

DPP

DAILY PRACTICE PROBLEMS

CLASS : XIth
DATE :

SUBJECT : BIOLOGY
DPP No. : 7

Topic :-MOLECULAR BASIS OF INHERITANCE

- Transformation was discovered by
(A) Meselson and Stahl (B) Hershey and Chase
(C) Griffith (D) Watson and Crick
- Which one of the following is wrongly matched ?
(A) Transcription - Writing information from DNA to tRNA
(B) Translation - Using information in mRNA to make protein
(C) Repressor proteins - Binds to operator to stop enzyme synthesis
(D) Operon - Structural genes, operator and promoter
- Satellite DNA is important because it
(A) codes for proteins needed in cell cycle
(B) shows high degree of polymorphism in population and also the same degree of polymorphism in an individual, which is heritable from parents to children
(C) does not code for proteins and is same in all members of the population
(D) codes for enzymes needed for DNA replication
- Identify the correct order of organisation of genetic material from largest to smallest
(A) Chromosome, gene, genome, nucleotide (B) Genome, chromosome, nucleotide, gene
(C) Genome, chromosome, gene, nucleotide (D) Chromosome, genome, nucleotide, gene
- Which one of the following is not applicable to RNA ?
(A) Complementary base pairing (B) 5' phosphoryl and 3' hydroxyl ends
(C) Heterocyclic nitrogenous bases (D) Chargaff's rule
- Taylor conducted the experiments to prove semiconservative mode of chromosome replication on (A) *Vinca rosea*
(B) *Vicia faba*
(C) *Drosophila melanogaster*
(D) *E-coli*
- The equivalent of a structural gene is
(A) muton (B) cistron (C) operon (D) recon
- Which of the following rRNAs act as structural RNA as well as ribozyme in bacteria ?
(A) 5 srRNA (B) 18 srRNA (C) 23 srRNA (D) 58 srRNA

9. A molecule that can act as a genetic material must fulfill the traits given below, except
(A) it should be able to express itself in the form of 'Mendelian characters'
(B) it should be able to generate its replica
(C) it should be unstable structurally and chemically
(D) it should provide the scope for slow changes that are required for evolution
10. DNA-dependent RNA polymerase catalyses transcription on one strand of the DNA which is called the
(A) template strand (B) coding strand
(C) alpha strand (D) anti strand
11. Which of the following is required as inducer(s) for the expression of lac operon ?
(A) galactose (B) lactose (C) lactose and galactose (D) glucose
12. Which of the following is not required for any of the techniques of DNA fingerprinting available at present
(A) zinc finger analysis (B) restriction enzymes
(C) DNA-DNA hybridisation (D) polymerase chain reaction
13. A complex of ribosomes attached to a single strand of RNA is known as
(A) polymer (B) polypeptide (C) okazaki fragment (D) polysome
14. Which one of the following is the starter codon ?
(A) UGA (B) UAA (C) UAG (D) AUG
15. Which of the following RNAs should be most abundant in animal's cell ?
(A) rRNA (B) tRNA (C) mRNA (D) miRNA
16. DNA replication in bacteria occurs
(A) during S-phase
(B) within nucleolus
(C) prior to fission
(D) just before transcription
17. Spliceosomes are not found in cells of
(A) Plants (B) fungi
(C) animals (D) bacteria
18. The association of histone H1 with a nucleosome indicates
(A) transcription is occurring (B) DNA replication is occurring
(C) the DNA is condensed into chromatin fibre (D) the DNA double helix is exposed
19. The final proof for DNA as the genetic material came from the experiments of
(A) Griffith
(B) Hershey and Chase
(C) Avery, MacLeod and McCarty (D) Hargobind Khorana
20. If there are 999 bases in an RNA that codes for a protein with 333 amino acids and the base at position 901 is deleted such that the length of the RNA becomes 998 bases, how many codons will be altered ?
(A) 1 (B) 11 (C) 33 (D) 333