

CLASS : XIth
DATE :

SUBJECT : BIOLOGY
DPP No. : 10

Topic :-MOLECULAR BASIS OF INHERITANCE

1. Which of the following statements are correct ?
(i) RNA polymerase I transcribes rRNAs. (ii) RNA polymerase II transcribes snRNAs.
(iii) RNA polymerase III transcribes hn RNA. (iv) RNA polymerase II transcribe hn RNA.
(A) (i) and (ii) are correct (B) (i) and (iii) are correct
(C) (i),(ii) and (iv) are correct (D) (ii) and (iii) are correct
(E) (i) and (iv) are correct
2. Which one of the following is the starter codon ?
(A) UAA (B) UAG (C) AUG (D) UGA
3. Match the codons with their respective amino acids and choose the correct answer.
- | | |
|----------|------------------|
| Column I | Column II |
| A. UUU | 1. Serine |
| B. GGG | 2. Methionine |
| C. UCU | 3. Phenylalanine |
| D. CCC | 4. Glycine |
| E. AUG | 5. Proline |
- (A) A-3, B-4, C-1,D-5, E-2
(B) A-3, B-1, C-4,D-5, E-2
(C) A-3, B-4, C-5,D-1, E-2
(D) A-2, B-4, C-1,D-3, E-5
4. The disorder caused by point mutation is
(A) Down's syndrome (B) sickel cell anaemia
(C) Klinefelter's syndrome (D) tetany
(E) Turner's syndrome
5. Match colum I with column II and choose the correct option
- | | |
|--------------------------|---------------------------------------|
| Column I | Column II |
| (Scientist) | (Concept) |
| I. Taylor and colleagues | A. Lac operon |
| II. Hershey and Chase | B. DNA replicates semi-conservatively |
| III Griffith | C. Transforming principle |
| IV. Jacob & Monod | D. DNA is the genetic material |
- (A) I-B, II-E, III-A, IV-C
(B) I-C, II-D, III-B, IV-A
(C) I-B, II-D, III-B, IV-A
(D) I-A, II-E, III-D, IV-B
(E) I-C, II-E, III-B, IV-A

6. Which one of the following is a base analogue
 (A) nitrous acid (B) Colchicine
 (C) 5-bromouracil (D) Caffeine
7. Uridine, present only in RNA is
 (A) Nucleoside (B) Nucleotide
 (C) Purine (D) Pyrimidine
8. Barbara McClintock is famous for her work on
 (A) Wheat (B) Rice
 (C) Maize (D) Pisum
9. Genetic code consists of
 (A) 4 codons, each with two nucleotides (B) 16 codons, each with four nucleotides
 (C) 64 codons, each with two nucleotides (D) 64 codons, each with three nucleotides
10. Which one of the following codons codes for the same information as UGC
 (A) UGU (B) UGA
 (C) UAG (D) UGG
11. The process by which DNA of nucleus passes genetic information to mRNA
 or
 What is transfer of DNA → RNA called
 (A) Translocation (B) Transcription
 (C) Translation (D) Transportation
12. Translation is called
 (A) Formation of RNA from DNA (B) Formation of DNA from DNA
 (C) Formation of DNA from RNA (D) Protein formation
13. Who discovered Reverse transcription
 (A) Repressor gene (B) Structural gene
 (C) Operator gene (D) Regulatory gene

Read the assertion and reason carefully to mark the correct option out of the options given below.

- (A) If both the assertion and the reason are true and the reason is a correct explanation of the assertion.
 (B) If both the assertion and reason are true but the reason is not a correct explanation of the assertion
 (C) If the assertion is true but the reason is false
 (D) If both the assertion and reason are false
 (E) If the assertion is false but reason is true.
14. Assertion : One of the two strands of DNA is called sense strand and other is called antisense strand.
 Reason : Sense strand of DNA forms complementary RNA.
15. Assertion : Plasmids are extrachromosomal DNA.
 Reason : Plasmids are found in bacteria and are useful in genetic engineering.
16. Assertion : DNA polymerase - I acts as proofreader.
 Reason : DNA polymerase -I removes mismatched nucleotides.

17. Assertion : rRNA is the most abundant RNA.
Reason : rRNA is a constituent of ribosomes.
18. Assertion : DNA fingerprinting involves identifying differences in some specific regions in DNA sequence
Reason : In repetitive DNA sequences a small stretch of DNA is repeated many times.

PE