

1. A nucleic acid contains thymine or methylated uracil then it should be -
 - (a) DNA
 - (b) RNA
 - (c) Either DNA or RNA
 - (d) RNA of bacteria

2. Which purine & pyrimidine bases are paired together by H - bonds in DNA -
 - (a) AC & GT
 - (b) GC & AT
 - (c) GA & TC
 - (d) None of the above

3. Wilkins X - ray diffraction showed the diameter of the DNA helix is -
 - (a) 10 Å
 - (b) 20 Å
 - (c) 30 Å
 - (d) 40 Å

4. Nucleoside is :-
 - (a) Polymer of nucleic acid
 - (b) Phosphoric acid + base
 - (c) Phosphoric acid + sugar + base
 - (d) Sugar + base

5. If the sequence of bases in one strand of DNA is known then the sequence in other strand can be predicted on the basis of-
 - (a) Antiparallel
 - (b) Complementary
 - (c) Polarity
 - (d) Coiling

6. A bacterium with completely radioactive DNA was allowed to replicate in a non- radioactive medium for two generation what % of the bacteria should contain radioactive DNA :-
 - (a) 100 %
 - (b) 50 %
 - (c) 25 %
 - (d) 12.5 %

7. Code in RNA corresponding to AGCT in DNA-
 - (a) TACA
 - (b) UCGA
 - (c) TCGA
 - (d) AGUC

8. The process by which DNA of the nucleus passes genetic information to m-RNA is called-
 - (a) Transcription
 - (b) Translocation
 - (c) Translation
 - (d) Transportation

9. In bacteria the codon AUG stands for -
 - (a) Glycine
 - (b) Methionine
 - (c) N- formyl methionine
 - (d) Alanine

10. Which form of RNA has a structure resembling clover leaf ?
 - (a) rRNA
 - (b) hnRNA
 - (c) mRNA

(d) tRNA

11. If the base sequence in DNA is 5' AAAA 3' then the bases sequence in m-RNA is :-

- (a) 5' UUUU 3'
- (b) 3' UUUU 5'
- (c) 5' AAAA 3'
- (d) 3' TTTT 5'

12. Method by which information reaches from DNA to RNA is :-

- (a) Transcription
- (b) Translation
- (c) Transformation
- (d) Transduction

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

- (a) exon
- (b) intron
- (c) cistron
- (d) codon

14. One strand of DNA (non template) has base sequence CAG, TCG, GAT. What will be the sequence of bases in m-RNA :-

- (a) AGC, CTA, CTA
- (b) GTC, AGC, CTC
- (c) CAG, UCG, GAU
- (d) GAC, TAG, CTA

15. In DNA promoter is the site for the initiation of

- (a) Replication
- (b) Translation
- (c) Transcription
- (d) Both (b)&(c)

16. Removal of introns and joining of exons is called

- (a) Capping
- (b) Tailing
- (c) Splicing
- (d) All

17. Genetic code was discovered by-

- (a) Nirenberg & Mathei
- (b) Kornberg & Crick
- (c) Khorana & Kornberg
- (d) Gamow

18. 64 Codons constitute genetic code because-

- (a) There was 64 types of amino acid
- (b) 64 types of t-RNA
- (c) Genetic code is triplet
- (d) There are 64 enzymes

19. Which codon gives signal for the start of polypeptide (protein) chain synthesis-

- (a) AUG
- (b) UGA
- (c) GUA
- (d) UAG

20. Genetic code determines-
- (a) Structural pattern of an organism
 - (b) Sequence of amino acid in protein chain
 - (c) Variation in offsprings
 - (d) constancy of morphological trait
21. Sometimes the starting codon is GUG in place of AUG, GUG normally stands for:-
- (a) Valine
 - (b) Glycine
 - (c) Methionine
 - (d) Tyrosine
22. Degeneration of a genetic code is attributed to the :-
- (a) First member of a codon
 - (b) Second member of a codon
 - (c) Entire codon
 - (d) Third member of a codon
23. Protein synthesis in an animal cell occurs -
- (a) On ribosomes present in cytoplasm as well as in mitochondria
 - (b) On ribosomes present in the nucleolus as well as in cytoplasm
 - (c) Only on ribosomes attached to the nuclear envelope and endoplasmic reticulum
 - (d) Only on the ribosomes present in cytosol
24. In a polypeptide chain of 125 amino acids, if the 25th amino acid is mutated to UAA, then :-
- (a) A polypeptide of 124 amino acid is formed
 - (b) A polypeptide of 25 amino acid is formed
 - (c) A polypeptide of 24 amino acid is formed
 - (d) Any of the above can be possible
25. Out of 64 codons only 61 codes for the 20 different amino acids.. This character of genetic code is called
- (a) Degeneracy
 - (b) Non ambiguous nature
 - (c) Redundancy
 - (d) Overlapping
26. How many ATP and GTP molecules are required respectively for incorporation of 25 amino acids in peptide chain ?
- (a) 20 ATP, 20 GTP
 - (b) 25 ATP, 25 GTP
 - (c) 50 ATP, 50 GTP
 - (d) 25 ATP 50 GTP
27. Translation refers to the process of -
- (a) Polymerisation of nitrogen bases
 - (b) Polymerisation of nucleotides
 - (c) Polymerisation of nucleosides
 - (d) Polymerisation of amino acids
28. Sickle cell anaemia is an example of :-
- (a) Frame shift mutation
 - (b) Point mutation
 - (c) Segmental mutation
 - (d) Gibberish mutation
29. DNA fingerprinting method is very useful for -
- (a) DNA tests for identity & relation ships
 - (b) Forensic studies

- (c) Polymorphism
- (d) All of the above

30. Which one of the following pairs of nitrogenous bases of nucleic acids, is wrongly matched with the category mentioned against it ?

- (a) Guanine, Adenine - Purines
- (b) Adenine, Thymine - Purines
- (c) Thymine, Uracil - Pyrimidines
- (d) Uracil, Cytosine - Pyrimidines

- (a)
- (b)
- (b)
- (d)
- (b)
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