BOTANY PG

1. The non-protein constituent of enzymes is termed as

|  |  |
| --- | --- |
| (A) | Apoenzyme |
| (B) | Holoenzyme |
| (C) | Prosthetic group |
| (D) | Isoenzyme |

2. Agar-agar is obtained from

|  |  |
| --- | --- |
| (A) | Rhodophyceae |
| (B) | Phaeophyceae |
| (C) | Cyanophyceae |
| (D) | Chlorophyceae |

3. Term to denote the reduction division is

|  |  |
| --- | --- |
| (A) | Amitosis |
| (B) | Mitosis |
| (C) | Meiosis |
| (D) | Budding |

4. Wounding of plant organs results in

|  |  |
| --- | --- |
| (A) | Decrease in the rate of respiration |
| (B) | Increase in the rate of respiration |
| (C) | Inhibition of respiration |
| (D) | Downregulation of respiration |

5. Respiration is an

|  |  |
| --- | --- |
| (A) | Exothermic process |
| (B) | Endothermic process |
| (C) | Endergonic process |
| (D) | Anabolic process |

6. Which one among the following enzymes is employed in Genetic Engineering?

|  |  |
| --- | --- |
| (A) | Phosphatase  |
| (B) | α-Amylase |
| (C) | Lipase |
| (D) | Restriction endonuclease |

7. Carrot is an example of

|  |  |
| --- | --- |
| (A) | Flower |
| (B) | Fruit |
| (C) | Taproot |
| (D) | Sporangiophore  |

8. The bread wheat *Triticum aestivum*, that is commonly consumed all over the world, is

|  |  |
| --- | --- |
| (A) | Hexaploid |
| (B) | Tetraploid |
| (C) | Triploid |
| (D) | Diploid |

9. In Plant Biotechnology, PEG is employed in

|  |  |
| --- | --- |
| (A) | Protoplast fusion |
| (B) | Cell culture preparation |
| (C) | Protoplast isolation |
| (D) | Sphaeroplast isolation |

10. The Universal Chlorophyll Pigment which is present in green plants is

|  |  |
| --- | --- |
| (A) | Chlorophyll a |
| (B) | Chlorophyll b |
| (C) | Chlorophyll c |
| (D) | Chlorophyll d |

11. N2 fixation in the soil substratum is carried out by

|  |  |
| --- | --- |
| (A) | Virus |
| (B) | Yeast |
| (C) | Bacteria |
| (D) | Protozoa |

12. The Okazaki fragments are sealed by one among the following enzymes

|  |  |
| --- | --- |
| (A) | Ligase |
| (B) | Nuclease |
| (C) | Primase |
| (D) | Topoisomerase |

13. Water in plants is transported by

|  |  |
| --- | --- |
| (A) | Xylem |
| (B) | Epidermis |
| (C) | Phloem |
| (D) | Cambium |

14. Introns are removed by a process of

|  |  |
| --- | --- |
| (A) | Splicing |
| (B) | Transcription |
| (C) | Translation |
| (D) | Transduction  |

15. A synthetic auxin is

|  |  |
| --- | --- |
| (A) | Indole-3-acetic acid (IAA) |
| (B) | Benzylaminopurine (BAP) |
| (C) | 2,4-Dichlorophenoxyacetic acid (2,4-D) |
| (D) | Abscisic acid (ABA) |

16. Two monosaccharides are linked by

|  |  |
| --- | --- |
| (A) | Hydrogen bond |
| (B) | Peptide bond |
| (C) | Glycosidic bond |
| (D) | Phosphodiester bond |

17. Which one among the following is a polysaccharide?

|  |  |
| --- | --- |
| (A) | Glucose |
| (B) | Glycogen |
| (C) | Fructose |
| (D) | Lactose |

18. An organism with two identical alleles is termed as

|  |  |
| --- | --- |
| (A) | Dominant |
| (B) | Hybrid |
| (C) | Heterozygous |
| (D) | Homozygous |

19. Final electron acceptor in respiration is

|  |  |
| --- | --- |
| (A) | Hydrogen  |
| (B) | Oxygen |
| (C) | Cytochrome  |
| (D) | Phytochrome |

20. Metal ion found in chlorophyll molecule is

|  |  |
| --- | --- |
| (A) | Cobalt |
| (B) | Zinc |
| (C) | Magnesium |
| (D) | Iron |

21. The loading of phloem during translocation is referred as

|  |  |
| --- | --- |
| (A) | Elongation of phloem cells |
| (B) | Separation of phloem parenchyma |
| (C) | Strengthening of phloem fibers |
| (D) | Pouring of sugars into phloem |

22. Which one among the following bacteria is called as “natural genetic engineer”?

|  |  |
| --- | --- |
| (A) | *Agrobacterium tumefaciens* |
| (B) | *Agrobacterium radiobacter* |
| (C) | *Psueudomonas putida* |
| (D) | *Thermus aquaticus* |

23. Which one among the following cereal crops has the smallest genome?

|  |  |
| --- | --- |
| (A) | Maize |
| (B) | Barley |
| (C) | Rice |
| (D) | Wheat |

24. QTL stands for

|  |  |
| --- | --- |
| (A) | Quantitative trait locus |
| (B) | Qualitative trait locus |
| (C) | Quanta trait locus |
| (D) | Quantasome locus |

25. Which one among the following group of plants has respiratory roots?

|  |  |
| --- | --- |
| (A) | Mangroves |
| (B) | Epiphytes |
| (C) | Xerophytes |
| (D) | Submerged hydrophytes |

26. The head and tail of a chlorophyll molecule are made up of

|  |  |
| --- | --- |
| (A) | Pyrrole and tetrapyrrole |
| (B) | Porphyrine and phytin |
| (C) | Porphyrine and phytol |
| (D) | Tetrapyrrole and magnesium |

27. Process of water exudation through hydathodes is termed as

|  |  |
| --- | --- |
| (A) | Guttation |
| (B) | Transpiration |
| (C) | Evaporation |
| (D) | Bleeding |

28. Insectivorous plants grow in

|  |  |
| --- | --- |
| (A) | Nitrogen rich soil |
| (B) | Nitrogen deficient soil |
| (C) | Potassium deficient soil |
| (D) | Carbohydrate rich soil |

29. Eyes on potato tubers represent

|  |  |
| --- | --- |
| (A) | Rootlets |
| (B) | Nodes with buds |
| (C) | Scars |
| (D) | Sutures |

30. Which one among the following biomolecules is a vitamin?

|  |  |
| --- | --- |
| (A) | Abscisic acid |
| (B) | Glutamic acid |
| (C) | Folic acid |
| (D) | Linoleic acid |

31. Fungus without mycelium is

|  |  |
| --- | --- |
| (A) | *Puccinia* sp. |
| (B) | *Rhizopus* sp*.* |
| (C) | *Saccharomyces* sp*.* |
| (D) | *Mucor* sp*.* |

32. Phytohormone which reduces transpiration rate by inducing stomatal closure is

|  |  |
| --- | --- |
| (A) | Abscisic acid |
| (B) | Ethylene |
| (C) | Cytokinin |
| (D) | Auxin |

33. First CO2 receptor in C4 plants is

|  |  |
| --- | --- |
| (A) | PGA |
| (B) | PEP |
| (C) | RuBP |
| (D) | NAA |

34. The holistic components of an ecosystem consists of

|  |  |
| --- | --- |
| (A) | Trees and weeds |
| (B) | Plants and animals |
| (C) | Man and plants |
| (D) | Biotic and abiotic |

35. Ribozyme which exhibits enzymatic activity belongs to one among the following types of biomolecule

|  |  |
| --- | --- |
| (A) | Protein |
| (B) | RNA  |
| (C) | DNA |
| (D) | Phytosterol  |

36. Root cap is not found in

|  |  |
| --- | --- |
| (A) | Mesophytes |
| (B) | Hydrophytes |
| (C) | Xerophytes |
| (D) | Halophytes  |

37. Soil salinity is measured by

|  |  |
| --- | --- |
| (A) | Potometer |
| (B) | Porometer |
| (C) | Conductivity meter |
| (D) | Calorimeter |

38. BLAST is a tool for

|  |  |
| --- | --- |
| (A) | DNA sequence search |
| (B) | DNA sequence alignment |
| (C) | Protein sequence alignment |
| (D) | Genetic diversity analysis |

39. First edible vaccine was developed in

|  |  |
| --- | --- |
| (A) | Banana |
| (B) | Tomato |
| (C) | Rice |
| (D) | Papaya |

40. Phytohormone which does not occur naturally is

|  |  |
| --- | --- |
| (A) | Cytokinin |
| (B) | 2, 4-D |
| (C) | Gibberellic acid  |
| (D) | IAA |

41. The phytohormone which induces triple response phenotype in seedlings is

|  |  |
| --- | --- |
| (A) | GA3 |
| (B) | ABA |
| (C) | IAA |
| (D) | C2H4 |

42. Simplest type of reproduction in plants is found in

|  |  |
| --- | --- |
| (A) | *Ulothrix* sp*.* |
| (B) | *Nostoc* sp*.* |
| (C) | *Chlamydomonas* sp*.* |
| (D) | *Spirogyra* sp*.* |

43. Heterosis refers to

|  |  |
| --- | --- |
| (A) | Hybrid sterility |
| (B) | Hybrid selection |
| (C) | Hybrid incompatibility |
| (D) | Hybrid vigour |

44. Which one among the following is an example of RNA-virus?

|  |  |
| --- | --- |
| (A) | SV-40 |
| (B) | T2 Phage |
| (C) | TMV |
| (D) | Adenovirus |

45. Who was the famous palaeobotanist from India?

|  |  |
| --- | --- |
| (A) | P. Parija |
| (B) | Birbal Sahni |
| (C) | P. Maheswari |
| (D) | S. R. Kashyap |

46. Enzyme used in PCR is

|  |  |
| --- | --- |
| (A) | RNA-polymerase |
| (B) | Taq polymerase  |
| (C) | DNA-ligase |
| (D) | Restriction endonuclease |

47. *Bt* cotton is a genetically engineered plant with one of the following traits

|  |  |
| --- | --- |
| (A) | Drought tolerance |
| (B) | Insect pest resistance |
| (C) | Herbicide resistance |
| (D) | Photoperiod insensitivity |

48. The correct sequence of taxa is

|  |  |
| --- | --- |
| (A) | Division, order, class, family |
| (B) | Division, class, order, family |
| (C) | Class, order, division, family |
| (D) | Family, class, order, division |

49. Apple belongs to the family

|  |  |
| --- | --- |
| (A) | Apocyanaceae |
| (B) | Apiaceae |
| (C) | Scrophulariaceae |
| (D) | Rosaceae |

50. Caryopsis type of fruit is seen in

|  |  |
| --- | --- |
| (A) | Rosaceae |
| (B) | Scrophulariaceae |
| (C) | Asteraceae |
| (D) | Poaceae |

51. Phylogenetic system of classification of plants was proposed by

|  |  |
| --- | --- |
| (A) | Bentham and Hooker |
| (B) | Engler and Prantl |
| (C) | Hutchinson |
| (D) | Carl von Linnaeus |

52. The most advanced monocotyledonous family is

|  |  |
| --- | --- |
| (A) | Poaceae |
| (B) | Orchidaceae |
| (C) | Cyperaceae |
| (D) | Amaryllidaceae |

53. Polyploidy in plants can be induced by treatment with

|  |  |
| --- | --- |
| (A) | Mustard gas |
| (B) | Colchicine |
| (C) | Nitrous acid |
| (D) | Ionizing radiation |

54. The culturing of plant cells in liquid medium along with agitation is called

|  |  |
| --- | --- |
| (A) | Hanging drop culture  |
| (B) | Agarised medium culture  |
| (C) | Micropropagation |
| (D) | Suspension culture |

55. Digitalin, is obtained from

|  |  |
| --- | --- |
| (A) | Common foxglove |
| (B) | Buckweed  |
| (C) | Belladonna |
| (D) | Sarpagandha |

56. The genetic material of Tobacco Mosaic Virus (TMV) is a

|  |  |
| --- | --- |
| (A) | dsDNA |
| (B) | ssRNA |
| (C) | ssDNA |
| (D) | dsRNA |

57. In dicotyledonous leaves, stomata are

|  |  |
| --- | --- |
| (A) | Arranged in straight rows |
| (B) | Absent |
| (C) | Scattered |
| (D) | Devoid of guard cells |

58. Acid concentration in CAM plants is found to be high during

|  |  |
| --- | --- |
| (A) | Night |
| (B) | Dawn |
| (C) | Twilight period  |
| (D) | Daytime |

59. IAA is chemically similar to one among the following amino acids

|  |  |
| --- | --- |
| (A) | Proline |
| (B) | Methionine |
| (C) | Phenylalanine |
| (D) | Tryptophan |

60. The light reaction in photosynthesis is also called

|  |  |
| --- | --- |
| (A) | TCA cycle |
| (B) | Calvin cycle |
| (C) | Hill reaction |
| (D) | Mendelian cycle |

61. Kranz anatomy is a typical character of

|  |  |
| --- | --- |
| (A) | C3 Plants |
| (B) | C4 Plants |
| (C) | C2 Plants |
| (D) | CAM Plants |

62. Totipotency means

|  |  |
| --- | --- |
| (A) | Flowering in culture medium |
| (B) | Development of fruit from a flower in culture conditions  |
| (C) | Development of a complete organism from a single cell in culture medium |
| (D) | Shoot formation in culture  |

63. Haploid plants can be obtained from

|  |  |
| --- | --- |
| (A) | Bud culture |
| (B) | Leaf culture |
| (C) | Root culture |
| (D) | Anther Culture |

64. Guttation is mainly due to

|  |  |
| --- | --- |
| (A) | Root pressure |
| (B) | Transpiration |
| (C) | Imbibition |
| (D) | Osmosis |

65. A cation that is cytotoxic and poisonous to plants is

|  |  |
| --- | --- |
| (A) | Hg |
| (B) | K |
| (C) | Zn |
| (D) | Fe |

66. Oxidative phosphorylation occurs during

|  |  |
| --- | --- |
| (A) | Photosynthesis |
| (B) | Protein synthesis |
| (C) | Lipid synthesis |
| (D) | Respiration |

67. As an immediate consequence of plasmolysis, a plant cell becomes

|  |  |
| --- | --- |
| (A) | Dead |
| (B) | Elongated |
| (C) | Flaccid |
| (D) | Turgid |

68. Which one among the following organic compounds is the most efficient water imbibant?

|  |  |
| --- | --- |
| (A) | Pectin |
| (B) | Agar |
| (C) | Cellulose |
| (D) | Lignin |

69. Cross of F1 hybrid with either parent is termed as

|  |  |
| --- | --- |
| (A) | Test cross  |
| (B) | Single cross |
| (C) | Back cross  |
| (D) | Somatic hybridization  |

70. Which virus was crystallized for the first time?

|  |  |
| --- | --- |
| (A) | Cauliflower mosaic virus  |
| (B) | Influenza virus |
| (C) | Tomato mosaic virus  |
| (D) | Tobacco mosaic virus (TMV) |

71. Coenocytic condition is found in

|  |  |
| --- | --- |
| (A) | Angiosperm pollen grain  |
| (B) | *Acetabularia* |
| (C) | *Chlamydomonas* |
| (D) | Angiosperm apical meristem  |

72. The stiffness of paddy straw is due to the presence of

|  |  |
| --- | --- |
| (A) | Hard fibres  |
| (B) | Silicon |
| (C) | Collenchyma  |
| (D) | Stone cells |

73. Pollinia are found in one of the following families

|  |  |
| --- | --- |
| (A) | Apocyanaceae  |
| (B) | Cucurbitaceae |
| (C) | Magnoliaceae |
| (D) | Asclepidaceae |

74. Wheat grain is a/an

|  |  |
| --- | --- |
| (A) | Seed  |
| (B) | Fruit |
| (C) | Embryo  |
| (D) | Endosperm |

75. *Cannabis sativa* is a plant species that yields

|  |  |
| --- | --- |
| (A) | Coir  |
| (B) | Natural oil |
| (C) | Hemp  |
| (D) | Wood |

76. Secondary phloem is nearer to

|  |  |
| --- | --- |
| (A) | Cambium  |
| (B) | Secondary xylem |
| (C) | Cortex |
| (D) | Pith |

77. Which part of the wood is living?

|  |  |
| --- | --- |
| (A) | Vessels  |
| (B) | Xylem fibres |
| (C) | Tracheids  |
| (D) | Rays and parenchyma |

78. Vestigial stomata are found in

|  |  |
| --- | --- |
| (A) | Floating hydrophytes  |
| (B) | Mesophytes |
| (C) | Submerged hydrophytes  |
| (D) | Xerophytes |

79. The cork of dicots is the derivative of

|  |  |
| --- | --- |
| (A) | Phellogen  |
| (B) | Phloem |
| (C) | Tracheids  |
| (D) | Vascular cambium |

80. A pollen grain is best defined as a

|  |  |
| --- | --- |
| (A) | Partially developed embryo  |
| (B) | Partially developed male gametophyte |
| (C) | Spore mother cell  |
| (D) | Male sperm cell |

81. In Monocots, male gametophyte is

|  |  |
| --- | --- |
| (A) | Microspore  |
| (B) | Nucellus |
| (C) | Megaspore  |
| (D) | Tetrad |

82. Premature leaf fall is caused due to the deficiency of

|  |  |
| --- | --- |
| (A) | Potassium  |
| (B) | Phosphorus |
| (C) | Nitrogen  |
| (D) | Calcium |

83. The stored food in germinating cotton seed is acted upon by

|  |  |
| --- | --- |
| (A) | Phosphatase |
| (B) | Lipase |
| (C) | Kinase |
| (D) | Trypsin |

84. In bacterial photosynthesis, electron donor is

|  |  |
| --- | --- |
| (A) | H2S  |
| (B) | NH2 |
| (C) | H2O  |
| (D) | H2SO4 |

85. Chloroplast contains the maximum quantity of

|  |  |
| --- | --- |
| (A) | Pyruvic carboxylase  |
| (B) | Hexokinase |
| (C) | RuBP carboxylase  |
| (D) | Pyruvic dehydrogenase |

86. Greater growth on the lower surface of a typical leaf is

|  |  |
| --- | --- |
| (A) | Nyctinasty  |
| (B) | Hyponasty |
| (C) | Epinasty  |
| (D) | Photonasty |

87. Photorespiration occurs in

|  |  |
| --- | --- |
| (A) | C3 plants  |
| (B) | C4 plants |
| (C) | Insectivorous plants  |
| (D) | Algae only |

88. Water droplets at the tip of the leaf are due to

|  |  |
| --- | --- |
| (A) | Cuticular transpiration  |
| (B) | Lenticular transpiration |
| (C) | Stomatal transpiration  |
| (D) | Guttation |

89. Photosynthesis cannot take place in

|  |  |
| --- | --- |
| (A) | Red light  |
| (B) | Blue light |
| (C) | Ultra-violet light |
| (D) | Yellow light |

90. Which one among the following is NOT correctly matched?

|  |  |
| --- | --- |
| (A) | Auxin - Cell enlargement |
| (B) | Gibberellins - α-Amylase synthesis |
| (C) | Cytokinin - Promotes ageing process |
| (D) | Ethylene - Fruit ripening |

91. The preferred source of Nitrogen for plants is

|  |  |
| --- | --- |
| (A) | Nitrates  |
| (B) | Nitrites |
| (C) | Ammonia  |
| (D) | Molecular nitrogen |

92. Apical dominance in higher plants is due to

|  |  |
| --- | --- |
| (A) | Ethylene |
| (B) | Brassinosteroid |
| (C) | Cytokinin |
| (D) | Auxin |

93. Most of the desert plants bloom during night time because

|  |  |
| --- | --- |
| (A) | Blooming is regulated by low temperature |
| (B) | They are sensitive to the phases of moon |
| (C) | Desert insects eat away flowers during day time |
| (D) | Desert insects are active during night time |

94. Exosmosis takes place when a plant cell is placed in

|  |  |
| --- | --- |
| (A) | Hypertonic solution  |
| (B) | Hypotonic solution |
| (C) | Isotonic solution  |
| (D) | Non-ionic solution |

95. In mitochondria, cytochrome oxidase is present in

|  |  |
| --- | --- |
| (A) | Outer membrane  |
| (B) | Perimitochondrial space |
| (C) | Matrix  |
| (D) | Inner membrane |

96. In which of the following wavelengths, photosystem I is inactive?

|  |  |
| --- | --- |
| (A) | 690 nm  |
| (B) | 550 nm |
| (C) | 780 nm  |
| (D) | 680 nm |

97. Which one of the following is a protozoan disease?

|  |  |
| --- | --- |
| (A) | Polio  |
| (B) | Arthritis |
| (C) | AIDS  |
| (D) | Malaria |

98. LSD is obtained from

|  |  |
| --- | --- |
| (A) | *Cannabis sativa*  |
| (B) | *Cannabis indica* |
| (C) | *Claviceps purpurea*  |
| (D) | *Pseudomonas putida* |

99. To obtain virus free healthy plants from a diseased one by tissue culture technique, which part of the diseased plant will be cultured?

|  |  |
| --- | --- |
| (A) | Palisade parenchyma  |
| (B) | Spongy parenchyma |
| (C) | Apical meristem  |
| (D) | Epidermis  |

100. Cloves are obtained from

|  |  |
| --- | --- |
| (A) | Seed  |
| (B) | Fruit |
| (C) | Seed coat  |
| (D) | Flower bud |

101. Somatic hybridization is a technique of

|  |  |
| --- | --- |
| (A) | Artificial pollination |
| (B) | Fusion of somatic cells  |
| (C) | Natural pollination  |
| (D) | Natural breeding |

102. If the root of a flowering plant has 36 chromosomes in its cells, then how many chromosomes are present in its gametes?

|  |  |
| --- | --- |
| (A) | 24 |
| (B) | 16 |
| (C) | 18 |
| (D) | 12 |

103. The process of embryo formation without fertilization is known as

|  |  |
| --- | --- |
| (A) | Apospory |
| (B) | Apogamy |
| (C) | Parthenocarpy  |
| (D) | Polyembryony |

104. Multiplication of DNA is termed as

|  |  |
| --- | --- |
| (A) | Inversion  |
| (B) | Transcription |
| (C) | Translation  |
| (D) | Replication |

105. The lac operon is turned on when allolactose molecules bind to

|  |  |
| --- | --- |
| (A) | Promoter site  |
| (B) | Operator site |
| (C) | Repressor protein  |
| (D) | mRNA |

106. What is common between chloroplasts, chromoplasts and leucoplasts?

|  |  |
| --- | --- |
| (A) | Ability to multiply by a fission like process |
| (B) | Absence of pigments |
| (C) | Absence of thylakoids and grana |
| (D) | Storage of starch, proteins and lipids |

107. Potometer works on the principle of

|  |  |
| --- | --- |
| (A) | Osmotic pressure |
| (B) | Potential difference between the tip of the tube and that of the plant |
| (C) | Amount of water absorbed equals the amount transpired |
| (D) | Root pressure |

108. Which one of the following is NOT true for enzymes?

|  |  |
| --- | --- |
| (A) | They act on a specific substrate |
| (B) | They are made up of sugars |
| (C) | They act optimally at a specific temperature |
| (D) | They act optimally at a specific pH |

109. The chromosome with centromere near the end is called

|  |  |
| --- | --- |
| (A) | Telocentric  |
| (B) | Metacentric |
| (C) | Acrocentric  |
| (D) | Meiotic |

110. The translocation of organic solutes in sieve tubes is supported by

|  |  |
| --- | --- |
| (A) | Root pressure and transpiration pull |
| (B) | Evaporation |
| (C) | Mass-flow involving carrier proteins and energisation by ATP |
| (D) | Cytoplasmic streaming |

111. Photoperiodism was first characterized in

|  |  |
| --- | --- |
| (A) | Tobacco  |
| (B) | Potato |
| (C) | Tomato  |
| (D) | Cotton |

112. From which cells of embryo, plumule is produced?

|  |  |
| --- | --- |
| (A) | Proembryo  |
| (B) | Hypophysis |
| (C) | Apical octant  |
| (D) | Micropylar octant |

113. Multiple phenotype is seen in

|  |  |
| --- | --- |
| (A) | Pleiotropy  |
| (B) | Incomplete dominance |
| (C) | Multiple allelism  |
| (D) | Polygenic inheritance |

114. To determine heterozygosity of a cross, one has to perform

|  |  |
| --- | --- |
| (A) | Back cross  |
| (B) | Test cross |
| (C) | Reciprocal cross  |
| (D) | Somatic hybridization  |

115. Which of the following is not a viral symptom?

|  |  |
| --- | --- |
| (A) | Mosaic  |
| (B) | Canker |
| (C) | Vein clearing  |
| (D) | Vein banding |

116. The largest ovule in plant kingdom is present in

|  |  |
| --- | --- |
| (A) | *Cycas revoluta*  |
| (B) | *Cycas circinalis* |
| (C) | *Pinus sylvestris*  |
| (D) | *Ephedra gerardiana* |

117. The cell that exhibits ‘Totipotency’ is

|  |  |
| --- | --- |
| (A) | Sclerenchyma cells  |
| (B) | Collenchyma cells |
| (C) | Parenchyma cells  |
| (D) | Xylem vessel |

118. *Laminaria* is an important source of

|  |  |
| --- | --- |
| (A) | Agar-agar  |
| (B) | Gelatin |
| (C) | Iodine  |
| (D) | Antibiotic |

119. Moisture absorbing roots are seen in

|  |  |
| --- | --- |
| (A) | Vanda  |
| (B) | Banyan |
| (C) | Beet root  |
| (D) | Carrot |

120. Wide variety of plants are observed in this part of the world

|  |  |
| --- | --- |
| (A) | Tropical regions  |
| (B) | Temperate regions |
| (C) | Near polar regions  |
| (D) | High altitude areas |

121. Plasmodesmata connect neighbouring cells forming a/an

|  |  |
| --- | --- |
| (A) | Apoplast  |
| (B) | Symplast |
| (C) | Protoplast  |
| (D) | Tonoplast |

122. Acid rain is due to the emission of

|  |  |
| --- | --- |
| (A) | Oxides of sulphur  |
| (B) | Oxides of nitrogen |
| (C) | CFC  |
| (D) | Oxides of sulphur and nitrogen |

123. Large scale clonal propagation practically means raising a genetically homogeneous population of plantlets from

|  |  |
| --- | --- |
| (A) | A single cell  |
| (B) | A single explant |
| (C) | Many explants from a single plant  |
| (D) | Many explants from a group of plants |

124. For scaling up of a bioreactor, the following parameter is assumed to be constant

|  |  |
| --- | --- |
| (A) | Air flow rate  |
| (B) | Diameter of the impeller |
| (C) | Agitator speed |
| (D) | Volumetric mass transfer coefficient |

125. Expression profiling of hundreds of different genes in DNA microarray technology is monitored by using

|  |  |
| --- | --- |
| (A) | Radioactive probe  |
| (B) | Visible chromogenic probe |
| (C) | Fluorescent probe  |
| (D) | UV absorbing sensors |

126. The method used for the prediction of 3D-structure of a protein from known structures of one or more related proteins is

|  |  |
| --- | --- |
| (A) | Multiple sequence alignments |
| (B) | Homology modeling |
| (C) | Phylogeny  |
| (D) | Docking |

127. Law of inheritance of acquired characters is termed as

|  |  |
| --- | --- |
| (A) | Lamarckism  |
| (B) | Darwinism |
| (C) | Neo-Lamarckism  |
| (D) | Neo-Darwinism |

128. Electric potential of the brain is recorded by

|  |  |
| --- | --- |
| (A) | CT – scan  |
| (B) | Sphygmomanometer |
| (C) | ECG  |
| (D) | EEG |

129. Desired improved varieties of economically useful crops are raised by

|  |  |
| --- | --- |
| (A) | Migration  |
| (B) | Application of biofertilizers |
| (C) | Hybridization  |
| (D) | Natural selection |

130. The Ti-plasmid which is often used for making transgenic plants is found in

|  |  |
| --- | --- |
| (A) | *Azotobacter* sp*.*  |
| (B) | *Agrobacterium tumefaciens*  |
| (C) | *Rhizobium* sp. |
| (D) | Yeast |

131. Which one among the following radioisotopes is not suitable for DNA labeling based studies?

|  |  |
| --- | --- |
| (A) | 3H  |
| (B) | 32P |
| (C) | 15N  |
| (D) | 35S |

132. Diameter of DNA is constant due to

|  |  |
| --- | --- |
| (A) | Hydrogen bond between base pairs  |
| (B) | Phosphodiester bond |
| (C) | Disulphide bond  |
| (D) | Covalent bonds |

133. The chemiosmotic coupling hypothesis of oxidative phosphorylation proposes that Adenosine Triphosphate is formed because

|  |  |
| --- | --- |
| (A) | High energy bonds are formed in mitochondrial proteins |
| (B) | A proton gradient is formed across the inner membrane |
| (C) | ADP is pumped out of the matrix into the intermembrane space |
| (D) | There is a change in the permeability of the inner mitochondrial membrane towards ADP |

134. The pigment involved in photomorphogenetic movement is

|  |  |
| --- | --- |
| (A) | Cytochrome  |
| (B) | Carotenoids |
| (C) | Xanthophyll |
| (D) | Phytochrome |

135. *Cycas revoluta* is popularly known as

|  |  |
| --- | --- |
| (A) | Royal palm  |
| (B) | Sea palm |
| (C) | Date palm  |
| (D) | Sago palm |

136. Peat moss is

|  |  |
| --- | --- |
| (A) | *Funaria* sp*.*  |
| (B) | Fern |
| (C) | *Sphagnum* sp.  |
| (D) | *Anthoceros* sp*.* |

137. Classification based on chromosome number is

|  |  |
| --- | --- |
| (A) | Cytotaxonomy  |
| (B) | Numerical taxonomy |
| (C) | Karyotaxonomy  |
| (D) | Molecular taxonomy |

138. Which family is known as cotton family?

|  |  |
| --- | --- |
| (A) | Fabaceae  |
| (B) | Malvaceae |
| (C) | Solanaceae  |
| (D) | Musaceae |

139. Epicalyx seen in the members of Malvaceae is a whorl of

|  |  |
| --- | --- |
| (A) | Bracteoles  |
| (B) | Bracts |
| (C) | Stamens  |
| (D) | Tepals |

140. A typical angiospermic embryo sac is usually

|  |  |
| --- | --- |
| (A) | one celled  |
| (B) | two celled |
| (C) | four celled  |
| (D) | seven celled |

141. Bioassay for auxin is

|  |  |
| --- | --- |
| (A) | *Avena* curvature test  |
| (B) | Iodine test |
| (C) | Dwarf maize test  |
| (D) | Cell division test |

142. The energy source which is not useful to perform metabolic functions of living cells is

|  |  |
| --- | --- |
| (A) | Sun light |
| (B) | ATP |
| (C) | Lipids |
| (D) | Heat |

143. The most successful vector employed in higher plants is

|  |  |
| --- | --- |
| (A) | Ti-plasmid  |
| (B) | pBR 322 |
| (C) | SV 40 |
| (D) | CaMV |

144. Pseudo-fossils are

|  |  |
| --- | --- |
| (A) | False image of actual fossils |
| (B) | False image of minerals in rock crevices |
| (C) | Mummified plants  |
| (D) | Coral reefs |

145. Heterocysts are found in

|  |  |
| --- | --- |
| (A) | *Cystocarp* sp*.*  |
| (B) | *Aspergillus* sp*.* |
| (C) | *Nostoc* sp*.* |
| (D) | *Ulothrix* sp*.* |

146. Invertase, amylase and cellulase are

|  |  |
| --- | --- |
| (A) | Oxidoreductases  |
| (B) | Hydrolases |
| (C) | Isomerases  |
| (D) | Transferases |

147. In Bacteria, sex is determined by the presence of

|  |  |
| --- | --- |
| (A) | Pili  |
| (B) | Flagella |
| (C) | Mesosomes  |
| (D) | Episomes |

148. The oldest method of plant breeding is

|  |  |
| --- | --- |
| (A) | Introduction  |
| (B) | Selection |
| (C) | Hybridization  |
| (D) | Mutation breeding |

149. Which part of a virus usually enters the host?

|  |  |
| --- | --- |
| (A) | Envelope  |
| (B) | Capsid |
| (C) | Nucleic acid  |
| (D) | All together |

150. Super-coiled structure of DNA is unwound by

|  |  |
| --- | --- |
| (A) | Deoxyribonuclease  |
| (B) | DNA ligase |
| (C) | DNA polymerase III  |
| (D) | DNA gyrase |

