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1. The hydrophobic tails of a phospholipid bilayer are oriented towards the
 - (A) Interior of the plasma membrane
 - (B) Extracellular fluid surrounding the cell
 - (C) Cytoplasm of the cell
 - (D) Nucleus of the cell

 2. Which of the following is not the similarity of mitochondria and chloroplasts?
 - (A) Both make ATP
 - (B) Both possess their own DNA
 - (C) Both have an envelope of double unit membrane
 - (D) Both capture solar energy and convert it into chemical energy

 3. Cell membrane is mainly constituted by lipids, proteins and carbohydrates. With respect to their proportion which statement is correct?
 - (A) All the three are in equal proportion
 - (B) Proteins are in least proportion
 - (C) Lipids are in equal proportion
 - (D) Carbohydrates are in least proportion

 4. Who proposed the fluid-mosaic model of membrane structure?
 - (A) Davson and Danielli
 - (B) Roberston
 - (C) Seifriz
 - (D) Singer and Nicholson

 5. Most hydrolytic enzymes of lysosomes function at
 - (A) Acidic (pH)
 - (B) Basic (pH)
 - (C) Neutral (pH)
 - (D) Any (pH)

 6. In meiotic division four daughter cells are produced by two successive divisions in which
 - (A) First division is equational and second is reductional
 - (B) First division is reductional and second is equational
 - (C) Both divisions are reductional
 - (D) Both divisions are equational

 7. Terminalization is a process related to
 - (A) Mitosis
 - (B) Cytokinesis
 - (C) Diakinesis
 - (D) Meiosis
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8. The sex-determination in *Drosophila* is
- (A) Monogenic (B) Diagenic
(C) Determined by Y-Chromosome (D) Polygenic
9. Which of the following cells are most numerous?
- (A) Helper T cells (B) Killer T cells
(C) Cytotoxic T cells (D) Memory cells
10. Which of the following cells guard against the over-production of antibodies?
- (A) Helper T cells (B) Suppressor T cells
(C) Regulatory cells (D) Cytotoxic T cells
11. Which of the following reactions requires the removal of water to form a covalent bond?
- (A) Glycogen \rightarrow Glucose subunits
(B) Glucose \rightarrow Galactose \rightarrow Lactose
(C) Triglyceride \rightarrow 3 fatty acids \rightarrow and glycerol
(D) Dipeptide \rightarrow Two amino acids
12. What determines the specific functions of a protein?
- (A) The exact sequence of its amino acids
(B) The length of the molecule
(C) Having fatty acids are monomers
(D) Having a hydrophobic head and a hydrophilic tail region
13. Substrate level phosphorylation occurs when
- (A) Succinic acid changes to fumaric acid
(B) Fumaric acid changes to malic acid
(C) Succinyl CoA changes to succinic acid
(D) Oxaloacetic acid changes to ketoglutaric acid
14. Which of the following reaction occurs in shuttle mechanism of mitochondria?
- (A) NADH is oxidized to NAD +
(B) Glucose is phosphorylated
(C) Ascorbic acid oxidized to dehydroascorbic acid
(D) Ferrous iron is oxidized to ferric iron

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15. All the following correctly describe the active site of an enzyme except
- (A) It is small relative to the entire enzyme
 - (B) It is two-dimensional in structure
 - (C) It initially binds substrates by weak attractions
 - (D) Specificity is defined by arrangement of certain atom
16. The greater amount of DNA in a cell of an individual shows that it is a
- (A) Primitive organism
 - (B) Lower organism
 - (C) Highly evolved organism
 - (D) None of these
17. After initiation of transcription with core enzyme RNA polymerase the sigma factor is
- (A) Functionless
 - (B) Released to take part again
 - (C) Used during closing of chain
 - (D) Retained and it performs special functions
18. Protein synthesis in an animal cell takes place
- (A) Only on the ribosomes present in cytosol
 - (B) On ribosomes present in the nucleolus as well as in mitochondria
 - (C) On ribosomes present in cytosol as well as in cytosol
 - (D) Only on ribosomes attached to the nuclear envelope and endoplasmic reticulum
19. Apical dominance in higher plants is due to
- (A) Balance between auxins and cytokinins
 - (B) Enzyme activity
 - (C) Photoperiodism
 - (D) Carbohydrate and nitrogen ratio
20. Aldosterone helps in
- (A) Conservation of Sodium and water and elimination of Potassium
 - (B) Elimination of Sodium, Potassium and water
 - (C) Conservation of Sodium, Potassium and water
 - (D) Conservation of Potassium and water and elimination of Sodium

21. If pituitary is surgically removed, blood level of sodium falls and that of potassium rises because of
- (A) Atrophy of adrenal cortex
(B) Atrophy of adrenal medulla
(C) Fact that oxytocin from pituitary is no longer available
(D) Fact that LTH from pituitary is no longer available
22. If a person lives exclusively on a diet of milk, eggs and bread he is likely to suffer from
- (A) Scurvy (B) Rickets
(C) Beri-beri (D) Night blindness
23. Which one of the following is in correct in sequence?
- (A) Zygote, cleavage, blastula, gastrula (B) Zygote, blastula, gastrula, cleavage
(C) Zygote, cleavage, gastrula, blastula (D) Cleavage, zygote, blastula, gastrula
24. Entry of pollen tube through the micropyle is called
- (A) Misogamy (B) Chalazogamy
(C) Pseudogamy (D) Porogamy
25. Function of suspensor of embryo is
- (A) Absorbation of nourishment
(B) Formation of secondary embryos
(C) To push the embryo into the nutritive region
(D) All the above
26. Migration and rearrangement of cells during embryo development occur in
- (A) Gastrulation (B) Epiboly
(C) Emboly (D) Involution
27. Which of the following ensures the effectiveness of reproduction in mammals?
- (A) Formation of yolk sac (B) Formation of placenta
(C) Retention of embryo (D) Reduced number of eggs
28. The first step in activation of ovum during process of fertilization is
- (A) Formation of fertilization cone (B) Penetration of sperm in ovum
(C) Formation of fertilization membrane (D) Fertilizin-antifertilizin reaction

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29. Linkage is
- (A) Stronger between genes located away from each other upon the chromosomes
 - (B) Stronger between genes located close together upon the chromosome
 - (C) Strength of linkage is not dependent upon the distance between the genes
 - (D) It depends upon the Nature of the concerned genes
30. In all of Mendel's experiments, the two alleles causing a trait were
- (A) Dominant-recessive
 - (B) Co-dominant
 - (C) Incompletely dominant
 - (D) Co-recessive
31. Independent assortment of Mendel was proved by
- (A) Monohybrid cross
 - (B) Incomplete dominance
 - (C) Back-cross
 - (D) Dihybrid cross
32. Which type of prokaryotic cell would be more successful as judged by the growth potential?
- (A) One that is able to express all its genes all the time
 - (B) One that is unable to express any of its genes any of the time
 - (C) One that express some of its genes some of time
 - (D) One that divides only when all types of amino acids and sugars are present in the medium
33. In the 'Operon concept' the regulator gene regulates chemical reactions in the cell by
- (A) Inhibiting substrate in the reaction
 - (B) Inhibiting migration of mRNA into cytoplasm
 - (C) Inhibiting transcription of mRNA
 - (D) Inactivating enzymes in the reaction
34. The concept of split gene is that the
- (A) DNA in a gene can be split by deoxyribonuclease
 - (B) Secondary constrictions on the chromosomes give a split appearance to genes
 - (C) Coding sequences in many eukaryotic genes are often separated by non-coding sequences
 - (D) Adjacent genes are separated from each other by spacers
35. Errors during DNA replication, repair or recombination can lead to base-pair substitutions. Such changes are called
- (A) Conditional mutations
 - (B) Mutagens
 - (C) Saltatory changes
 - (D) Spontaneous mutations
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36. Okazaki segments are
- (A) Segments of DNA capable of replication
 - (B) Segments of a chain of nucleotides
 - (C) Segments of a chain of nucleotides formed during replication of DNA
 - (D) Segments of gene which undergo recombination
37. An anti-codon of t-RNA can recognize more than one codon of m-RNA. It is
- (A) Wobble hypothesis
 - (B) Gene flow hypothesis
 - (C) Template hypothesis
 - (D) Richmond and Lang effect
38. A gene which affects the character of another gene, not located on the similar locus of the homologous chromosome is
- (A) Duplicate gene
 - (B) Complementary gene
 - (C) Epistatic gene
 - (D) Supplementary gene
39. In human beings, multiple genes are involved in the inheritance of
- (A) Sickle Cell Anemia
 - (B) Colour blindness
 - (C) Phenylketonuria
 - (D) Skin colour
40. Which one of the following is not a characteristic of heterochromatin?
- (A) Usually found in centromeric region
 - (B) Identifiable in atleast some interphase chromosomes
 - (C) Associated with active genes
 - (D) Located in the dark bands of polytene chromosomes
41. The latest view about the origin of virus is that
- (A) They arose from nucleic acid and protein which were formed in primitive water
 - (B) They arose from bacteria as a result of loss of cell wall
 - (C) They arose from some primitive bacteria by loss of nucleus
 - (D) They are modified plasmids which are fragments of the nucleic acids of the host
42. Phenomenon of "Industrial Melanism" demonstrates
- (A) Natural selection
 - (B) Induced mutation
 - (C) Geographical isolation
 - (D) Reproductive isolation
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43. Supermale and superfemale type of determination of sex in *Drosophila* is based on
- (A) Genic balance (B) Oxygen balance
(C) Biodiversity (D) Uniformity
44. Barr body in mammals represents
- (A) All the heterochromatin in female cells
(B) One of the two X-chromosomes in the somatic cells of female
(C) All the heterochromatin in male and female cells
(D) The Y-chromosome in the somatic cells of male
45. A cross between white-eyed female and red-eyed male *Drosophila* give red-eyed females and white eyed males. Rarely the cross gives rise to white eyed females and red-eyed males. This is due to
- (A) Mutation in male
(B) Loss of sex chromosome
(C) Mutation in female fly
(D) Nondisjunction of two X-chromosomes in female
46. Which of these is a true statement?
- (A) Eukaryotes evolved before prokaryotes
(B) Prokaryotes evolved before eukaryotes
(C) The true cell evolved before the protocell
(D) Prokaryotes didn't evolve until 1.5 billion years ago
47. The evolution of one population in response to the evolution of another population and vice versa, is called
- (A) Coevolution (B) Convergent evolution
(C) Divergent evolution (D) Parallel evolution
48. An isolated population of humans, with approximately equal numbers of blue-eyed and brown-eyed individuals was decimated by an earthquake. Only a few brown-eyed people remained to form the next generation. This kind of change in the gene pool is called a
- (A) Blocked gene flow (B) Hardy-Weinberg equilibrium
(C) Bottleneck effect (D) Founder effect
49. In some birds, such as peacock and pheasant, the males are more colourful than the females. The selective agent producing the evolution of such conspicuous features is:
- (A) Females (B) Predators
(C) Climate (D) Humans

50. Different species of dragonflies do not mate with each other because the males of each species have appendages that can clasp and hold for copulation only females of their own species. This is an example of
- (A) Ecological isolation (B) Temporal isolation
(C) Mechanical isolation (D) Behavioural isolation
51. A potential danger to a population that has been greatly reduced in number is the
- (A) Loss of genetic variability (B) Tendency towards assortative mating
(C) Hardy-Weinberg equilibrium (D) Reduced gene flow
52. The formation of a new species through change in a single lineage is known as
- (A) Convergent evolution (B) Anagenesis, or phyletic evolution
(C) Cladogenesis or divergent evolution (D) Allopatry
53. Intraspecific competition is strongest when the
- (A) Species overlap in their distribution (B) Populations overlap in their ranges
(C) Population is at its carrying capacity (D) Reproductive rate is at its maximum
54. Similar environments on different continents produce similar ecological communities. Ecologically similar species in some non adjacent communities are known as
- (A) Sibling species (B) Ecological equivalents
(C) Parallel species (D) Geographic competitors
55. Which of the following atoms typically cycles within the most localized area?
- (A) Carbon (B) Water
(C) Nitrogen (D) Phosphorous
56. Flow of energy gradually decreases when it passes from lower to higher trophic levels. This is explained by
- (A) First law of thermodynamics (B) Second law of thermodynamics
(C) Newton's law (D) None of these
57. From which part of *Atropa belladonna* is the drug belladonna obtained?
- (A) Stems (B) Flowers
(C) Leaves (D) Leaves and roots

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58. One of the major difficulties in the biological control of insect pests is
- (A) The predator develops a preference to other diets and may itself become a pest
 - (B) The method is less effective as compared with the use of insecticides
 - (C) The predators does not always survive when transferred to a new environment
 - (D) The practical difficulty of introducing the predator to specific areas
59. If producer is a large tree that supports a number of herbivorous animals is further attacked by still more ectoparasites the pyramid of number shall be
- (A) Inverted
 - (B) Upright
 - (C) Irregular
 - (D) Spindle shaped
60. Radiations from outer space do not constitute health hazard because
- (A) They are harmless
 - (B) Only 0.1% radiations reach the earth annually
 - (C) They are useful as they provide energy and heat
 - (D) None of these
61. Which of the following habitats from the highest diversity of living species?
- (A) Tropical forests
 - (B) Grassland
 - (C) Desert
 - (D) Tropical rainforest
62. Carolus Linnaeus system is an artificial system because
- (A) It is based on evolutionary trends
 - (B) It is based on number of characters
 - (C) It is based on a few characters of superficial similarities in morphology
 - (D) It is phylogenetic
63. Taxonomy based on identification of evolutionary units within species by determining units within species by determining their genetical interrelationship is called
- (A) Numerical taxonomy
 - (B) Biochemical taxonomy
 - (C) Experimental taxonomy
 - (D) Chemotaxonomy
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64. Egg of eutherian mammals is
- (A) centrolecithal (B) telolecithal
(C) macrolecithal (D) microlecithal
65. In which type of cleavage do the cleavage furrows divide a small amount of active cytoplasm at the animal pole?
- (A) Meroblastic (B) Holoblastic
(C) Determinate (D) Unequal holoblastic
66. The amnion in mammals consists of extra-embryonic
- (A) endoderm and somatic mesoderm (B) ectoderm and somatic mesoderm
(C) ectoderm and splanchnic mesoderm (D) endoderm and splanchnic mesoderm
67. Who introduced the term 'Nucleic acid'?
- (A) Meischer (B) Altmann
(C) Robert Brown (D) Feulgen and Rossenbeck
68. Which law of evolution states that warm-blooded mammals of hot and humid areas have abundant melanin pigment?
- (A) Dollo's Law (B) Gloger's Law
(C) Cope's Law (D) Gause's Law
69. The aquatic animals in the polar region survive even in freezing temperature due to
- (A) very thick layer of fat deposition in their skin
(B) migrating to temperate region during cold times
(C) the neutral pH of the soil at very cold condition
(D) the high density of water at 4°C
70. Which of the following is an example of atavism?
- (A) Hairs on the head of man (B) Feathers on birds
(C) Tail in some babies (D) Scales on fishes

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71. Who first divided the Zoogeographic regions?
- (A) Sclater (B) Wallace
(C) Linnaeus (D) Darwin
72. _____ Zoogeographic region is called as living museum.
- (A) Palaeartic (B) Ethiopian
(C) Oriental (D) Australian
73. Species occurring in different geographical area are known as
- (A) sympatric (B) allopatric
(C) sibling (D) neopatric
74. The biodiversity hotspots identified by Myers *et al.* cover _____ if the globe and contain – _____ of the known plant species.
- (A) 2.5%, 42% (B) 4.6%, 55%
(C) 1.7%, 71% (D) 1.4%, 44%
75. Species richness of island increases with _____ and decreases with _____.
- (A) isolation, area (B) area, isolation
(C) more circular shapes, isolation (D) isolation, less circular shapes
76. Marine iguana is found in
- (A) Galapagos Islands (B) Andaman and Nicobar Islands
(C) Coco Island (D) Hawaii Island
77. A substance that can act as a base as well as an acid is called
- (A) Alkali (B) Amorphous
(C) Amphoteric (D) Allotrope

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78. Two zoogeographical regions separated by high mountain ranges are
- (A) Neotropical and Ethiopian (B) Palaearctic and Oriental
(C) Nearctic and Palaearctic (D) Oriental and Australian
79. A haemophilic man marries a normal homozygous woman. What is the probability that their son will be haemophilic?
- (A) 100% (B) 75%
(C) 50% (D) 0%
80. The Coriolis effect causes
- (A) winds to move straight north-south
(B) a rightward deflection of winds in the Northern Hemisphere
(C) a rightward deflection of winds in the Southern Hemisphere
(D) collision of westerlies and polar easterlies
81. Which lake zone is most comparable to the marine oceanic zone?
- (A) hypolimnion (B) metalimnion
(C) epilimnion (D) limnetic zone
82. Alleles which prevent the expression of other alleles are called _____, while the alleles which they suppress are called _____.
- (A) superior, inferior (B) senior, junior
(C) major, minor (D) dominant, recessive
83. Life on earth appeared _____ according to geological time scale.
- (A) 7000 mya (B) 1200 mya
(C) 3500 mya (D) 6000 mya
84. Madreporite is associated with
- (A) Nervous system (B) Locomotion
(C) Digestive system (D) Haemal system

85. The global distribution of tropical rain forests corresponds to areas where conditions are
- (A) warm and wet year-round
 - (B) warm year-round with wet and dry seasons
 - (C) warm and dry year-round
 - (D) cool year-round with wet and dry seasons
86. Which one of the following is a characteristic of adult ascidian?
- (A) Elongated tail
 - (B) Large notochord
 - (C) Enlarged pharynx
 - (D) Well developed statocyst
87. Darwin's finches are a good example of
- (A) Convergent evolution
 - (B) Industrial melanism
 - (C) Connecting link
 - (D) Adaptive radiation
88. Which one of the following is not observed in biodiversity hotspots?
- (A) Species richness
 - (B) Endemism
 - (C) Lesser inter-specific competition
 - (D) Accelerated species loss
89. In singing birds, the sound is produced by the
- (A) lungs
 - (B) air-sacs
 - (C) syrinx
 - (D) larynx
90. Maximum species diversity is recorded in
- (A) Coral reefs
 - (B) Mangroves
 - (C) Seagrasses
 - (D) Seaweeds
91. Endemic species defines
- (A) species localized in a specific region
 - (B) rare species
 - (C) threatened species
 - (D) vulnerable species

92. Allen's Rule for the mammals from colder climates defines
- (A) shorter ears and longer limbs (B) longer ears and shorter limbs
(C) longer ears and longer limbs (D) shorter ears and shorter limbs
93. _____ is most likely a cosmopolitan species.
- (A) humpback whale (B) ostriches
(C) penguins (D) crows
94. Which of the following navigational methods is used by bees?
- (A) magnetic cues from the earth (B) sound waves
(C) celestial cues from the sun (D) celestial cues from the moon
95. Which of the following is NOT a physical barrier to dispersal?
- (A) Humidity (B) Mountains
(C) Valleys (D) Water currents
96. Which is not considered as Protected Area under Wildlife Protection Act, 1972?
- (A) National Park (B) Biosphere Reserve
(C) Wildlife Sanctuary (D) Community Reserve
97. The particular specimen or element designated by the author of a taxon is designated as
- (A) Paratype (B) Holotype
(C) Lectotype (D) Neotype
98. Who has introduced five kingdom system of biological classification?
- (A) Linnaeus (B) Copeland
(C) Ernst Mayr (D) Robert H. Whittakar

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99. Genes located on Y-chromosome are
- (A) Mutant genes (B) Autosomal genes
(C) Holandric genes (D) Sex-linked genes
100. Double hydrogen bonds occurs in DNA between
- (A) U and T (B) T and C
(C) A and G (D) A and T
101. The father of evolution is
- (A) Gregor Johar Mendel (B) Charles Darwin
(C) Watson (D) Aristotle
102. The total number of chromosomes in humans
- (A) 46 (B) 50
(C) 60 (D) 100
103. The alternate form of gene is known as
- (A) Dominant (B) Recessive
(C) Allele (D) Co-Dominant
104. Sudden inheritable change is called as
- (A) Mutation (B) Cross over
(C) Linkage (D) None of the above
105. Which of the following is an example of sex-linked inheritance?
- (A) Milk Production (B) Height
(C) Hairs in Ear (D) Haemophilia
106. The powerhouse of a cell is
- (A) Chloroplast (B) Mitochondria
(C) Lysosome (D) Nucleus
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107. Ribosomes are responsible for
- (A) Lipid Synthesis (B) Carbohydrate synthesis
(C) Protein Synthesis (D) Vitamin Synthesis
108. DNA multiplication is through Semi conservative model. This is proposed by
- (A) Watson and Crick (B) Meselson and Stahl
(C) Jacob and Monod (D) None of the above
109. The largest phylum is
- (A) Annelida (B) Echinodermata
(C) Arthropoda (D) Platyhelminthes
110. Flame cells/Solenocytes are the excretory structures of
- (A) Aschelminthes (B) Annelida
(C) Arthropoda (D) Platyhelminthes
111. Sericulture is related to
- (A) Honey (B) Silk worm
(C) Milk production (D) Prawn culture
112. Sea cucumber is
- (A) Echinoderm (B) Arthropod
(C) Plant (D) Mollusc
113. One horned Rhinoceros is found in
- (A) Assam (B) Gujarat
(C) West Bengal (D) Karnataka
114. National Aquatic Animal is
- (A) Blue Whale (B) Pilot Whale
(C) Shark (D) Gangetic Dolphin
115. Elephantiasis/Filariasis is caused by
- (A) *Wuchereia bancrofti* (B) *Taenia solium*
(C) *Anopheles sp.* (D) *Plasmodium vivax*
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116. Asiatic Lion is commonly seen in
- (A) Kaziranga National Park (B) Kanha National Park
(C) Point calimer wildlife Sanctuary (D) Gir National Park
117. Crossing Over happens at this stage of Meiotic Division
- (A) Diplotene (B) Pachytene
(C) Diakinesis (D) Leptotene
118. Night Blindness is caused due to the deficiency of
- (A) Vitamin D (B) Riboflavin
(C) Vitamin K (D) Vitamin A
119. Penicillin was first discovered by
- (A) Alaister Cook (B) Alaister Flemming
(C) Alexander Flemming (D) Alexander Cook
120. Sphygmomanometer is used for
- (A) Plant Growth (B) Blood Pressure
(C) Spleen function test (D) Liver function test
121. The branch of science which deals with cell is
- (A) Entomology (B) Physiology
(C) Endocrinology (D) Cytology
122. Group of animals having pseudocoelom is
- (A) Platyhelminths (B) Aschelminths
(C) Mollusc (D) Annelids
123. Tympanum represents which part of the body
- (A) Eye (B) Nose
(C) Ear (D) Toes
124. The correct order of stages involved in Mitosis
- (A) Prophase, Telophase, Metaphase, Anaphase
(B) Prophase, Anaphase, Metaphase, Telophase
(C) Prophase, Metaphase, Anaphase, Telophase
(D) Prophase, Telophase, Anaphase, Metaphase

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125. The outer covering of virus is made up of protein which is known as
- (A) Capsid (B) Virion
(C) Immunoglobulin (D) Keratin
126. T wave in ECG represents
- (A) Depolarization (B) Repolarization
(C) Excitation (D) Atrial Contraction
127. Volume of air remaining in the lungs even after a forcible expiration is known as
- (A) Inspiratory Capacity (B) Vital capacity
(C) Tidal Volume (D) Residual Volume
128. Which among the following is the connective tissue
- (A) Nervous Tissue (B) Muscular Tissue
(C) Epithelial Tissue (D) Blood
129. The cells which form the Myelin Sheath in axon of a Nerve is known as
- (A) Sertoli Cell (B) Schwann Cell
(C) Leydig cell (D) Nissl's granular cells
130. Smallest taxon of classification is
- (A) Phylum (B) Kingdom
(C) Variety (D) Species
131. Bentham and Hooker gave which type of classification
- (A) Phylogenetic (B) Artificial
(C) Natural (D) Numerical
132. In Frog, the surface of attachment of tongue is
- (A) Sphenoid (B) Palatine
(C) Pterygoid (D) Hyoid Apparatus

133. Blue-green algae belong to which group?

- (A) Protista (B) Fungi
(C) Prokaryotes (D) Bryophytes

134. Non-membrane bound cell organelle is

- (A) Mitochondria (B) Plastid
(C) Endoplasmic Reticulum (D) Ribosome

135. The typhlosole in earthworm is related to

- (A) Respiration (B) Excretion
(C) Absorption (D) Reproduction

136. ICBN stands for

- (A) Indian Congress of Biological Names
(B) Indian Code of Biological Names
(C) Indian Code of Botanical Nomenclature
(D) International Code

137. Which statement is the correct one?

- (A) Lymph is passed through capillaries in tissues
(B) Lymph is known as Tissue Fluid
(C) Lymph is secreted from Endocrine glands
(D) Lymph has trace amounts of Erythrocytes and platelets

138. _____ % of O₂ is transported by RBCs in the blood.

- (A) 3 (B) 33
(C) 67 (D) 97

139. Endogenous Rhythm are known as

- (A) Circadian Rhythm (B) Diurnal Rhythm
(C) Ultradian Rhythm (D) Infradian Rhythm

140. The gland responsible for production of hormone melatonin

- (A) Pituitary Gland (B) Adrenal Gland
(C) Pineal Gland (D) Pancreas

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141. Which among the following is a viviparous snake?
- (A) Cobra (B) Krait
(C) Viper (D) Rat Snake
142. Poisonous fangs of a snake are modified
- (A) Mandible (B) Maxillary teeth
(C) Canine (D) Nasals
143. The snake which has hemotoxic venom is
- (A) Cobra (B) Sea Snakes
(C) Kraits (D) Viper
144. Which of the following is not a poisonous snake?
- (A) Viper (B) King Cobra
(C) Python (D) Sea Snake
145. Biogenetic law is proposed by
- (A) Ernst Haeckel (B) Charles Darwin
(C) Hardy-Weingberg (D) Aristotle
146. T H Morgan carried out experiments in which animal to confirm that genes are stored in chromosomes
- (A) House Fly (B) Aedes Mosquito
(C) Fruit Fly (D) Anopheles Mosquito
147. Maltose consists of
- (A) Glucose and Fructose (B) Glucose and Galactose
(C) Fructose and Galactose (D) Two Molecules of Glucose
148. Which among the following is not a Pyrimidine?
- (A) Cytosine (B) Adenine
(C) Thymine (D) Uracil
149. Example for Involuntary muscles
- (A) Skeletal Muscles (B) Cardiac Muscles
(C) Both Skeletal and Cardiac muscles (D) None of the above
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150. Bombay Duck is a/an
- (A) Insect (B) Bird
(C) Whale (D) Fish
151. Lichen is an example of mutualistic relationship between
- (A) Algae and Fern (B) Fungi and Fern
(C) Algae and Fungi (D) Fern and Wood
152. Kwashiorkor is a disease due to malnutrition of
- (A) Carbohydrate (B) Protein
(C) Fat (D) Minerals
153. Earth's largest carbon sink is
- (A) Forest (B) Fossil
(C) Ocean (D) Atmosphere
154. Formation of Ozone Hole is maximum over
- (A) China (B) Antarctica
(C) India (D) USA
155. Bio-magnification refers to
- (A) Growth of an organism due to food consumption
(B) Increase in Population size
(C) Blowing up of environmental issues by man
(D) Increase in the concentration of non-degradable pollutants as they pass through the food chain
156. Taj Mahal is being affected by
- (A) Air Pollution (B) Water Pollution
(C) Noise Pollution (D) Soil Pollution
157. The phasing out of substances that deplete ozone was proposed in
- (A) Kyoto Protocol (B) Montreal Protocol
(C) Nagoya Protocol (D) Ramsar Convention
158. The number of Cervical Vertebra in Mammals is
- (A) 10 (B) 9
(C) 8 (D) 7
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159. The longest bone in human body is
- (A) Tibia (B) Scapula
(C) Femur (D) Humerus
160. Reduction Division happens in
- (A) Mitosis (B) Meiosis
(C) Mitosis and Meiosis (D) None of the above
161. The condition in which extra Chromosome in 21 (Trisomy) is known as
- (A) Klinefelter Syndrome (B) Down Syndrome
(C) Haemophilia (D) Point mutation
162. The resolving power of telescope depends upon
- (A) Length of telescope (B) Diameter of objective
(C) Focal length of objective (D) Focal length of eye-piece
163. The chromosomal proteins, histones are rich in
- (A) Arginine but not lysine (B) Tryptophan and histidine
(C) Lysine but not arginine (D) Lysine and arginine
164. What is the full form of SCUBA diving
- (A) Self Contained Breathing Apparatus (B) Self Controlled Breathing Apparatus
(C) Self Combined Breathing Apparatus (D) Self Controlled Breathing Arrangement
165. The Skeleton of corals is made up of.
- (A) Calcium silicate (B) Calcium carbonate
(C) Calcium phosphate (D) Calcium peroxide
166. Which among the following is not a Stop Codon?
- (A) UAA (B) UGA
(C) UAG (D) UGG
167. The mammalian egg is covered by a membrane immediately after ovulation, known as
- (A) Corona radiata (B) Vitelline membrane
(C) Zona pellucida (D) Graafian follicle

168. WIDAL test is used to diagnose the disease
- (A) Cholera (B) Malaria
(C) Typhoid (D) Dysentery
169. Chromosomes in birds are designated as
- (A) ZZ and ZW (B) XX and XY
(C) XX and XO (D) ZZ and ZO
170. Ribozyme is
- (A) RNA with extra phosphate (B) RNA without phosphate
(C) RNA with sugar (D) RNA with enzyme activity
171. The male hormone testosterone is secreted by
- (A) Sperms (B) Seminiferous tubules
(C) Leydig cells (D) Prostrate gland
172. Biological action of estrogen includes all of the following except
- (A) Decreased glucose tolerance (B) Increased serum cholesterol
(C) Stimulation of follicular growth (D) Delayed bone loss at menopause
173. What is the breathing apparatus of cockroach?
- (A) Lung (B) Gills
(C) Booklung (D) Trachea
174. Which one of the following is a micro-nutrient?
- (A) Iron (B) Magnesium
(C) Calcium (D) Oxygen
175. Which of the following are called critical elements?
- (A) Nitrogen, Phosphorous and Potassium
(B) Zinc, Iron and Copper
(C) Chlorine, Nitrogen and Hydrogen
(D) Oxygen, Nitrogen and Hydrogen
176. Most essential source of calcium and phosphate is
- (A) Meat (B) Egg
(C) Cheese (D) Milk

177. Which of the following is a nutritionally essential amino acid for humans?

- (A) Phenylalanine (B) Serine
(C) Aspartic acid (D) Glycine

178. During prolong starvation, body derives nutrition from storage of

- (A) Spleen (B) Lungs
(C) Subcutaneous fat (D) Liver and lungs

179. Which of the following has single stranded DNA?

- (A) $\phi \times 174$ coliphage (B) Reovirus
(C) TMV (D) Wound tumour virus

180. Epiboly involves

- (A) Inward movement of macromeres
(B) Overgrowth of micromeres over macromeres
(C) Rapid proliferation of cells at the rim of the blastopore
(D) Invagination of cells at the blastopore

181. The structural arrangement of carbon atoms in diamond is

- (A) Tetrahedral (B) Hexagonal
(C) Octahedral (D) Triangular

182. The atomic number of an atom refers to

- (A) The total number of protons and neutrons in its nucleus
(B) The number of protons in its nucleus
(C) The number of neutrons in its nucleus
(D) The total number of electrons, protons and neutrons in it

183. Electromagnetic radiation with minimum wavelength is

- (A) Ultraviolet rays (B) x-rays
(C) Infrared rays (D) γ -rays

184. In endothermic reactions the reactants

- (A) Have less energy than the products
(B) Have more energy than the products
(C) Have the same energy as the products
(D) Are at lower temperature than the products

185. Lichens are ecologically important because
- (A) They are associated with algae and fungi
 - (B) They are associated with mycorrhizal roots
 - (C) They are pioneers and pass xeric conditions successfully
 - (D) They can grow in polluted area
186. The correct order of ornithine cycle of urea formation is
- (A) Ornithine, arginine, citrulline
 - (B) Ornithine, citrulline, arginine
 - (C) Ornithine, arginine, urinine
 - (D) Ornithine, urinine, arginine
187. RBC in mammals have no nucleus because
- (A) It has degenerated during development
 - (B) They do not have nucleus since early
 - (C) Nucleus is harmful for RBC
 - (D) Nucleus decreases surface area
188. The reverse transcriptase is also called
- (A) RNA dependent DNA Polymerase
 - (B) DNA dependent RNA polymerase
 - (C) Both (A) and (B) are correct
 - (D) None of these
189. Oncogenic viruses are harmful in
- (A) Provirus state
 - (B) Lytic phase
 - (C) Prophage state
 - (D) Hybrid state
190. Vitamin K is required in the process of blood clotting for
- (A) Change of prothrombin to thrombin
 - (B) Synthesis of prothrombin
 - (C) Change of fibrinogen to fibrin
 - (D) Formation of thromboplastin
191. _____ is not a bio-fertilizer.
- (A) Agrobacterium
 - (B) Nostoc
 - (C) Rhizobium
 - (D) Mycorrhiza
192. Consider the following statements made about the sedimentary rocks
- (1) Sedimentary rocks are formed at earth's surface by the hydrological system
 - (2) The formation of the sedimentary rocks involves the weathering of pre-existing rocks
 - (3) Sedimentary rocks contain fossils
 - (4) Sedimentary rocks typically occur in layers
- Which of these statements are correct?
- (A) 1 and 2
 - (B) 1 and 4
 - (C) 2, 3 and 4
 - (D) 1, 2, 3 and 4

193. All the following features are likely to occur in a limestone region expect
- (A) Coombs (B) Underground rivers
(C) Ox-bow lakes (D) Clints
194. A certain human abnormal individual showing 2 Barr bodies in the somatic cells, would be
- (A) Only a male with one X-chromosome
(B) Only a female with two X-chromosomes
(C) Only a male having two Y-chromosomes
(D) Either a male or a female having three X-chromosome
195. The Gutenberg discontinuity is between
- (A) The crust and the mantle (B) The upper and the lower mantles
(C) The outer core and the lower mantle (D) The inner and outer cores
196. In Eutheria, if the fertilized ovum is implanted in the uterine wall, then further development of the foetus cannot occur
- (A) Without the formation of placenta (B) In the presence of progesterone
(C) In the presence of foetal membranes (D) With mother's hormones
197. The oral contraceptive pill used by women
- (A) Permits ovulation, but prevents fertilization
(B) Permits ovulation, but blocks luteinization
(C) Permits fertilization but interferes with implantation
(D) Inhibits ovulation by suppressing pituitary LH secretion
198. After fertilization, the vitelline membrane gets separated from the plasma membrane. This is
- (A) To prevent polyspermy
(B) To facilitate cleavage
(C) To maintain osmotic tension
(D) For free cell movement during gastrulation
199. The type of parthenogenesis in which the male develops from unfertilized egg and female from fertilized egg, is known as
- (A) Thelytoky (B) Arrhenotoky
(C) Gynogenesis (D) Apospory
200. The fertilized egg in human female gets implanted in the uterus after
- (A) two months of fertilization (B) about one week days of fertilization
(C) one month of fertilization (D) three weeks of fertilization

