

BOTANY (Final)

1. How many pairs of chromosomes are there in *Drosophila melanogaster*?
 - A. 2
 - B. 3
 - C. 5
 - D. 4
2. The point mutation which occurs due to the replacement of a single nucleotide by another nucleotide is called
 - A. Substitution mutation
 - B. Insertion mutation
 - C. Deletion mutation
 - D. Deficiency mutation
3. Which one of the following form the trunk of banana?
 - A. Rhizome
 - B. Pseudostem
 - C. Bundle of leaves
 - D. Inflorescence
4. Which one of the following subcell is involved in the protein biosynthesis?
 - A. Golgi body
 - B. Ribosome
 - C. Vacuole
 - D. Cell wall
5. Which one of the following elements finds use as a fungicide?
 - A. Boron
 - B. Copper
 - C. Zinc
 - D. Magnesium
6. Chloroplasts are found in
 - A. Upper epidermis
 - B. Lower epidermis
 - C. Guard Cell
 - D. Cuticle

7. *Withania somnifera* belongs to the family
- A. Malvaceae
 - B. Magnoliaceae
 - C. Solanaceae
 - D. Sterculiaceae
8. Iodine has the capacity to turn this biomolecule into blue
- A. Protein
 - B. Fat
 - C. Starch
 - D. Vitamin A
9. The method of reproduction in pteridophytes is through
- A. Seeds
 - B. Fruits
 - C. Spores
 - D. Fossils
10. The germination of pinus seed is
- A. Hypogeal
 - B. Epigeal
 - C. Vivipary
 - D. Ovipary
11. An important ingredient to prepare jam that is obtained from within the fruit is
- A. Lectin
 - B. Pectin
 - C. Glutelin
 - D. Albumin
12. Jaundice is cured by
- A. *Wedellia calendulacea*
 - B. *Phyllanthus niruri*
 - C. *Helianthus annus*
 - D. *Lactra saliva*

13. Which of the following seeds are used as weight by goldsmiths?
- A. *Butea frondosa*
 - B. *Clitoria ternata*
 - C. *Abutilon indicum*
 - D. *Abrus precatorius*
14. Phyllode is a modified leaf form that helps to
- A. Reduce transpiration
 - B. Increase water uptake
 - C. Reduce photosynthesis
 - D. Increase disease resistance
15. The interior of the leaf between upper and lower epidermis is called
- A. Mesophyll
 - B. Vascular bundle
 - C. Xylem
 - D. Phloem
16. Venation indicates the arrangement of
- A. Anthers in a flower
 - B. Veins in a leaf
 - C. Fruits in a bunch
 - D. Grains in a head
17. Development of fruits without fertilization is called as
- A. Apocorpy
 - B. Syncorpy
 - C. Polycorpy
 - D. Parthenocarpy
18. Stamens attached to the petals are termed as
- A. Episepalous
 - B. Epipetalous
 - C. Epitepalous
 - D. Polypetalous

19. Seedless fruits are seen in
- A. Banana
 - B. Grapes
 - C. Pine apple
 - D. All of the above
20. The maximum biodiversity in India occurs at
- A. Western Himalayas
 - B. North East Himalayas
 - C. Western Ghats
 - D. Eastern Ghats
21. Cambium is present in
- A. Dicot stem
 - B. Monocot stem
 - C. Dicot root
 - D. Dicot leaf
22. Gregore Johannes Mendel published the results of his experiment in the journal
- A. Genera Plantarum
 - B. Hortus Uplandicus
 - C. Flora Lapponica
 - D. Transactions of Natural History Society
23. In hybridization technique, emasculation means the removal of
- A. Stamen
 - B. Pistil
 - C. Corolla
 - D. Calyx
24. In a cross between two individuals pure for contrasting characters of a pair, the character which is not represented in F_1 generation is the
- A. Dominant character
 - B. Recessive character
 - C. Incomplete dominant character
 - D. Intermediate character

25. The chemical name for milk sugar is
- A. D-Galactose
 - B. α -D Galactosyl pyranose
 - C. D- Glucose
 - D. None of the above
26. Cells of higher plants are grown artificially in laboratory conditions using the technique of
- A. Molecular cloning
 - B. Gene cloning
 - C. Tissue culture
 - D. Hybridization
27. An example of fusogen is
- A. Methanol
 - B. Ethyl alcohol
 - C. Polyethylene alcohol
 - D. Polyethylene glycol (PEG)
28. Transposon was discovered by
- A. Darwin
 - B. Barbara McClintok
 - C. Monod
 - D. Watson
29. A popular technique to amplify thousands of copies of a DNA sequence is
- A. RFLP
 - B. PCR
 - C. Translation
 - D. Duplication
30. The type of light microscopy used to visualize living cells is
- A. Fluorescence microscopy
 - B. Electron microscopy
 - C. Phase-contrast microscopy
 - D. Confocal scanning microscopy

31. mRNA molecule specifying for more than one polypeptide is called
- A. Polysomic
 - B. Polycistronic
 - C. Polygenic
 - D. None of the above
32. Which organelle has only single membrane?
- A. Mitochondria
 - B. Peroxisomes
 - C. Chloroplasts
 - D. Nucleus
33. The plant with the smallest genome is
- A. Maize
 - B. *Arabidopsis thaliana*
 - C. Mungbean
 - D. Rice
34. DNA synthesis occurs during
- A. G1 phase
 - B. G2 phase
 - C. S phase
 - D. M phase
35. Regulated processes leading to cell death via a series of well-defined morphological changes is termed as
- A. Apolysis
 - B. Apoptosis
 - C. Apomixis
 - D. Endoduplication
36. Trypsin inhibitor is present in
- A. Wheat
 - B. Paddy
 - C. Maize
 - D. Soybean

37. DNA replication is
- A. Semi-discontinuous
 - B. Semi-conservative
 - C. Fully conservative
 - D. DNA degradation
38. Meiosis is
- A. Reduction division
 - B. Equal division
 - C. Unreduction division
 - D. Nuclear fission
39. The character that appears in F1 is called
- A. Recessive
 - B. Dominant
 - C. Incomplete dominance
 - D. None of the above
40. Enzymatic isolation of protoplasts was first demonstrated by
- A. Zimmermann
 - B. Vasil
 - C. Cocking
 - D. Murashige
41. A synthetic plant hormone is
- A. IAA
 - B. IBA
 - C. 2, 4-D
 - D. ABA
42. Lycopene is the coloring pigment of
- A. Carrot
 - B. Tomato
 - C. Papaya
 - D. Lime

43. Agar-Agar is obtained from
- A. Ficus
 - B. Polysiphonia
 - C. Gelidium
 - D. Laminaria
44. Which of the algae is responsible for red color of red sea?
- A. *Chlamydomonas braui*
 - B. *Trichodesmium erythrium*
 - C. *Ulothrix zonata*
 - D. *Gelidium sps*
45. Increase in girth in woody plants is due to the activity of
- A. Cork cambium
 - B. Procambium
 - C. Fascicular cambium
 - D. All of the above
46. Casparian strips are present in
- A. Pericycle
 - B. Endodermis
 - C. Hypodermis
 - D. Collenchyma
47. Grafting is not possible in monocotyledons because they
- A. Have parallel bundles
 - B. Lack cambium
 - C. Are herbaceous
 - D. Have scattered vascular bundles
48. rRNA synthesis takes place in
- A. Nucleus
 - B. Mitochondrion
 - C. Nucleolus
 - D. Cytosol

49. Name the biological source of Iodine
- A. Sea water
 - B. *Oedogonium*
 - C. Laminaria
 - D. None of the above
50. H_2O_2 clearance inside the cell is carried out by
- A. Glyoxysome with enzyme isocitrate lyase
 - B. Peroxisome with enzyme lipase
 - C. Glyoxysome with enzyme catalase
 - D. Peroxisome with enzyme amino oxidase
51. All are particulate pollutants except
- A. dust
 - B. ozone
 - C. Soot
 - D. smoke
52. The true statement about 'green house effect' is that it is
- A. Caused by combinatin of many gases
 - B. Caused by CO_2
 - C. Caused only by CO_2 , CFC, CH_4 and NO_2 gases
 - D. None of the above
53. Carbon monoxide is poisonous because it
- A. Reacts with O_2
 - B. Inhibits glycolysis
 - C. Makes nervous system inactive
 - D. Reacts with haemoglobin
54. Family Labiatae can be easily identified with the help of
- A. Spurred corolla and quadrangular stem
 - B. Verticillaster inflorescence and many stamens
 - C. Gynobasic style and four ovules
 - D. Two stigmas and regular corolla

55. What is the edible part in Jack fruit?
- A. Thalamus
 - B. Ovary (ripened)
 - C. Perianth and seeds
 - D. Fleshy aril
56. Phyllocade is seen in
- A. Rice
 - B. *Caesalpinia*
 - C. Casuarina
 - D. Cotton
57. The process of photorespiration in plants leads to
- A. Release of enhanced levels of O₂
 - B. Removal of waste metabolites
 - C. Lowering of the efficiency of photosynthetic carbon fixation
 - D. Enhanced plant yield
58. Under water stress, the leaves of plants are found to contain higher concentration of
- A. Gibberellic acid
 - B. Cytokinins
 - C. Auxins
 - D. Absciscic acid
59. ³²P is one of the radioactive isotopes commonly used in biological studies. Its half-life is
- A. 14.3 days
 - B. 87.5 days
 - C. 8.07 days
 - D. 3.2 days
60. Which one of the following bacteria has found extensive use in genetic engineering work in plants?
- A. *Agrobacterium tumefaciens*
 - B. *Clostridium septicum*
 - C. *Xanthomonas citri*
 - D. *Bacillus coagulens*

61. Which one of the following techniques is employed to detect the proteins of a particular specificity?
- A. Western blotting
 - B. Southern blotting
 - C. Northern blotting
 - D. Slot blotting
62. The protein in the pollen wall that causes allergy is contributed by
- A. Exine
 - B. Pollen cytoplasm
 - C. Tapetum
 - D. Intine
63. Fluorescein diacetate is used to test pollen viability based on the activity of which one of the following enzymes?
- A. Catalase
 - B. Amylase
 - C. Esterase
 - D. Callase
64. Restriction enzymes are used in genetic engineering because
- A. They can join different DNA fragments
 - B. They can cleave DNA at a specific target site
 - C. They are nucleases that cut DNA at variable sites
 - D. They are proteolytic enzymes which can degrade harmful enzymes
65. The hydrostatic pressure developed within a plant cell through endo-osmosis and exerted on its wall is termed as
- A. Wall pressure
 - B. Osmotic pressure
 - C. Suction pressure
 - D. Turgor pressure
66. In Nature, the orchid seeds germinate only in association with
- A. Myxomycetes
 - B. Mycorrhiza
 - C. Blue green algae
 - D. Actinomycetes

67. Which is major factor contributing to loss of biodiversity?
- A. Habitat loss and fragmentation
 - B. Introduced species
 - C. Over exploitation of plants and animals
 - D. Industrial farming and forestry
68. The discipline dealing with the inheritance of characters is called
- A. Cytology
 - B. Evolution
 - C. Genetics
 - D. Embryology
69. *Puccinia graminis* causes in cereals one of the following diseases
- A. Blight
 - B. Gall
 - C. Rust
 - D. Wilt
70. Which of the following can only be viewed by electron microscopy?
- A. Viruses
 - B. Bacteria
 - C. Nuclei
 - D. Mitochondria
71. Which of the following units is used to measure energy?
- A. Joule
 - B. Mole
 - C. Watt
 - D. Meter
72. Which of the following is not a base used in DNA replication?
- A. Cytosine
 - B. Uracil
 - C. Thymine
 - D. Guanine

73. Which of the following molecules would not readily cross an intact cell membrane by simple diffusion?
- A. Water
 - B. Fatty acids
 - C. Ethanol
 - D. Glucose
74. The most widely used method for determining the purity of a protein is
- A. High pressure liquid chromatography (HPLC)
 - B. Ion exchange chromatography
 - C. Isoelectric focusing
 - D. Polyacrylamide gel electrophoresis (PAGE)
75. The normal cell cycle usually proceeds in the following sequence
- A. S phase – mitosis – G1 phase – G2 phase
 - B. S Phase – G1 phase – G2 phase - mitosis
 - C. G1 Phase - G2 phase – S phase - mitosis
 - D. Mitosis – G1 phase – S phase – G2 phase
76. Biochemical Oxygen Demand measures
- A. Pollution level
 - B. Industrial pollution
 - C. Dissolved oxygen needed by microbes to decompose organic waste
 - D. Degree of contamination
77. Phosphorous and Nitrogen ions generally get depleted in soil because they usually occur as
- A. Neutral ions
 - B. Negatively charged ions
 - C. Positively charged ions
 - D. Both positively and negatively charged but disproportionate mixture
78. What causes a green plant to bend towards light as it grows?
- A. Auxin accumulates on shaded side stimulating greater cell elongation
 - B. Because green plants are phototropic
 - C. Light stimulates plant cells on the lighted side to grow faster
 - D. Because green plants need light to carry on photosynthesis

79. The transmembrane region of a protein is likely to have
- A. A stretch of hydrophilic amino acids
 - B. Alternating hydrophilic and hydrophobic amino acids
 - C. A stretch of hydrophobic amino acids
 - D. A disulphide loop
80. The 'eyes' of the potato tuber are
- A. Root buds
 - B. Axillary buds
 - C. Flower buds
 - D. Shoot buds
81. Water moulds belongs to the Division
- A. Ascomycota
 - B. Basidiomycota
 - C. Chytridiomycota
 - D. Oomycota
82. Litmus which is used for the detection of acids or alkalies is obtained from
- A. Algae
 - B. Lichens
 - C. Fungi
 - D. Bacteria
83. Which one of the following is called as the 'brewers yeast'?
- A. *Saccharomyces cerevisiae*
 - B. *Saccharomyces ludwigi*
 - C. *Saccharomyces boulardii*
 - D. *Saccharomyces pastorianus*
84. Transcription is the transfer of genetic information from
- A. RNA to cDNA
 - B. t-RNA to mRNA
 - C. DNA to mRNA
 - D. mRNA to protein

85. Transpiration is least in
- A. High wind velocity
 - B. Good soil moisture
 - C. Dry environment
 - D. High atmospheric humidity
86. Indole 3-acetic acid is chemically similar to the amino acid
- A. Methionine
 - B. Tryptophan
 - C. Proline
 - D. Phenylalanine
87. The root in mangrove tree is
- A. Tuberous
 - B. Buttress
 - C. Respiratory
 - D. Fibrous
88. The process of pinocytosis means
- A. Cells excreting fluids
 - B. Cells engulfing solids
 - C. Cells engulfing bacteria
 - D. Cells engulfing fluids
89. If the endosperm cells of an angiosperm seed are pentaploid, then such a seed may have been formed by which of the following parents?
- A. Pentaploid female and pentaploid male
 - B. Triploid female and diploid male
 - C. Diploid male and tetraploid female
 - D. Triploid male and diploid female
90. Fungi in the division Deuteromycota are characterized by the fact that
- A. A method of sexual reproduction has not been identified
 - B. They only reproduce sexually
 - C. They form sexual spores called deuterospores
 - D. They are incapable of sexual reproduction

91. Which one of the following statements about ATP is correct?
- A. ATP is considered a low energy phosphate compound
 - B. Hydrolysis of ATP is a strongly exergonic reaction
 - C. ATP cannot be taken up through cell membrane
 - D. ATP is present at high concentration in the cell
92. One thousand micrometers is equivalent to
- A. 0.1 millimeter
 - B. 10 millimeters
 - C. 1 millimeter
 - D. 100 millimeters
93. If an endosperm cell of an angiosperm contains 24 chromosomes, the number of chromosomes in each cell of the root will be
- A. 8
 - B. 16
 - C. 4
 - D. 24
94. Pericycle of roots gives
- A. Lateral roots
 - B. Mechanical support
 - C. Vascular bundles
 - D. Adventitious roots
95. Which of the following is a parasitic alga?
- A. *Sargassum*
 - B. *Cladophora*
 - C. *Oedogonium*
 - D. *Celphaleuros*
96. The ploidy of endosperm in Gymnosperms is
- A. Haploid
 - B. Diploid
 - C. Triploid
 - D. Polyploid

97. Lichens serve as an indicator of pollution by
- A. NO_3
 - B. CO_2
 - C. CO
 - D. SO_2
98. Carbon dioxide joins the photosynthetic pathway in
- A. PS I
 - B. PS II
 - C. Dark reaction
 - D. Light reaction
99. In grafting scion forms
- A. Root system
 - B. Shoot system
 - C. Hybrid plant
 - D. Chimeric plant
100. 'The energy available to do useful work' is a description of which of the following terms
- A. Free energy
 - B. Enthalpy
 - C. Kinetic energy
 - D. Entropy
101. Littoral zone is located along the
- A. Deserts
 - B. Mountain ranges
 - C. Sea
 - D. Rivers
102. Which of the following is not a member of the division *Ascomycota*?
- A. *Claviceps*
 - B. *Aspergillus*
 - C. *Penicillium*
 - D. *Rhizopus*

103. Azolla is used as biofertilizer as it has
- A. Higher humus and nitrates
 - B. Cyanobacteria
 - C. *Rhizobium*
 - D. Mycorrhiza
104. Which of the following pair of diseases is caused by virus?
- A. Typhoid and Tetanus
 - B. Cholera and Tuberculosis
 - C. Rabies and Measles
 - D. AIDS and Syphilis
105. A common structural feature of vessel elements and sieve tube elements is
- A. Thick secondary walls
 - B. Pores on lateral walls
 - C. Eucleate condition
 - D. Presence of 'P' protein
106. Which of the following statements about the functions of the cell membrane is not correct?
- A. Cell membranes are selectively permeable to most molecules
 - B. Cell membranes are passively not permeable to inorganic ions
 - C. Cell membrane always maintains the shape of the cell
 - D. Cell membrane retain the contents of the cell
107. Identify non-membranous organelle from the following
- A. Ribosome
 - B. Endoplasmic reticulum
 - C. Nucleus
 - D. Chloroplast
108. The fully formed male gametophyte of angiosperms contains
- A. One tube nucleus, one vegetative cell and one generative cell
 - B. One generative cell, one tube cell and one stalk cell
 - C. One generative cell, one tube cell and one body cell
 - D. One vegetative nucleus, and two male gametes

109. Why is vivipary an undesirable character for annual crop plants?
- A. It reduces the vigour of the plant
 - B. The seeds cannot be stored under normal conditions for the next season
 - C. It adversely affects the fertility of the plant
 - D. The seeds exhibit long dormancy
110. During respiration yeast converts glucose into
- A. Ethanol and oxygen
 - B. Lactic acid and CO₂
 - C. Ethanol and CO₂
 - D. Ethanol and water
111. A transgenic crop which may help in solving the problem of night blindness in developing countries is
- A. Golden rice
 - B. Bt soy bean
 - C. 'Flavr Savr' tomato
 - D. Starlink maize
112. The flax fibres are obtained from
- A. *Cannabis sativa*
 - B. *Cocos nucifera*
 - C. *Crotolaria juncea*
 - D. *Linum usitatissimum*
113. Correct order of geological era is
- A. Archaeozoic→Cenozoic→ Paleozoic
 - B. Cenozoic→Paleozoic→ Archaeozoic
 - C. Paleozoic→ Mesozoic→Cenozoic
 - D. Mesozoic→Archaeozoic→ Cenozoic
114. Organization of stem apex into tunica and corpus is mainly determined by
- A. Planes of cell division
 - B. Rate of cell grown
 - C. Rate of shoot tip grown
 - D. Regions of meristematic activity

115. An example of a heterozygous but homogenous population is
- A. Pure line
 - B. Synthetic variety
 - C. Inbreds
 - D. Hybrid variety
116. Jute is obtained from *Corchorus* sp. This is
- A. Phloem fiber
 - B. Xylem fiber
 - C. Surface fiber
 - D. Tracheo fiber
117. Dry indehiscent single-seeded fruit formed from bicarpellary syncarpous inferior ovary is
- A. Berry
 - B. Caryopsis
 - C. Cypsela
 - D. Cremocarp
118. Which of the following spores are characteristic of the black bread mould *Rhizopus*?
- A. Arthrospore and Blastospore
 - B. Sporangiospore and Zygosporangium
 - C. Ascospore and Zygosporangium
 - D. Arthrospore and Ascospore
119. The effect of gaseous pollutants depend mainly on their –
- A. Longevity in air
 - B. Ability to settle down
 - C. Hydrophobic nature
 - D. Solubility in water
120. Spore mother cell in Bryophytes is
- A. Diploid
 - B. Haploid
 - C. Polyploid
 - D. Triploid

121. Which of the following is a disadvantage of most of the renewable energy sources?
- A. Highly polluting
 - B. Unreliable supply
 - C. High waste disposal cost
 - D. High running cost
122. The classification that is exhaustive and broad based
- A. Phylogenetic system
 - B. Natural system
 - C. Modern system
 - D. Artificial system
123. The element found in all amino acids that is not found in carbohydrates is
- A. Oxygen
 - B. Hydrogen
 - C. Carbon
 - D. Nitrogen
124. Smooth endoplasmic reticulum is the site of
- A. Protein synthesis
 - B. Lipid synthesis
 - C. Amino acid synthesis
 - D. Carbohydrate synthesis
125. Electron transport system is located in mitochondrial
- A. Inner membrane
 - B. Outer membrane
 - C. Inter membrane space
 - D. Matrix
126. Accurate determination of water content in soil is made by
- A. Calcium carbide method
 - B. Sand bath method
 - C. Alcohol method
 - D. Oven-drying method

127. The dark reaction in photosynthesis is called so because
- A. It is light-independent
 - B. It cannot occur during day time
 - C. It occurs rapidly at night
 - D. Things cannot be seen during this period
128. Removal of hydrogen and CO_2 from substrate is called
- A. Decarboxylation
 - B. Reductive decarboxylation
 - C. Oxidative decarboxylation
 - D. Oxidation
129. The six most common atoms in organic molecules are
- A. C, H, O, He, Ca and K
 - B. C, H, N, O, P and S
 - C. C, H, O, Mn, Mg and S
 - D. C, H, N, O, P and K
130. Gregore Johannes Mendel did not observe linkage due to
- A. Independent assortment
 - B. Mutation
 - C. Synapsis
 - D. Crossing over
131. In Pteridophytes, reduction division occurs when
- A. Gametes are formed
 - B. Spores are formed
 - C. Prothallus is formed
 - D. Sex organs are formed
132. Viral genome attached to the bacterial genome is termed as
- A. Bacteriophage
 - B. Prophage
 - C. Lysophage
 - D. Virophage

133. Enzyme immobilization is
- A. Changing a soluble enzyme into insoluble state
 - B. Changing pH so that enzyme is not able to carry out its function
 - C. Conversion of an active enzyme into inactive form
 - D. Providing enzyme with protective covering
134. Population of genetically similar plants obtained from same individual by vegetative method
- A. Propagules
 - B. Buds
 - C. Clone
 - D. Callus
135. Enzymes having slightly different molecular structure but performing identical activity are
- A. Coenzymes
 - B. Apoenzymes
 - C. Holoenzymes
 - D. Isoenzymes
136. Intellectual Property Rights protect the use of information and ideas that are of
- A. Moral value
 - B. Commercial value
 - C. Ethical value
 - D. Social value
137. Pyrenoids are
- A. Starch grains surrounded by oil droplets
 - B. Protein surrounded by starch grains
 - C. Protein surrounded by oil droplets
 - D. Starch grains surrounded by protein
138. Pasteurization is a
- A. Low temperature treatment
 - B. Steaming treatment
 - C. High temperature treatment
 - D. Ultralow temperate treatment

139. Protonema is found in
- A. *Polytrichum*
 - B. *Porella*
 - C. *Marchantia*
 - D. *Anthoceros*
140. Ozone is found in
- A. Exosphere
 - B. Ionosphere
 - C. Stratosphere
 - D. Mesosphere
141. A tautonym is –
- A. Same name for genus and species
 - B. Non-latinised name
 - C. Common name used as scientific name
 - D. Unscientific explanation of a phenomenon
142. Some of the enzymes, which are associated in converting fats into carbohydrates, are present in
- A. Glyoxysomes
 - B. Liposomes
 - C. Microsomes
 - D. Golgi bodies
143. How many hydrogen bonds form between U and A in a Watson-Crick base pair interactions?
- A. 1
 - B. 2
 - C. 3
 - D. 4
144. Phytochrome is involved in
- A. Photosynthesis
 - B. Photorespiration
 - C. Geotropism
 - D. Photoperiodism

145. Why are haploids superior to diploids in study of mutations?
- A. They have smaller number of chromosomes
 - B. They have shorter life time
 - C. They allow expression of recessive mutation
 - D. They can be produced large number very easily
146. What is the correct descending sequence of taxonomic categories?
- A. Class, order, division, family, species, tribe
 - B. Family, order, genus, tribe, division, class
 - C. Tribe, genus, class, division, family, order
 - D. Division, class, order, family, tribe, genus
147. The negative charge of DNA is due to
- A. Deoxy ribose sugar
 - B. Sugar, phosphate and amino acid
 - C. Phosphate group
 - D. Nitrogen bases particularly Adenine
148. Which of the following is best suited method for production of virus-free plants?
- A. Embryo culture
 - B. Meristem culture
 - C. Ovule culture
 - D. Callus culture
149. Acid rains are produced by
- A. Excess NO_2 and SO_2 from burning fossil fuels
 - B. Excess production of NH_3 by industry and coal gas
 - C. Excess release of carbon monoxide by incomplete combustion
 - D. Excess formation of CO_2 by combustion and animal respiration
150. A character is determined by many genes and does not show discrete variation and is known as
- A. Qualitative character
 - B. Quantitative character
 - C. Pseudo dominance
 - D. Multiple allelic character
