

CAT 2019 - BIOTECHNOLOGY

1. Which one of the following is most similar to construction of DNA chips?
  - (A) PCR
  - (B) Northern blotting
  - (C) Semiconductor
  - (D) Electrophoresis
  
2. The globular structure of a protein with one polypeptide is its
  - (A) Primary structure
  - (B) Secondary structure
  - (C) Tertiary structure
  - (D) Quaternary structure
  
3. Triticale is a food plant whose parents are
  - (A) Rice and wheat
  - (B) Rye and barley
  - (C) Wheat and maize
  - (D) Durum wheat and rye
  
4. *Bialaphos* herbicide resistance is conferred by
  - (A) *Hygromycin phospho transferase*
  - (B) *Neomycin phospho transferase*
  - (C) *Phosphotricin acetyl transferase*
  - (D) *Acetylcholine esterase*
  
5. *rbcL* gene used for barcoding of plants is located in the
  - (A) Mitochondria
  - (B) Chloroplast
  - (C) Nucleus
  - (D) Transposable element

6. Conversion of floral organ to leaf-like structure is known as
- (A) Phyllody
  - (B) Petalody
  - (C) Emody
  - (D) Modality
7. An agent that causes phyllody is
- (A) Bacteria
  - (B) Fungi
  - (C) Virus
  - (D) Phytoplasma
8. Most commonly used gene for construction of microbial phylogenetic tree is
- (A) 5S rRNA
  - (B) 16S rRNA
  - (C) 18S rRNA
  - (D) 23S rRNA
9. Albert Lasker prize is awarded to those who excel in the
- (A) Plant Science research
  - (B) Biotechnology
  - (C) Basic medical research
  - (D) Mathematical research
10. The virus that is linked to cervical cancer is
- (A) Epstein-Barr Virus
  - (B) Human Cytomegalo virus
  - (C) Human Herpes Virus 8
  - (D) Human Papilloma Virus
11. The micro-organism that fixes nitrogen non-symbiotically is
- (A) *Rhizobium japonicum*
  - (B) *Frankia sp.*
  - (C) *Azospirillum sp.*
  - (D) *Azotobacter chroococcum*

12. Adenosine deaminase deficiency leads to
- (A) Gout
  - (B) Lesch-Nyhan syndrome
  - (C) Porphyria
  - (D) Severe combined immunodeficiency disease
13. A cross is made between two parents, both with genotype Aa. What is the probability that an offspring will have the genotype AA?
- (A) 0.125
  - (B) 0.250
  - (C) 0.500
  - (D) 0.750
14. The insertion of three nucleotides into an open reading frame cannot result in
- (A) a nonsense mutation
  - (B) a frame shift mutation
  - (C) a missense mutation
  - (D) the destruction of a nonsense mutation
15. Which of the following cell organelles is concerned with acrosome formation in sperms?
- (A) Lysosome
  - (B) Mitochondria
  - (C) Centriole
  - (D) Golgi body
16. Which one of the following is an essential fatty acid?
- (A) Linolenic Acid
  - (B) Oleic Acid
  - (C) Arachidic Acid
  - (D) Palmitoleic Acid
17. One of the following is not an entomopathogenic fungus
- (A) *Baeuveria bassiana*
  - (B) *Metarrhizium anisopliae*
  - (C) *Trichoderma viride*
  - (D) *Verticillium lecanii*

18. Alpha-ketoglutarate serves as one of the keto-substrate in the formation of
- (A) agropine
  - (B) nopaline
  - (C) octopine
  - (D) histopine
19. This hormone is different from other hormones in its physical state
- (A) Gibberellia
  - (B) Ethylene
  - (C) Indole acetic acid
  - (D) Zeatin
20. The purpose of Meselson and Stahl experiment in which they grew *E. coli* on the nutrient medium containing  $\text{NH}_4\text{Cl}$  made using either normal ( $^{14}\text{N}$ ) or radioactive nitrogen ( $^{15}\text{N}$ ) is
- (A) to find a bactericidal drug
  - (B) to prove that DNA and not protein is the genetic material
  - (C) to prove that the DNA replicate in a semi-conservative fashion
  - (D) to prove abiogenesis
21. Which one of the following is not true of meiosis?
- (A) Reduction division resulting in 'n' number of chromosomes
  - (B) Crossing over
  - (C) Pairing of homologous chromosomes
  - (D) Separation of chromatids during Anaphase I
22. Which one of the following is most distinct from the others?
- (A) Incubation
  - (B) Autoclaving
  - (C) Boiling
  - (D) Pasteurization
23. The foreign DNA could be covalently bonded to a vector plasmid by the enzyme
- (A) DNA helicase
  - (B) DNA ligase
  - (C) DNA polymerase
  - (D) Restriction endonuclease
24. The Human growth hormone "hGH" is secreted by

- (A) Pituitary gland
- (B) Hypothalamus
- (C) Pancreas
- (D) Thymus

25. The cells that transport oxygen within the body are the

- (A) macrophages
- (B) erythrocytes
- (C) platelets
- (D) leukocytes

26. Individual strands of the fungal body are known as

- (A) mycelium
- (B) hypha
- (C) ascocarp
- (D) zygospore

27. Which of these is required for aerobic cellular respiration?

- (A) Carbon dioxide
- (B) Sunlight
- (C) Oxygen
- (D) Chlorophyll

28. An organism's ability to maintain a constant internal condition necessary for life is known as

- (A) Homeostasis
- (B) Stability
- (C) Reproduction
- (D) Adaptation

29. The terminal electron acceptor during mitochondrial respiration is

- (A) Oxygen
- (B)  $FAD^+$
- (C)  $NAD^+$
- (D) ATP

30. MADS is the acronym from the founding (gene) members of the gene family, namely, MCM1, AGAMOUS, DEFICIENS and SRF derived respectively from
- (A) *Saccharomyces cerevisiae*, *Arabidopsis thaliana*, *Antirrhinum majus*, *Homo sapiens*
  - (B) *Arabidopsis thaliana*, *Antirrhinum majus*, *Saccharomyces cerevisiae*, *Homo sapiens*
  - (C) *Antirrhinum majus*, *Saccharomyces cerevisiae*, *Homo sapiens*, *Arabidopsis thaliana*
  - (D) *Homo sapiens*, *Arabidopsis thaliana*, *Antirrhinum majus*, *Saccharomyces cerevisiae*
31. For the DNA strand 5'-TACGATCATAT-3' the correct complementary DNA strand is
- (A) 3'-TACGAT CATAT-5'
  - (B) 3'-ATGCTAGTATA-5'
  - (C) 3'-AUGCUAGUAUA-5'
  - (D) 3'-GCATAT ACGCG-5'
32. A mature messenger RNA is 336 nucleotides long, including the initiator and termination codons. The number of amino acids in the protein translated from this mRNA is
- (A) 111
  - (B) 112
  - (C) 110
  - (D) 113
33. The scientist who was awarded the Nobel Prize in Physiology or Medicine, "for the discovery that mutations can be induced by X-rays" is
- (A) Linus Carl Pauling
  - (B) George Beadle
  - (C) H J Muller
  - (L) Edward Tatum
34. All microbial contaminants are visible by light microscopy except
- (A) Bacteria
  - (B) Fungi
  - (C) Yeast
  - (D) Mycoplasma

35. Trypsin is a digestive serine protease which is made as a zymogen (proenzyme) in the pancreas. As it enters the duodenum it is activated by
- (A) Hexokinase
  - (B) Enterokinase
  - (C) Rubisco
  - (D) Phosphokinase
36. Which one of the following is an example for non-reducing sugar?
- (A) Maltose
  - (B) Lactose
  - (C) Trehalose
  - (D) Cellobiose
37.  $K_m$  denotes affinity of an enzyme towards its substrate. Which one of the following  $K_m$  values depict highest affinity for a hypothetical enzyme?
- (A)  $1 \times 10^{-5}M$
  - (B)  $1 \times 10^{-6}M$
  - (C)  $1 \times 10^{-7}M$
  - (D)  $1 \times 10^{-8}M$
38. When a rotor in a centrifuge moves by  $2\pi$  radians, it actually means that the rotor has moved by an angle of
- (A)  $45^\circ$
  - (B)  $90^\circ$
  - (C)  $180^\circ$
  - (D)  $360^\circ$
39. The inventor of electrophoresis is
- (A) Mikhail Tswett
  - (B) Arne Wilhelm Kaurin Tiselius
  - (C) Linus Pauling
  - (D) Thomas Alva Edison

40. Microscope used to study the structural details of fungal sheath is
- (A) Dark field microscope
  - (B) Bright field microscope
  - (C) Phase contrast microscope
  - (D) Dissecting microscope
41. X-rays were discovered by
- (A) Pierre Curie and Marie Curie
  - (B) John H. Muller
  - (C) Wilhelm Conrad Roentgen
  - (D) Henri Becquerel
42. Mad Cow disease is caused by
- (A) Virus
  - (B) Bacteria
  - (C) Prions
  - (D) Fungi
43. Chikungunya is caused by
- (A) single-stranded RNA virus
  - (B) double-stranded RNA virus
  - (C) single-stranded DNA virus
  - (D) double-stranded DNA virus
44. Transfer of cellular genetic material from one bacterial cell to another by means of virus particles is called
- (A) Transfection
  - (B) Transduction
  - (C) Transformation
  - (D) Transposition
45. Chronobiology is
- (A) A branch of science devoted to the study of biological rhythms
  - (B) A branch of science devoted to the study of ageing
  - (C) A branch of science devoted to the study of historical events
  - (D) A branch of science devoted to the study of chromatography



46. Norman Ernest Borlaug is considered as father of
- (A) Green Revolution
  - (B) White Revolution
  - (C) Yellow Revolution
  - (D) Black Revolution
47. If a cat has 38 chromosomes in each of its body cells, how many chromosomes will be there in each daughter cell after meiosis?
- (A) 11
  - (B) 19
  - (C) 38
  - (D) 76
48. Which one of the following is OMEGA SIX fatty acid.
- (A) Myristic acid
  - (B) Linolenic acid
  - (C) Oleic acid
  - (D) Linoleic acid
49. 'Energy can neither be created nor destroyed but can be converted from one form to another' explains the
- (A) First law of Mendelian genetics
  - (B) First law of Thermodynamics
  - (C) Beer-Lambert law of spectroscopy
  - (D) First law of Motion
50. 'Fluid Mosaic Model' was proposed by
- (A) Singer and Nicolson
  - (B) Robertson
  - (C) Davidson-Danielli
  - (D) Watson and Crick
51. One *Svedberg* unit is equal to
- (A)  $0.1 \times 10^{-13}$ sec
  - (B)  $1.0 \times 10^{-13}$ sec
  - (C)  $0.5 \times 10^{-13}$ sec
  - (D)  $1.5 \times 10^{-13}$ sec

52.  $\beta$ -carotene is the precursor of
- (A) Vitamin A
  - (B) Vitamin B
  - (C) Vitamin C
  - (D) Vitamin D
53. Pineapple is a specific example for plants with
- (A) Crassulacean acid metabolism
  - (B) Hatch-Slack metabolism
  - (C) The Calvin-Benson cycle
  - (D) Krebs cycle
54. L- Citrulline is
- (A) an amino acid
  - (B) a monosaccharide
  - (C) a fatty acid
  - (D) a nucleotide
55. A single gene controlling many traits is known as
- (A) Multiple alleles
  - (B) Linkage
  - (C) Dominance
  - (D) Pleiotropy
56. Three-celled pollen is
- (A) a male gametophyte
  - (B) a male gamete
  - (C) a microspore
  - (D) a megaspore
57. An enzyme that stimulates germination of barley seed is
- (A)  $\alpha$ -amylase
  - (B)  $\beta$ -galactosidase
  - (C) lipase
  - (D) invertase

58. Which of the RNA has a structure resembling clover-leaf?

- (A) rRNA
- (B) hnRNA
- (C) mRna
- (D) tRNA

59. The recognition site for *EcoRI* is

- (A) GAATTC
- (B) CAAGTC
- (C) AATGTC
- (D) CTGAAT

60. Microarray is used to reveal the details of

- (A) Gene expression
- (B) Gene coding
- (C) Protein sequence
- (D) Lipid profiling

61. HRP is a glycoprotein that can be effectively purified by

- (A) Lectin affinity chromatography
- (B) Metal chelate chromatography
- (C) Covalent chromatography
- (D) Hydroxylapatite chromatography

62. Centre of origin of bread wheat is

- (A) Middle East
- (B) Africa
- (C) USA
- (D) India

63. Latex is commercially obtained from

- (A) Rubber tree
- (B) Neem tree
- (C) Rhine tree
- (D) Banyan tree

64. Real time PCR is used to estimate
- (A) Translational level of a gene
  - (B) Replication of DNA
  - (C) Transcriptional level of a gene
  - (D) Organization of RNA
65. Co-enzyme responsible for one carbon metabolism is
- (A) Acetyl CoA
  - (B) THF<sub>4</sub>
  - (C) Biotin
  - (D) Pyridoxin
66. The most common secondary messenger is
- (A) ATP
  - (B) Cyclic AMP
  - (C) ADP
  - (D) GMP
67. According to Brønsted's theory, the weakest acid has
- (A) Strongest conjugate base
  - (B) No conjugate base
  - (C) Weakest conjugate base
  - (D) Strong hydroxide
68. First product of glycogenolysis is
- (A) Glucose 6 - Phosphate
  - (B) Glucose 1- Phosphate
  - (C) Glucose 1, 6 - diphosphate
  - (D) Fructose 1- phosphate
69. Protein purification can be done by all except
- (A) Centrifugation
  - (B) Densitometry
  - (C) Electrophoresis
  - (D) Chromatography

70. The optically inactive amino acid is
- (A) Glycine
  - (B) Tyrosine
  - (C) Valine
  - (D) Threonine
71. Competitive enzyme inhibition will cause
- (A) Decrease  $K_m$  and increase  $V_{max}$
  - (B) Decrease  $K_m$  and decrease  $V_{max}$
  - (C) Increase  $K_m$  and increase  $V_{max}$
  - (D) Increase  $K_m$  and unchanged  $V_{max}$
72. The powerhouse of the cell is
- (A) Golgi complex
  - (B) Mitochondrion
  - (C) Nucleoli
  - (D) Vacuole
73. The secretion of salivary gland may be described as
- (A) Endocrine and merocrine
  - (B) Endocrine and holocrine
  - (C) Exocrine and holocrine
  - (D) Endocrine and merocrine
74. Cell that lacks nucleus is
- (A) Lymphoblast
  - (B) Erythrocyte
  - (C) Cardiac muscle cell
  - (D) Leucocyte
75. The three termination codons are
- (A) UAA AAA GGU
  - (B) UAA UAG AAU
  - (C) UAA UUU UAG
  - (D) UAA UAG UGA

76. Natural rubber is a polymer derived from
- (A) Isoprene
  - (B) Isoprene
  - (C) Ethylene
  - (D) Butadiene
77. pH of blood and skin is
- (A) 6.4 and 7.0
  - (B) 4.0 and 5.0
  - (C) 5.0 and 7.0
  - (D) 7.4 and 5.5
78. Water drops are spherical because of
- (A) Density
  - (B) Polarity
  - (C) Surface tension
  - (D) Viscosity
79. Which gas is used to manufacture vanaspathi from vegetable oil?
- (A) Carbon dioxide
  - (B) Hydrogen
  - (C) Nitrogen
  - (D) Oxygen
80. Air is a
- (A) Compound
  - (B) Colloid
  - (C) Element
  - (D) Mixture
81. Due to rusting the weight of iron
- (A) Decreases
  - (B) Increases
  - (C) Remains the same
  - (D) Uncertain

82. What is the term used to indicate the growth of new blood vessels?

- (A) Biosynthesis
- (B) Angiogenesis
- (C) Apoptosis
- (D) Metastasis

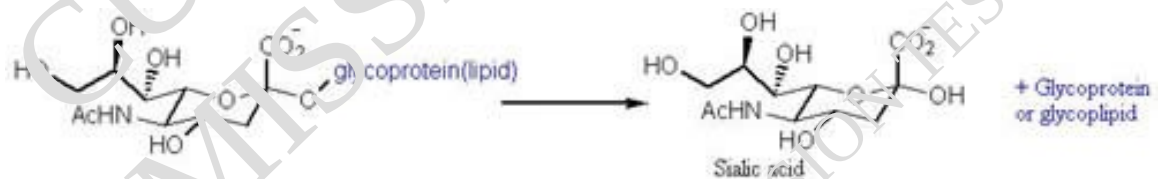
83. Which molecules are involved in the anchoring of cells to an extracellular matrix?

- (A) Integrins
- (B) Interleukins
- (C) Angiostatin
- (D) Cyclins

84. Which of the following enzyme is responsible for processing HIV proteins during the production of new viruses?

- (A) Helicase
- (B) Protease
- (C) Reverse transcriptase
- (D) DNA polymerase

85. An enzyme carried by the flu virus catalyses the following reaction. Which enzyme is it?



- (A) Hemagglutinin
- (B) RNA polymerase
- (C) DNA polymerase
- (D) Neuraminidase

86. The number of moles of solute present in 1 kg of a solvent is called its

- (A) Molality
- (B) Molarity
- (C) Normality
- (D) Formality

87. The main buffer system of the human blood is

- (A)  $\text{H}_2\text{CO}_3 - \text{HCO}_3^-$
- (B)  $\text{H}_2\text{CO}_3 - \text{CO}_3^{2-}$
- (C)  $\text{CH}_3\text{COOH} - \text{CH}_3\text{COO}^-$
- (D)  $\text{NH}_2\text{CONH}_2 - \text{NH}_2\text{CONH}^+$

88. Aspirin is

- (A) Ethyl salicylate
- (B) Sodium salicylate
- (C) Methyl salicylate
- (D) Acetyl salicylic acid

89. DNA synthesis occurs during

- (A)  $G_1$  Phase
- (B) M Phase
- (C) S Phase
- (D)  $G_2$  phase

90. Humans are unable to digest

- (A) Pectin
- (B) Complex carbohydrates
- (C) Denatured proteins
- (D) Cellulose

91. The synthesis or breakdown of \_\_\_\_\_ is often coupled with the metabolic reactions.

- (A)  $\text{O}_2$
- (B) DNA
- (C) ATP
- (D)  $\text{CO}_2$

92. A substance that absorbs moisture is called as

- (A) Hygroscopic
- (B) Amorphous
- (C) Hydrophobic
- (D) Hydrophilic



93. The heat energy produced when the human body metabolises 1.0 gram of fat is
- (A) 30 KJ
  - (B) 39 KJ
  - (C) 1KJ
  - (D) 29 KJ
94. Which pyrimidine base contains an amino group at C<sub>4</sub>?
- (A) Cytosine
  - (B) Thymine
  - (C) Uracil
  - (D) Adenine
95. FAD is reduced to FADH<sub>2</sub> during
- (A) Electron transport phosphorylation
  - (B) Lactate fermentation
  - (C) Krebs cycle
  - (D) Glycolysis
96. Vitamin B<sub>12</sub> is only synthesized by the
- (A) Fishes
  - (B) Microorganisms
  - (C) Plants
  - (D) Animals
97. The nodes of cabbage are packed closely together, and all the leaves are tightly clustered comes under which phyllotaxy?
- (A) Opposite phyllotaxy
  - (B) Whorled phyllotaxy
  - (C) Spiral phyllotaxy
  - (D) Alternate phyllotaxy
98. Development of petal involves regulated
- (A) Cell division
  - (B) Cell expansion
  - (C) Both (A) and (B)
  - (D) Cell Elongation

99. Peroxisomes, a pore forming proteins, in the membranes permit passage of molecules as large as
- (A) 600Da
  - (B) 500Da
  - (C) 800Da
  - (D) 1000Da
100. RNA polymerase II transcribes
- (A) mRNA and a few small RNAs
  - (B) 18s/28s rRNA
  - (C) tRNA, 5s rRNA, and other small RNAs
  - (D) Both (B) and (C)
101. The 5' end of eukaryotic mRNA is capped by adding which base to the terminal base of the transcript via a 5'-5' link?
- (A) A
  - (B) T
  - (C) C
  - (D) G
102. What are all the contributing factors involved in cell cycle regulation ensuring that only certain cells divide at appropriate time?
- (A) Growth factor
  - (B) Size of cell
  - (C) Nutritional state of cell
  - (D) All of the above
103. What is the reaction centre for Photosystems I and II?
- (A) P700 and P650
  - (B) P700 and P630
  - (C) P700 and P680
  - (D) All of the above

104. If a short night plant is given long night, it does not flower. But it is possible to cause flowering by illumination with
- (A) Blue light
  - (B) White light
  - (C) Red light
  - (D) Green light
105. In plant cell osmotic adjustment during water stress results in
- (A) net increase in the number of solute particles
  - (B) net decrease in solute particles
  - (C) fluctuations in the number of solute particles
  - (D) Both (A) and (C)
106. Which one of the following plant belongs to C<sub>4</sub> group?
- (A) *Zea mays*
  - (B) *Vigna radiata*
  - (C) *Cajanus cajan*
  - (D) *Vigna mungo*
107. Which one is the correct order of gene regulation?
- (A) DNA-RNA-tRNA-Protein
  - (B) DNA-Protein-tRNA-RNA
  - (C) DNA-mRNA-rRNA-Protein
  - (D) DNA-RNA-mRNA-Protein
108. Seed dormancy is controlled by a hormonal balance of
- (A) Gibberellins
  - (B) Abscisic acid
  - (C) Both (A) and (B)
  - (D) Benzyl-adenine
109. The anticancer drugs vincristine and vinblastins are isolated from
- (A) *Taxus brevifolli*
  - (B) *Cathanthus roseas*
  - (C) *Plumbago zeylanica*
  - (D) *Podophyllum peltatum*

110. What is the major storage tissue of pine seeds?
- (A) Cotyledons
  - (B) Endosperm
  - (C) Megagametophyte
  - (D) None of the above
111. The transgenic 'Golden rice' produces precursor of
- (A) Vitamin E
  - (B) Vitamin D
  - (C) Vitamin A
  - (D) Folic acid
112. What for the transgenic 'Bt cotton' produced?
- (A) Drought tolerance
  - (B) Insect resistance
  - (C) Pest resistance
  - (D) Herbicide resistant
113. Which was the first transgenic animal?
- (A) E. coli
  - (B) Zebrafish
  - (C) Albino
  - (D) Albino mice
114. Transport of a substance from inside a cell to the outside is called as
- (A) Exocytosis
  - (B) Endocytosis
  - (C) Both (A) and (B)
  - (D) Pericarb
115. The portion of an antigen to which an antibody binds is called as
- (A) Adjuvant
  - (B) Epitope
  - (C) Effector
  - (D) Precipitation

116. Bioremediation is

- (A) Removal of pollutant
- (B) Removal of solid
- (C) Removal of soil
- (D) Removal of chemicals

117. Sickle-cell anaemia is caused by

- (A) Recessive genes
- (B) Lethal genes
- (C) Chromosomal aberrations
- (D) p35 genes

118. Which of the following cells would be considered differentiated?

- (A) Blastomere
- (B) Muscle cell
- (C) Stem cell
- (D) Morula

119. Scurvy is due to the deficiency of

- (A) Vitamin A
- (B) Vitamin B
- (C) Vitamin C
- (D) Vitamin D

120. Green glands are excretory in function which are found in

- (A) Moth
- (B) Spider
- (C) Scorpions
- (D) Prawn

121. Which step is most important to bind the primers for target region of template DNA in PCR?

- (A) Denaturation
- (B) Annealing
- (C) Elongation
- (D) Final extension

122. Which of the following is a protein deficiency disease?
- (A) Goitre
  - (B) Rickets
  - (C) Kwashiorkor
  - (D) Pellagra
123. Which gland is responsible for producing high temperature during fever condition?
- (A) Pituitary
  - (B) Thalamus
  - (C) Hypothalamus
  - (D) Cerebellum
124. Which of the following abnormality, resulted from the inheritance of an unbalanced complement of chromosomes can be diagnosed through karyotyping?
- (A) Down's syndrome
  - (B) Turner's syndrome
  - (C) Klinefelter's syndrome
  - (D) All of the above
125. In an organism, the chromosome number is maintained constant because of
- (A) Independent assortment
  - (B) Crossing over
  - (C) DNA duplication
  - (D) Synapsis
126. Virus and disease-free plants are produced by
- (A) Micropropagation
  - (B) Somatic Embryo genesis
  - (C) Protoplast culture
  - (D) Pollen culture
127. Albinism is caused due to lack of production of
- (A) Tyrosine 3-monooxygenase
  - (B) Homogentisic acid oxidase
  - (C) Thiamine pyrophosphate
  - (D) Phenylalanine hydroxylase

128. Polio immunising vaccine was developed by
- (A) Edward Jenner
  - (B) Jonas Salk
  - (C) Louis Pasteur
  - (D) Paul Ehrlich
129. Brunner's glands are present in
- (A) Stomach
  - (B) Liver
  - (C) Small intestine
  - (D) Large intestine
130. The following is not a heme protein
- (A) Hemoglobin
  - (B) Myoglobin
  - (C) Cytochrome P450
  - (D) Lipoprotein
131. The enzyme rapidly interconverts dihydroxyacetone phosphate with glyceraldehyde 3-phosphate is
- (A) Glyceraldehyde phosphate dehydrogenase
  - (B) Phosphoglycerate kinase
  - (C) Triosephosphate isomerase
  - (D) Enolase
132. Microsatellites are
- (A) 10-30 bp short sized sequences within the gene
  - (B) 2-5 base pairs repeated 5-50 times within the gene
  - (C) regions of chromosomes after secondary constriction
  - (D) short coding regions on the eukaryotic genome
133. The set of DNAs generated using random primers in a PCR reaction is called
- (A) RFLP
  - (B) in situ hybridization
  - (C) AFLP
  - (D) RAPD

134. The DNA fingerprint pattern of a child is
- (A) similar to father DNA print
  - (B) similar to mother DNA print
  - (C) exactly similar to both parent DNA print
  - (D) 50% similar to father and rest to mother
135. 'Human Genome Project' was also focused in identifying
- (A) AFLP
  - (B) RFLP
  - (C) VNTR
  - (D) SNP
136. Classification of organisms based on evolutionary as well as genetic relationships is called
- (A) Numerical taxonomy
  - (B) Phonetics
  - (C) Biosystematics
  - (D) Cladistics
137. Telomerase does which of the following ?
- (A) Joins the Okazaki fragments on the lagging strand
  - (B) Catalyzes DNA replication at the ends of chromosome
  - (C) Enhances transcription
  - (D) Requires dCTP
138. The only methylated base in mammals is
- (A) Thymine
  - (B) Methyl-Adenine
  - (C) 5-Methyl Cytosine
  - (D) 7-Methyl guanine
139. At which stage of the cell cycle are histones proteins synthesized in a eukaryotic cell?
- (A) During prophase
  - (B) During telophase
  - (C) During S phase
  - (D) During G2 stage of prophase



140. Atavism means
- (A) Inheritance of a trait by mother
  - (B) Inheritance of a trait by father
  - (C) Sibling shows common character
  - (D) Inheritance of distinct ancestor not shown by the parents
141. Filariasis is caused by
- (A) *Wuchereria bancrofti*
  - (B) *Ascaris lumbricoides*
  - (C) *Taenia solium*
  - (D) *Fasciola hepatica*
142. Chicken pox is caused by
- (A) Varicella Zoster Herpes virus
  - (B) Adeno virus
  - (C) Bacteriophage T2
  - (D) SV 40 virus
143. Use of steroids and anti-histamines give a quick relief from
- (A) Headache
  - (B) Allergy
  - (C) Nausea
  - (D) Cough
144. Which one of the following act as a physical barrier to the entry of micro-organisms in human body.
- (A) Tears
  - (B) Skin
  - (C) Monocytes
  - (D) Epithelium of urogenital tract
145. Enzyme which catalyse binding of two substrates by covalent bonds are known as
- (A) Lyases
  - (B) Hydrolases
  - (C) Ligases
  - (D) Oxidoreductases

146. An allosteric enzyme
- (A) is generally present at the end of the pathway
  - (B) generally catalyses a reversible reaction
  - (C) generally catalyses the committed step unique to a pathway
  - (D) possesses only substrate site
147. Deoxygenated blood is carried in
- (A) Pulmonary artery
  - (B) Pulmonary vein
  - (C) Carotid artery
  - (D) Aorta
148. What is the maximum limit of sound intensity in decibel units which a person cannot hear?
- (A) 65
  - (B) 75
  - (C) 85
  - (D) 95
149. In a population unrestricted reproductive capacity is called as
- (A) carrying capacity
  - (B) biotic potential
  - (C) birth rate
  - (D) fertility rate
150. Red Data Book provides data on
- (A) Red flowered plants
  - (B) Red coloured fishes
  - (C) List of plants and animals
  - (D) Endangered plants and animals

**BIOTECHNOLOGY - ANSWER KEY****TEST CODE: 601**

QN. NO.	KEY	QN. NO.	KEY	QN. NO.	KEY	QN. NO.	KEY	QN. NO.	KEY
1	B	26	B	51	B	76	A	101	D
2	C	27	C	52	A	77	D	102	D
3	D	28	A	53	A	78	C	103	C
4	C	29	A	54	A	79	B	104	C
5	B	30	A	55	D	80	D	105	A
6	A	31	B	56	A	81	B	106	A
7	D	32	A	57	A	82	B	107	D
8	B	33	C	58	D	83	A	108	C
9	C	34	D	59	A	84	B	109	B
10	D	35	B	60	A	85	D	110	C
11	D	36	C	61	A	86	A	111	C
12	D	37	D	62	A	87	A	112	B
13	B	38	D	63	A	88	D	113	A
14	B	39	B	64	C	89	C	114	A
15	C	40	C	65	B	90	D	115	B
16	A	41	C	66	B	91	C	116	A
17	C	42	C	67	A	92	A	117	B
18	B	43	A	68	B	93	B	118	B
19	B	44	B	69	B	94	A	119	C
20	C	45	A	70	A	95	C	120	D
21	D	46	A	71	D	96	B	121	B
22	A	47	B	72	B	97	C	122	C
23	B	48	D	73	A	98	C	123	C
24	A	49	B	74	B	99	C	124	D
25	B	50	A	75	D	100	A	125	C

<b>QN. NO.</b>	<b>KEY</b>
126	A
127	A
128	B
129	C
130	D
131	C
132	B
133	D
134	D
135	D
136	D
137	B
138	B
139	C
140	D
141	A
142	A
143	B
144	A
145	C
146	C
147	A
148	C
149	B
150	D

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