 3' fragments

helicase hydrogen bonds

hnRNA mRNA

Splicing removal of defective gene

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4. Translocation tRNA

p-site Ribosome

polysome protein synthesis

RNA editing chloroplast

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5. Arabidopsis space

Alternative Splicing stress response

mRNA codons

AUG stop codon

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Additional Questions And Answers Assertion And Reason

1. Assertion (A) : DNA polymerase alpha synthesizes primers.

Reason (R) : DNA polymerase requires a free 3' OH to initiate DNA synthesis.

A. Assertion is true and Reason is correct explanation of Assertion.

B. Assertion and Reason is true but Reason is not correct explanation of Assertion.

C. Assertion is true and Reason is false.

D. Both Assertion and Reason are false.

Answer: a

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2. Assertion (A) : In radiography experiment cells are arrested at metaphase stage.

Reason (R) : The separation of daughter chromosomes is clearly seen by spindle formation.

A. Assertion is true and Reason is correct explanation of Assertion.

B. Assertion and Reason is true but Reason is not correct explanation of Assertion.

C. Assertion is true and Reason is false.

D. Both Assertion and Reason are false.

Answer: c

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3. Assertion (A) : Capping protect the DNA from degradation.

Reason (R) : Capping is followed by Tailing where 3' end of tRNA is cleaved.

A. Assertion is true and Reason is correct explanation of Assertion.

B. Assertion and Reason is true but Reason is not correct explanation of Assertion.

C. Assertion is true and Reason is false.

D. Both Assertion and Reason are false.

Answer: D

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4. Assertion (A) : Release factors recognize the initiation codons.

Reason (R) : UAA is the initiation codon.

A. Assertion is true and Reason is correct explanation of Assertion.

B. Assertion and Reason is true but Reason is not correct explanation of Assertion.

C. Assertion is true and Reason is false.

D. Both Assertion and Reason are false.

Answer: d

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Additional Questions And Answers Answer In One Word

1. Who proposed the chromosome theory of inheritan _____

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2. Who demonstrated sex linkage for the first time _____

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3. Who reported linkage ____

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4. The other name for unlinked genes _____

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5. Who reported incomplete linkage

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6. In which plant was incomplete linkage reported for the first time _____

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7. Who coined the term crossing over _____

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8. What is pairing of homologous chromosomes known as _____

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9. When does synapsis occur in a cell ____

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10. In which stage does crossing over occur in a cell

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11. X-shaped structures formed during crossing over _____

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12. Filaments which facilitated synapsis and chiasma formation in crossing over _____

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13. Who developed the concept of gene mapping _____

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14. Unit of distance in a genetic map ____

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15. The other name for map unit ___

 Watch Video Solution

16. Who proposed mutation theory ____

 Watch Video Solution

17. Who coined the term mutation _____

Watch Video Solution

18. In which plant was mutation first reported

_____

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19. Agents which cause mutation _____

Watch Video Solution

20. A mutation which reduces normal function is called ____ mutation

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21. If there is no change in the amino acid encoded, the type of mutation is called _____

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22. Mutant wheat variety developed by irradiation

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23. _____ is father of "Indian Green Revolution"

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24. Name a mutant variety of castor___

Watch Video Solution

25. _____is an example of a chemical mutagen.

Watch Video Solution

26. Substance which lack their own mutagenic properties but enhance the effects of known mutagens _____

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27. The other name for numerical chromosomal aberration _____

28. Ploidy involving individual chromosomes within a diploid set _____

29. Ploidy involving entire sets of chromosomes ____

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30. Addition of single chromosome to a diploid set _____

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31. Addition of two individual pairs of chromosomes to a diploid set _____

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32. Loss of a single chromosome from a diploid set _____

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33. Loss of a pair of homologous chromosome rom diploid set ____

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34. An organism possessing more than two basic sets of chromosomes _____

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35. A plant which is a natural autotriploid _____

Watch Video Solution

36. An example of a allopolyploid _____

Watch Video Solution

37. _____ is the first man made cereal.

Watch Video Solution

38. Amino acid which is abundant in Rye _____

Watch Video Solution

39. ..... is an alkaloid that induces polyploidy.

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40. Transfer of segments between non homologous chromosome _____

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41. Enzyme which initiates DNA replication

Watch Video Solution

42. An enzyme which removes supercoiling from replication fork during replication _____

Watch Video Solution

43. Short pieces of DNA synthesized on the lagging strand _____

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44. Coding sequences of mRNA _____

Watch Video Solution

45. Non-coding sequences of mRNA _____

Watch Video Solution

46. The process of removal of introns and joining of exons is called

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47. Sequence of bases on tRNA which are complementary to codon of mRNA _____

Watch Video Solution

48. A cluster of Ribosomes linked together by mRNA _____

 Watch Video Solution

49. Mobile genetic elements _____

 Watch Video Solution

50. Who coined the word jumping genes _____

 Watch Video Solution

51. A plant which successfully completed its life cycle in space _____

Watch Video Solution

52. Who demonstrated sex linkage for the first time _____

Watch Video Solution

53. Genes which have lost their ability to make proteins _____

Watch Video Solution

54. In which plant did Bateson and Punnett demonstrate linkage _____

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55. Who reported absence of crossing over in some Drosophila species _____

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56. Who proposed widely accepted model of DNA recombination.

Watch Video Solution

57. Who developed the concept of gene mapping _____

Watch Video Solution

58. Who coined the term mutation _____

Watch Video Solution

59. Another name for synonymous mutations _____

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60. A mutant variety of castor produced to bring in early maturity is _____

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61. Compounds which enhance mutagenic effects of mutagens _____

Watch Video Solution

62. Who used X-rays to induce mutations in Drosophila _____

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63. What kind of plants are produced by selfing of monosomics?

Watch Video Solution

64. Who produced Raphano brassica _____

Watch Video Solution

65. _____ is the first man made cereal.

Watch Video Solution

66. Identify the chemical which can induce Polyploidy _____

A. Auxin

B. Gibberellin

C. Ethylene

D. Colchicine

Answer: D

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67. In which organism, 400 origins of replication can be found _____

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68. Which bonds do Helicases break to unwind DNA ____

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69. Name the strand of DNA which is not transcribed

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70. Which is the precursor of hnRNA ____

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71. Another name for Tailing of hnRNA _____

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72. Name the non coding sequences of mRNA

____

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73. A term which denotes Exons and Introns

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74. Number of codons available _____

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75. Who coined the word jumping genes _____

Watch Video Solution

76. In which plant has the entire genome _____ been sequenced.

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Additional Questions And Answers Very Short Answers

1. How dose Drosophila show complete linkage?

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2. Define linkage groups.

Watch Video Solution

3. What are linked genes ?

Watch Video Solution

4. What is synteny?

Watch Video Solution

5. Define chiasmata.

Watch Video Solution

6. What is meant by synaptonemal complex ?

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7. What is terminalisation?

Watch Video Solution

8. Define mutation.

Watch Video Solution

9. Define Holliday. Junction.

Watch Video Solution

10. How are mutations classified?

Watch Video Solution

11. Define mutagenesis.

Watch Video Solution

12. What does indel mutation refers to ?

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13. What is Sharbati sonora?

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14. Write a note on mutant variety of castor.

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15. Name any four chemical mutagens.

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16. What are comutagens? Give example.

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17. What is ploidy?

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18. What is nullisomy?

Watch Video Solution

19. What is polyploidy?

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20. What are Okazaki fragments?

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21. Why are RNA primers required for DNA replication?

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22. What is monocistronic mRNA?

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23. What is transcription?

Watch Video Solution

24. What are termination sequences?

Watch Video Solution

25. What is hnRNA?

Watch Video Solution

26. What is a codon?

Watch Video Solution

27. Name the stop codons?

Watch Video Solution

28. What are anticodons?

Watch Video Solution

29. What are polysomes?

Watch Video Solution

30. What is alternative splicing?

Watch Video Solution

31. Define crossing over.

Watch Video Solution

32. What is a three point test cross?

Watch Video Solution

33. What is the advantage of a three point test cross?

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Additional Questions And Answers Short Answers

1. What are pseudogenes or fossil genes?

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2. State Coupling and Repulsion theory.

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3. Tabulate the parallelism between Mendelian factors and chromosome behaviour.

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4. What is complete linkage?

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5. What is tetrad?

Watch Video Solution

6. What is synapsis or syndesis?

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7. Write the differences between linkage and crossing over.

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8. What is significance of crossing over?

Watch Video Solution

9. What is recombination?

Watch Video Solution

10. Define recombination frequency.

Watch Video Solution

11. What is genetic mapping?

Watch Video Solution

12. How are mutations classified based on their effects on translation?

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13. Draw a flowchart for mutation types based on molecular changes?

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14. What is an allopolyploid?

Watch Video Solution

15. What is a map unit?

Watch Video Solution

16. What are the uses of genetic mapping?

Watch Video Solution

17. What are multiple alleles?

Watch Video Solution

18. What is triticale?

Watch Video Solution

19. What is the significance of ploidy?

Watch Video Solution

20. What is translation?

Watch Video Solution

21. Differentiate Translocation and Crossing over.

Watch Video Solution

22. Differentiate Exons and Introns

Watch Video Solution

23. What is the significance of RNA editing?

Watch Video Solution

24. What are the significances of transposons?

Watch Video Solution

25. Define plant genome.

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Additional Questions And Answers Long Answers

1. Write a note on point mutation.

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2. Write a note on polyploidy.

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Unit Test Choose The Correct Answer

1. Due to incomplete linkage in maize, the ratio of parental and recombinants are

A. $50:50$

B. $7:1:1:7$

C. $96.4:3.6$

D. $1:7:7:1$

Answer:

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2. Assertion (A) : Gamma rays are generally used to induce mutation in wheat varieties.

Reason (R) : Because they carry lower energy to non-ionize electrons from atom.

A. A is correct. R is correct explanation of A

B. A is correct. R is not correct explanation of A

C. A is correct. R is wrong explanation of A

D. A and R are wrong.

Answer:

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3. The number of chromosomes is a diploid cell of Drosophila is _____

A. 6

B. 8

C. 10

D. 12

Answer:

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4. Choose the correct statement(s).

(I) Incomplete linkage 1:1:1:1 ratio is not obtained in test cross.

(II) Synaptonemal complex prevents crossing over in Drosopilla

(III) The horizontal cut will not create recombinants according to Robin Holliday.

(IV) crossing over is the reason for incomplete linkage

A. I, II and IV only

B. I and IV only

C. IV only

D. I, III and IV

Answer: C

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5. Sharbati Sonora is a mutant wheat variety got by using _____

A. Nitrous acid

B. X-ray

C. gamma ray

D. MMS

Answer:

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6. Trisomy was first reported by

A. Morgan

B. Blackeslee

C. Stadler

D. De Vries

Answer:

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7. An allohexaploidy contains

A. Six different genomes

B. Six copies of three different genomes

C. Two copies of three different genomes

D. Six copies of one genome

Answer:

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8. If haploid number in a cell is 18. The double monosomic and trisomic number will be

A. 35 and 37

B. 34 and 35

C. 37 and 35

D. 17 and 19

Answer:

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9. Removal of RNA polymerase III nucleoplasm will affect the synthesis of

A. rRNA

B. tRNA

C. hnRNA

D. mRNA

Answer:

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Unit Test Very Short Answer

1. What is the difference between missense and nonsense mutation?

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2. What is synteny?

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Unit Test Short Answer

1. What is a three point test cross?

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2. What is significance of crossing over?

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Unit Test Long Answer

1. Write a note on polyploidy.

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