

1. Archae is part of :
(A) Prokaryotes.
(B) Eukaryotes.
(C) Separate kingdom.
(D) None of the above.
2. Processing of mRNA is found in:
(A) Prokaryotes.
(B) Eukaryotes.
(C) Archae.
(D) None of the above.
3. Alternative splicing is observed in:
(A) Prokaryotes.
(B) Eukaryotes.
(C) Archae.
(D) None of the above.
4. Ames Test is used to determine if a chemical :
(A) Increases the rate of cell division.
(B) Decreases the number of cells in a culture.
(C) Is a potential mutagen.
(D) None of the above.
5. Which enzyme is used to label 5'-end of a DNA fragment?
(A) Restriction enzyme.
(B) Polynucleotide kinase.
(C) 5'-exonuclease.
(D) None of the above.
6. Which of the following antibiotics act by inhibiting cell wall biosynthesis?
(A) Amphotericin.
(B) Penicillin.
(C) Puromycin.
(D) Erythromycin.
7. Microtubules are made up of :
(A) Albumin.
(B) Globulin.
(C) Gelsolin.
(D) Tubulin.
8. The type of gene silencing involved in MiRNA is :
(A) Replicational.
(B) Transcriptional.
(C) Post transcriptional.
(D) Post translational.

9. The lac repressor acts as :
(A) Positive regulator.
(B) Negative regulator.
(C) Enhancer.
(D) None of the above.
10. The 5'-end of an eukaryotic mRNA has :
(A) 7-methyl adenosine.
(B) 5-methyl cytosine.
(C) 7-methyl guanosine.
(D) None of the above.
11. pH of human blood is :
(A) 6.8.
(B) 7.0.
(C) 7.4.
(D) None of the above.
12. The buffering system in blood is :
(A) Phosphate buffer.
(B) Bicarbonate buffer.
(C) Acetate buffer.
(D) None of the above.
13. A molecular vector should have :
(A) An origin of replication.
(B) Antibiotic resistance gene.
(C) Multiple cloning site.
(D) All of the above.
14. A restriction enzyme can cut :
(A) Only double stranded DNA.
(B) Both single and double stranded DNA.
(C) Only single stranded DNA.
(D) None of the above.
15. T4 DNA Ligase can join :
(A) Both blunt ended and sticky ended DNA fragments.
(B) Only blunt ended fragments.
(C) Only sticky ended fragments.
(D) None of the above.
16. Gene therapy was first applied for curing :
(A) AIDS.
(B) Cancer.
(C) SCID.
(D) None of the above.

17. B-DNA is :
- (A) Left handed helix.
 - (B) Right handed helix.
 - (C) Alternate left and right handed helix.
 - (D) None of the above.
18. A protein may have different levels of structure :
- (A) Two levels.
 - (B) Three levels.
 - (C) Four levels.
 - (D) Five levels.
19. The genome of Covid-19 consists of :
- (A) Double stranded DNA.
 - (B) Single stranded DNA.
 - (C) Single stranded RNA.
 - (D) None of the above.
20. The longest gene in human system is :
- (A) Troponin.
 - (B) Collagen.
 - (C) Dystrophin.
 - (D) None of the above.
21. The biochemical nature of enzymes may be :
- (A) RNA.
 - (B) DNA.
 - (C) Protein.
 - (D) Both RNA and protein.
22. Modified bases are found to occur in :
- (A) rRNA.
 - (B) tRNA.
 - (C) mRNA.
 - (D) None of the above.
23. Aminoacyl tRNAsynthetase enzyme functions :
- (A) To join mRNA with ribosome.
 - (B) To join amino acid with tRNA.
 - (C) To join mRNA and tRNA.
 - (D) None of the above.
24. IgM molecule consists of :
- (A) Two IgG molecules.
 - (B) Three IgG molecules.
 - (C) Four IgG molecules.
 - (D) Five IgG molecules.

25. The ribosomal subunits of eukaryotes are :
(A) 50S and 30S.
(B) 50S and 40S.
(C) 60S and 40S.
(D) None of the above.
26. Tetrahymena rRNA is processed by :
(A) MiRNA.
(B) Autosplicing.
(C) SnRNA.
(D) None of the above.
27. ELISA technique involves :
(A) Specific binding of antigen and its antibody.
(B) Secondary antibody binding.
(C) Conjugated enzyme activity.
(D) All of the above.
28. Allosteric enzymes have :
(A) One active site.
(B) Two active sites.
(C) Three active sites.
(D) None of the above.
29. The binding of Oxygen to Hemoglobin is :
(A) Non-co-operative.
(B) Co-operative.
(C) Synergistic.
(D) None of the above.
30. Hemoglobin has how many subunits?
(A) One.
(B) Two.
(C) Three.
(D) Four.
31. Sickle cell anemia is due to :
(A) Deletion of three nucleotides.
(B) Substitution of one amino acid.
(C) Insertion of an amino acid.
(D) None of the above.
32. Polyclonal antibody recognizes :
(A) A single epitope of an antigen.
(B) Two epitopes of an antigen.
(C) Multiple epitopes of an antigen.
(D) None of the above.

33. Western blotting is done to find out :
(A) DNA-protein interaction.
(B) Antibody-antigen interaction.
(C) Enzyme substrate interaction.
(D) None of the above.
34. PCR technique involves :
(A) Taq DNA polymerase.
(B) Mg^{++} ions.
(C) Four dNTPs.
(D) All of the above.
35. Proof reading function of DNA polymerase is due to :
(A) 5'-exonuclease activity.
(B) 3'-exonuclease activity.
(C) Both these activities.
(D) None of the above.
36. Which is the leading cause of blindness in children worldwide?
(A) Glaucoma.
(B) Cataracts.
(C) Colour blindness.
(D) Vitamin A deficiency.
37. An example of a digestive hormone is :
(A) Lipase.
(B) Pepsin.
(C) Amylase.
(D) Gastrin.
38. Which vitamin is required for calcium absorption from the small intestine?
(A) Vitamin A.
(B) Vitamin D.
(C) Vitamin E.
(D) Vitamin K.
39. What is another name for Thyroxine?
(A) Tetraiodothyronine.
(B) Triiodothyronine.
(C) Thyroid.
(D) Thymus.
40. Which of the following allosterically activate glycogen phosphorylase?
(A) ATP.
(B) AMP.
(C) Glucose 6 phosphate.
(D) Glucose 1 phosphate.

41. Which is the first intermediate in cholesterol synthesis?
(A) Mevalonate.
(B) Isoprene.
(C) Squalene.
(D) Ethylene.
42. Amount of water in a cell is :
(A) 20%.
(B) 30%.
(C) 60%.
(D) 70%.
43. Which type of DNA is commonly found in organisms?
(A) A.
(B) B.
(C) C.
(D) Z.
44. If one strand of DNA molecule contains the sequence of nucleotide ATGCACG then its complementary strand would contain the following sequence :
(A) TAGCTTC.
(B) TACTGGC.
(C) TACGTGC.
(D) TAGAGCG.
45. Which of the following organelle is called 'Suicidal Bag'?
(A) Mitochondria.
(B) Endoplasmic reticulum.
(C) Lysosome.
(D) Ribosome.
46. Number of iron atoms in one haemoglobin molecule are :
(A) 1.
(B) 3.
(C) 4.
(D) 8.
47. Which of the following is not a co-enzyme?
(A) NAD.
(B) NADP.
(C) FAD.
(D) Mn^{++} .
48. In competitive inhibition, inhibitors bears a close structural similarity with the :
(A) Co-enzyme.
(B) Co-factor.
(C) Prosthetic group.
(D) Substrate.

49. Which component of protein contribute to maximum percentage to total plasma protein?
(A) Albumin.
(B) Globulin.
(C) Fibrinogen.
(D) Prothrombin.
50. Largest WBCs in peripheral blood is :
(A) Neutrophil.
(B) Large lymphocyte.
(C) Monocyte.
(D) Eosinophil.
51. In 70S ribosome 'S' stands for :
(A) S.I unit.
(B) Solubility factor.
(C) Svedberg unit.
(D) None of the above.
52. The nucleus contains :
(A) Mitochondria.
(B) Golgi apparatus.
(C) Chromosomes.
(D) Lysosomes.
53. Following are the membrane bound cell organelles except :
(A) Endoplasmic reticulum.
(B) Lysosome.
(C) Ribosomes.
(D) Peroxisome.
54. Mitosis is the process by which eukaryotic cells:
(A) Grow.
(B) Multiply.
(C) Becomes specialized in structure and function.
(D) Expose the genes for proteins synthesis.
55. Eukaryotes contains all of these except:
(A) Ribosomes.
(B) Golgibody.
(C) Nucleus.
(D) Mesosome.
56. A protein has an isoelectric pH of 6. It is least soluble at pH:
(A) 6.
(B) 7.
(C) 5.
(D) 8.
57. The most probable amino acid that do not occur at bends and turns of a polypeptide chain is:
(A) Proline.
(B) Leucine.
(C) Phenylalanine.
(D) Tryptophan.

58. Enzymes accelerate the rate of reaction by :
- (A) Reducing the number of molecules with lower transition states.
 - (B) Reducing the activation energy of highest transition states.
 - (C) Providing energy to substrates.
 - (D) Providing more chance to the substrates to react together by reducing energy.
59. The enzyme used for the formation of RNA from DNA :
- (A) DNA polymerase.
 - (B) DNA ligase.
 - (C) RNA polymerase.
 - (D) Reverse transcriptase.
60. Among the following which amino acid does not absorb the wave length of 250-300 μ :
- (A) Tryptophan.
 - (B) Phenylalanine.
 - (C) Tyrosine.
 - (D) Cysteine.
61. Increased dietary uptake of trans fatty acid causes blood level _____ :
- (A) Increase of HDL.
 - (B) Increase of HDL and decrease of LDL.
 - (C) Increase of LDL and decrease of HDL.
 - (D) Increase of LDL.
62. A messenger RNA is 336 bases long including the initiation and termination codon. The number of amino acids in the polypeptide translated from this is :
- (A) 110.
 - (B) 333.
 - (C) 111.
 - (D) 600.
63. In prokaryotes, the promoter region consists of a homology of TATA box which is known as:
- (A) Pribnow box .
 - (B) pTATA box.
 - (C) SD sequence.
 - (D) HD sequence.
64. Not a dietary source of vitamin B12 :
- (A) Fish.
 - (B) Meat.
 - (C) Soyabean.
 - (D) Liver.
65. Translation occurs in :
- (A) Ribosome.
 - (B) Mitochondria.
 - (C) Nucleus.
 - (D) Cytoplasm.

66. A piece of nucleic acid used to find a gene, by forming a hybrid with it, is called a :
(A) Probe.
(B) Vector.
(C) Restriction sequence.
(D) Retrovirus.
67. Naturally Restriction enzymes:
(A) Help for cloning.
(B) Cut foreign DNA.
(C) Help for vector formation.
(D) Help for cell division.
68. Glucose is the best substrate for Hexokinase because:
(A) K_m is higher.
(B) K_m is lower.
(C) K_m is zero.
(D) None of these.
69. Which of the following vitamin is stored in the liver?
(A) Vitamin K.
(B) Vitamin D.
(C) Vitamin E.
(D) All of the above.
70. Which of the following minerals controls growth and body weight?
(A) Iodine.
(B) Calcium.
(C) Phosphorous.
(D) All of the above.
71. Which of the following enzymes are not involved in galactose metabolism?
(A) Galactokinase.
(B) Glucokinase.
(C) Galactose-1-Phosphate Uridyl transferase.
(D) UDP-Galactose 4-epimerase.
72. Which of the following is a tricarboxylic acid?
(A) Acetic acid.
(B) Succinic acid.
(C) Oxaloacetic acid.
(D) Citric acid.
73. Which of the following is the most essential nutrient for a woman during her initial stages of pregnancy to prevent birth defects?
(A) Thiamin.
(B) Folic acid.
(C) Vitamin C.
(D) Vitamin E.
74. What is a bond between amino acids called?
(A) Ionic bond.
(B) Acidic bond.
(C) Peptide bond.
(D) Hydrogen bond.

75. The 3-D structure of proteins can be determined by _____ :
- (A) Spectroscopy.
 - (B) X-ray crystallography.
 - (C) Nuclear magnetic resonance.
 - (D) Both (b) and (c).
76. _____ is a protein deficiency disorder :
- (A) Scurvy.
 - (B) Anaemia.
 - (C) Kwashiorkor.
 - (D) None of the above.
77. In which process cell to cell contact is required:
- (A) Conjugation.
 - (B) Transduction.
 - (C) Transformation.
 - (D) All of these.
78. In anaerobic respiration, there is a net gain of :
- (A) 38 ATP.
 - (B) 50 ATP.
 - (C) 2 ATP.
 - (D) 10 ATP.
79. Which name is associated with the chemical substances produced in endocrine ductless Glands?
- (A) Vitamins.
 - (B) Antigens.
 - (C) Bile Acids.
 - (D) Hormones.
80. The reason for double helical structure of DNA is operation of :
- (A) Electrostatic attraction.
 - (B) vander Waal's Forces.
 - (C) Dipole-dipole Interaction.
 - (D) Hydrogen bonding.
81. A bacterial disease is :
- (A) Measles.
 - (B) Tuberculosis.
 - (C) Rabies.
 - (D) Small Pox.
82. Magnesium is required for the enzymes connected with :
- (A) Oligosaccharide formation.
 - (B) ATP utilizing reactions.
 - (C) Glycoprotein formation.
 - (D) All the above.
83. Reducing sugars have :
- (A) Free aldehyde.
 - (B) Bound aldehyde.
 - (C) Free aldehyde or ketone.
 - (D) Bound ketone.

84. In meiosis chromosomes replicate during :
- (A) Prophase I.
 - (B) Prophase II.
 - (C) Telophase I.
 - (D) Interphase.
85. Which one cannot be synthesized from DNA directly :
- (A) mRNA.
 - (B) tRNA.
 - (C) rRNA.
 - (D) Protein.
86. DNA differs from RNA is :
- (A) Presence of deoxyribose sugar.
 - (B) Presence of thymine base.
 - (C) Property of replication.
 - (D) All of the above.
87. Triglyceride are composed of glycerol &:
- (A) Phosphate.
 - (B) Glucose.
 - (C) Lactose.
 - (D) Fatty acid.
88. Which of the following is a water born disease?
- (A) Tuberculosis.
 - (B) AIDS.
 - (C) Malaria.
 - (D) None of these.
89. PCR stands for :
- (A) Pus cell reaction.
 - (B) Pus creatinine RBC.
 - (C) Polymerase chain reaction.
 - (D) Protein carbohydrate reaction.
90. DNA replication is :
- (A) Conservative and discontinuous.
 - (B) Semiconservative and semidiscontinuous.
 - (C) Semiconservative and discontinuous.
 - (D) Conservative.
91. DNA sequence is ATG. What would be the sequence of bases in anticodon of tRNA :
- (A) ATG.
 - (B) AUG.
 - (C) UAC.
 - (D) TAC.
92. DNA sequence of ATTCGATG is transcribed as :
- (A) AUUCGAUG.
 - (B) UAAGCUAC.
 - (C) CAUCGAAU.
 - (D) GUAGCUUA.

93. In tissue / bacterial culture glassware and nutrients are sterilized through :
- (A) Water bath at 200⁰C.
 - (B) Dry air oven at 200⁰C.
 - (C) Dehumidifier.
 - (D) Autoclave.
94. Most abundant RNA of the cell of :
- (A) tRNA.
 - (B) rRNA.
 - (C) mRNA.
 - (D) tRNA.
95. Nucleotides present in one turn of DNA helix :
- (A) 4.
 - (B) 8.
 - (C) 10.
 - (D) 9.
96. Okazaki segments are formed during :
- (A) Transduction.
 - (B) Transcription.
 - (C) Replication.
 - (D) Translation.
97. Plasmids are vectors for gene cloning because they :
- (A) Self replicate in bacterial cells.
 - (B) Replicate freely outside bacterial cells.
 - (C) Can be multiplied in culture.
 - (D) Can be multiplied in laboratories using enzymes.
98. Reverse transcriptase is :
- (A) RNA dependent RNA polymerase.
 - (B) DNA dependent RNA polymerase.
 - (C) DNA dependent DNA polymerase.
 - (D) RNA dependent DNA polymerase.
99. Isoelectric point (pI) is :
- (A) The pH at which net electric charge is zero.
 - (B) The pressure at which net volume is zero.
 - (C) The net conductance is zero.
 - (D) The fluidity at which net viscosity is zero.
100. Prion is a :
- (A) Abnormally folded form of DNA.
 - (B) Abnormally folded form of RNA.
 - (C) Abnormally folded form of Protein.
 - (D) Abnormally folded form of virus.