

CLASS : XIth
DATE :

SUBJECT : BIOLOGY
DPP No. : 8

Topic :-MOLECULAR BASIS OF INHERITANCE

- Select the correct statement :
(A) Spliceosomes take part in translation
(B) Punnett square was developed by a British scientist
(C) Franklin Stahl coined the term “linkage”
(D) Transduction was discovered by Altman
- The experimental proof for semiconservative replication of DNA was first shown in a
(A) Plant (B) Bacterium (C) Fungus (D) Virus
- Select the correct match :
(A) Matthew Meselson And F. Stahl - *Sisum sativum*
(B) Alfred Hershey and Martha Chase - TMV
(C) Alec Jeffreys pneumoniae - *Streptococcus*
(D) Francois Jacob and Jacques Monod - Lacoperon
- All of the following are part of an operon except
(A) An enhancer (B) Structural genes (C) An operator (D) A promoter
- AGGTATCGCAT is a sequence from the coding strand of a gene. What will be the corresponding sequence of the transcribed mRNA
(A) ACCUAUGC GAU (B) UGGTUTC GCAT (C) AGGUAUCGCAU (D) UCCAUAGCGUA
- Select the incorrect match :
(A) Submetacentric - L-shaped Chromosomes chromosomes
(B) Allosomes - Sex chromosomes
(C) Lampbrush - Diplotene chromosome bivalents
(D) Polytene chromosomes - Oocytes of amphibians
- Many ribosomes may associate with a single mRNA to form multiple copies of a polypeptide simultaneously. Such strings of ribosomes are termed as
(A) Plastidome (B) Polyhedral bodies (C) Polysome (D) Nucleosome
- Which of the following events does not occur in rough endoplasmic reticulum ?
(A) Cleavage of signal peptide (B) Protein glycosylation
(C) Protein folding (D) Phospholipid synthesis
- Which one of the following codons codes for the same information as UGC ?
(A) UGU (B) UGA
(C) UAG (D) UGG

10. What is true about tRNA ?
(A) It binds with an amino acid at its 3' end.
(B) It has five double stranded regions.
(C) It has a codon at one end which recognizes the anticodon on messenger RNA.
(D) It looks like a clover leaf in its three dimensional structure.
11. Which one of the following correctly represents the manner of replication of DNA ?
(A)
(B)
(C)
(D)
12. Which one of the following pairs is correctly matched with regard to the codon and the amino acid coded by it ?
(A) UUA - valine (B) AAA - lysine
(C) AUG - cysteine (D) CCC - alanine
13. During protein synthesis in an organism at one point the process comes to a halt. Select the group of the three codons from the following, from which any one of the three could bring about this halt
(A) UUU, UCC, UAU (B) UUC, UUA, UAC
(C) UAG, UGA, UAA (D) UUG, UCA, UCG
14. How many genome types are present in a typical green plant cell ?
(A) More than five (B) More than ten
(C) Two (D) Three
15. Which of the following species has the chromosome complement similar to that of *Triticum aestivum* ?
(A) *Zea mays* (B) *Secale cereale*
(C) *Gossypium* (D) *Aegilops*
16. What is incorrect about the following figure representing DNA replication ?
(A) the direction of DNA replication in strand (i)
(B) the direction of DNA replication in strand (ii)
(C) discontinuous replication of strand (i)
(D) discontinuous replication of strand (ii)
17. The binding site of tRNA with mRNA and amino acids respectively are
(A) mRNA with DHU loop and amino acid with CCA end
(B) mRNA with CCA end and amino acid with anticodon loop
(C) mRNA with anticodon loop and amino acid with DHU loop
(D) mRNA with anticodon loop and amino acid with CCA end
18. Percentage of recombination between A and B is 9%, A and C is 17%, B and C is 26%, then the arrangement of genes is
(A) ABC (B) ACD
(C) BCA (D) BAC
19. Which of the following is correct regarding genetic code ?
(A) UUU is the initiation codon which also codes for phenylalanine.
(B) There are 64 triplet codons and only 20 amino acids.
(C) Three random nitrogen bases specify the placement of one amino acid.
(D) UAA is the nonsense codon which also codes for methionine.

20. Which of the following set of options is used in translation ?
- (A) hnRNA, tRNA, rRNA
 - (B) mRNA, tRNA, rRNA
 - (C) mRNA, tRNA, hnRNA
 - (D) hnRNA, rRNA, tRNA

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