

ACF (ASSISTANT CONSERVATOR OF FORESTS)  
BOTONY , PAPER - II  
EXAM HELD ON 08-04-2012

Time : 150 Minutes

Max. Marks : 300

INSTRUCTIONS

1. Please check the Test Booklet and ensure that it contains all the questions. If you find any defect in the Test Booklet or Answer Sheet, please get it replaced immediately.
2. The Test Booklet contains 150 questions. Each question carries two marks.
3. The Test Booklet is printed in four (4) Series, viz. **A B C D**. The Series, **A** or **B** or **C** or **D** is printed on the right-hand corner of the cover page of the Test Booklet. Mark your Test Booklet Series **A** or **B** or **C** or **D** in Part C on side 1 of the Answer Sheet by darkening the appropriate circle with Blue/Black Ball point pen.

Example to fill up the Booklet Series

If your Test Booklet Series is A, please fill as shown below :



*If you have not marked the Test Booklet Series at Part C of side 1 of the Answer Sheet or marked in a way that it leads to discrepancy in determining the exact Test Booklet Series, then, in all such cases, your Answer Sheet will be invalidated without any further notice.*

*No correspondence will be entertained in the matter.*

4. Each question is followed by 4 answer choices. Of these, you have to select one correct answer and mark it on the Answer Sheet by darkening the appropriate circle for the question. If more than one circle is darkened, the answer will not be valued at all. Use Blue/Black Ball point pen to make heavy black marks to fill the circle completely. Make no other stray marks.

e.g. : If the answer for Question No. 1 is Answer choice (2), it should be marked as follows :



1. Algae that grows on the leaves of tea
- (1) Oedogonium
  - (2) Chlorella
  - (3) Anabaena
  - (4) Cephaleuros
2. In addition to Watson and Crick, the following person received noble prize for DNA model
- (1) Frederick
  - (2) Wilkins
  - (3) Rosalind
  - (4) Chasgaff
3. DNA replication is
- (1) both uni and bidirectional
  - (2) only bidirectional
  - (3) only unidirectional
  - (4) continuous
4. Somatic hybrids are
- (1) hybrids attained through protoplast fusion
  - (2) hybrids obtained through crossing
  - (3) hybrids attained through emasculation
  - (4) hybrids obtained through cross pollination
5. Cryopreservation is
- (1) storage at a very low temperature
  - (2) storage in liquids
  - (3) storage in solid media
  - (4) storage in high temperature
6. Precursor of indole acetic acid (IAA) is
- (1) tryptophan
  - (2) methionine
  - (3) aspartic acid
  - (4) glutamic acid
7. The largest national park in the world is
- (1) Yellowstone National Park
  - (2) Northeast Greenland National Park ✓
  - (3) Yosenite National Park
  - (4) Vanoise National Park
8. Drusa type of embryo sac contain
- (1) 4 nuclei
  - (2) 8 nuclei
  - (3) 16 nuclei
  - (4) 12 nuclei

D

(4)

FCA/560

9. The process of mutation where an A-T pair replaces a G-C pair is termed

- (1) translation
- (2) transition
- (3) transcription
- (4) transversion

10. The chlorophyll is not formed without

- (1) K
- (2) Ca
- (3) Mg
- (4) Mn

11. Man is the following part of ecosystem

- (1) producer
- (2) consumer
- (3) decomposer
- (4) none of these

12. Bar-shaped eyes in drosophila is due to

- (1) deletion
- (2) duplication
- (3) shift
- (4) inversion

13. Gaseous hormone

- (1) ABA
- (2) Kinetin
- (3) GA<sub>3</sub>
- (4) Ethylene

14. Transformation of a lineage is

- (1) Anagenesis
- (2) Cladogenesis
- (3) Gradualism
- (4) Micro evolution

15. Autophagy is associated with

- (1) Peroxisomes
- (2) Microbodies
- (3) Glyoxysomes
- (4) Lysosomes

16. Phosphorus is present in the biosphere in the form of

- (1) Phosphorus
- (2) Phosphoric acid
- (3) Phosphate
- (4) Other form

17. Chlorosis is caused if plant is grown in

- (1) shade
- (2) dark
- (3) light
- (4) iron deficient soil

18. Pigment involved in red and far-red interaction

- (1) cytochrome
- (2) phytochrome ✓
- (3) chlorophyll
- (4) anthocyanin

19. Endodermis is present in

- (1) leaves
- (2) roots ✓
- (3) stem
- (4) fruits

20. The non-protein part of a conjugated enzyme is called

- (1) co-enzyme
- (2) co-factor ✓
- (3) apoenzyme
- (4) enzyme

21. The three dimensional structure of a protein indicates the following structure

- (1) tertiary structure ✓
- (2) primary structure
- (3) secondary structure
- (4) quaternary structure

22. In the energy flow of an ecosystem, herbivores belong to

- (1) first trophic level
- (2) third trophic level
- (3) second trophic level ✓
- (4) fifth trophic level

23. Which of the following is the correct difference between prokaryotic and eukaryotic cells?

- (1) prokaryotes have a cell wall and eukaryotes do not have cell wall
- (2) prokaryotes have smaller than eukaryotes
- (3) prokaryotes have larger ribosomes than eukaryotes
- (4) prokaryotes do not have separate compartment for genetic material as eukaryotes

**D**

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24. The largest organelle in eukaryotic cell

- (1) nucleus ✓
- (2) mitochondria
- (3) chloroplast
- (4) lysosomes

25. About how many typical amino acids are found in proteins?

- (1) 4
- (2) 16
- (3) 20 ✓
- (4) 64

26. The following element is an essential microelement

- (1) selenium
- (2) cobalt ✓
- (3) aluminium
- (4) nickel

27. During seed germination

- (1) heat is liberated ✓
- (2) starch is synthesized
- (3) fat is synthesized
- (4) light is absorbed

28. The Hardy Weinberg law describes the statistics of

- (1) Non Mendelion populations
- (2) Mendelion population
- (3) Both Non Mendelion and Mendelion population
- (4) Non anmetric population

29. One of the following is not a micro nutrient

- (1) sulphur ✓
- (2) boron
- (3) manganese
- (4) zinc

30. The enzyme responsible for strand separation during DNA replication is

- (1) Gyrase
- (2) Helicase
- (3) Topoisomerase
- (4) DNA polymerase ✓

31. The enzyme responsible for reduction of molecular nitrogen to ammonia in legume plants is

- (1) nitrate reductase
- (2) nitrogenase ✓
- (3) nitrite reductase
- (4) denitrogenase

32. The king of the Indian spices

- (1) *Foeniculum vulgare*
- (2) *Piper nigrum* ✓
- (3) *Curcuma longa*
- (4) *Zingiber officinale*

33. Sunken stomata are present in

- (1) hydrophytes
- (2) xerophytes ✓
- (3) halophytes
- (4) mesophytes

34. The following is a living tissue

- (1) Xylem
- (2) Cork
- (3) Sclerenchyma
- (4) Cork cambium ✓

35. Wild life protection act was enacted in

- (1) 1932
- (2) 1954
- (3) 1972 ✓
- (4) 1976

36. Secondary Xylem formed at the end of the growth season is called

- (1) early wood
- (2) heart wood
- (3) soft wood
- (4) late wood ✓

D

(8)

FCA/560

37. Flowering dependent on cold treatment is called

- (1) photoperiodism
- (2) vernalization ✓
- (3) devernalization
- (4) thermotrophy

38. *Colletotrichum falcatum* causes the following disease

- (1) Red rot of sugarcane ✓
- (2) Rust of wheat
- (3) Tikka disease
- (4) Grassy shoot disease

39. Algal bio-fertilizers are available in nature as

- (1) free living forms
- (2) symbiotic associations
- (3) Parasites
- (4) Both symbiotic associations and free living forms ✓

40. The maximum frequency of recombination possible between two adjacent genes

- (1) 100%
- (2) 50%
- (3) 10%
- (4) 0.05%

41. The element associated with carbohydrate transport in plants is

- (1) Boron ✓
- (2) Copper
- (3) Iron
- (4) Manganese

42. Colchicine is detected in the following members of Liliaceae

- (1) *Crotalaria* and *Dracaena*
- (2) *Allium* and *Colchicum* ✓
- (3) *Smilax* and *Iphigenia*
- (4) *Gloriosa* and *Colchicum* ✓

43. Saffron is obtained from

- (1) Crocus Sativus ✓
- (2) Piper Nigrum
- (3) Curcuma longa
- (4) Zingiber officinale

44. Following is the plant factor affecting infection

- (1) temperature
- (2) humidity
- (3) resistance ✓
- (4) light

45. Cybrids are obtained by the

- (1) fusion of nucleus from one parent and cytoplasm of the both the parents
- (2) fusion between two nuclei
- (3) fusion between nucelli
- (4) fusion between cells

46. Pairing of homologous chromosomes takes place during

- (1) zygotene ✓
- (2) leptotene ✓
- (3) pachytene
- (4) diplotene

47. The odd petal is anterior in

- (1) coriandrum
- (2) calotropis
- (3) ipomea
- (4) delomix ✓

48. The substance responsible for 'ozone hole'

- (1) DDT
- (2) CO
- (3) CH<sub>3</sub>
- (4) CFC ✓



D

(10)

FCA/560

49. Dictyosome is the word used for

- (1) A series of cisternae in a golgi stack ✓
- (2) Appressed regions of the thylakoid membrane
- (3) Disc shaped sacs
- (4) Mitochondria cisternae

50. Cry genes present in

- (1) bacillus substilis
- (2) bacillus thuringensis ✓
- (3) bacillus megasporium
- (4) bacillus aminoliquefaciens

51. The most extensively used metal in fungicide formulations

- (1) nickel
- (2) copper ✓
- (3) cobalt
- (4) chromium

52. Seed storage protein synthesis is associated with

- (1) ✓ Rough ER
- (2) Smooth ER
- (3) Golgi complex
- (4) Cytosol

53. Pollen tube grows out from

- (1) exine of the pollen grain
- (2) intine of the pollen grain ✓
- (3) callose wall
- (4) all the above ✓

54. Blackarm disease is found in

- (1) potato
- (2) sorghum ✓
- (3) cotton
- (4) groundnut

55. The predominant form of nitrogen available to most of the plants is

- (1) organic nitrogen
- (2) molecular nitrogen
- (3) nitrite
- (4) nitrate ✓

56. Red sanders belongs to

- (1) santalaceae ✓
- (2) verbenaceae
- (3) meliaceae
- (4) fabaceae

57. The phenomenon in which the stamens of a flower ripen earlier than the stigmas is referred to as

- (1) herkogamy
- (2) protogyny
- (3) protandry ✓
- (4) self sterility

58. This organelle is the major source of the lipids that are assembled to form intracellular membranes and the plasma membrane

- (1) mitochondria
- (2) peroxisome
- (3) chloroplast
- (4) endoplasmic reticulum ✓

59. Branching of pollen tube is observed in

- (1) cucurbita ✓
- (2) cotton
- (3) maize
- (4) barley

60. The cell which occupies the largest portion of the embryo sac is

- (1) Egg
- (2) Synergid
- (3) Central cell ✓
- (4) Antipodals

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61. Ruminant endosperm is present in

- (1) Annonaceae
- (2) Orchidaceae
- (3) Rubiaceae
- (4) Asclepiadaceae

62. The specimen designated by the author as nomenclature type is called

- (1) isotype
- (2) paratype
- (3) syntype
- (4) holotype ✓

63. Endoderm is a part of

- (1) epidermis
- (2) cortex ✓
- (3) stele
- (4) holotype

64. Double fertilization was first described by

- (1) Hofmeister
- (2) Leeuwenhock
- (3) Nawaschin ✓
- (4) Strasburger

65. Minimata disease is caused due to the poisoning by

- (1) Methyl isocyanate
- (2) BHC
- (3) Ammonia
- (4) Methyl mercury ✓

66. The anaerobic nitrogen fixing bacteria

- (1) rhizobium
- (2) agrobacterium
- (3) clostridium ✓
- (4) azotobacter

67. The hard portion of a wood is

- (1) heart wood ✓
- (2) sap wood
- (3) spring wood
- (4) summer wood

68. Commercial algal bio-fertilizers produced by

- (1) pit method
- (2) mass outdoor culture
- (3) pond culture ✓
- (4) none

69. Which Indian state has the first national park?
- (1) West Bengal ✓
  - (2) Himachal Pradesh
  - (3) Gujarat
  - (4) Uttar Pradesh
70. The hormone that can replace vernalisation
- (1) Auxin
  - (2) Gibberline ✓
  - (3) Cytokinin.
  - (4) Ethylene
71. Following is an Aneuploid
- (1) monoploid
  - (2) nullisomic ✓
  - (3) allopolyploid
  - (4) triploid
72. The plant yielding vanilla belongs to
- (1) Rutaceae
  - (2) Orchidaceae
  - (3) Lamiaceae ✓
  - (4) Asteraceae
73. Who proposed the binomial system of nomenclature?
- (1) Engler and Prantl
  - (2) Carolus Linnaeus ✓
  - (3) John Ray
  - (4) Andrea Caesalpino
74. The two major components of an ecosystem are
- (1) producers and consumers
  - (2) plants and animals
  - (3) biotic and abiotic ✓
  - (4) air and water
75. CAP (Catabolic Activator Protein) binding site is present in
- (1) Lac. Operon ✓
  - (2) Trp. Operon.
  - (3) Ara. Operon
  - (4) His. Operon
76. The world forestry day is celebrated on
- (1) 21<sup>st</sup> March
  - (2) 21<sup>st</sup> June ✓
  - (3) 5<sup>th</sup> March
  - (4) 5<sup>th</sup> June ✓

77. Dominance hypothesis was first proposed by
- (1) East and Shull
  - (2) Deven port
  - (3) Bruce
  - (4) Keetic and Pillew
78. Textile fibres are obtained from
- (1) Aristida
  - (2) Bambusa
  - (3) Gossypium✓
  - (4) Ceiba
79. Bentham and Hooker published
- (1) species plantarum
  - (2) genera plantarum✓
  - (3) taxonomy of angiosperms
  - (4) plant evolution
80. In which one of the following, smallest chromosome numbers are seen?
- (1) morus nigra
  - (2) poa littorosa
  - (3) haplopappus gracilis✓
  - (4) ophioglossum reticulatum
81. Photoperiodism is
- (1) Growth curvature in response to light
  - (2) Effect of day scorching light on sciophytes
  - (3) Effect of day length on vegetative growth
  - (4) Effect of day length on flowering plants✓
82. If the pits are arranged in horizontal pairs such pitting is called
- (1) alternate
  - (2) opposite✓
  - (3) scalariform✓
  - (4) reticulate
83. The best method for identification of transgenic plants
- (1) PCR
  - (2) Southern blotting
  - (3) Both (1) and (2)✓
  - (4) Site directed gene mutagenesis

84. This part of the endoplasmic reticulum stores calcium ions
- (1) Rough ER
  - (2) Smooth ER
  - (3) Subdomains of smooth ER
  - (4) Transitional vesicle of ER ✓
85. Bio-fertilizers belong to
- (1) chlorophyceae
  - (2) cyano phyceae ✓
  - (3) phaeophyceae
  - (4) rhodophyceae
86. Charles Darwin is a naturalist from
- (1) England
  - (2) France
  - (3) Germany ✓
  - (4) America
87. Water pollution causes the diseases like
- (1) typhoid
  - (2) amoebiosis
  - (3) cholera
  - (4) all the above ✓
88. Pyrethrum insecticide is obtained from
- (1) chrysanthemum ✓
  - (2) heteropogon
  - (3) indigofera
  - (4) ficus
89. Which cell organelle is covered with single membrane?
- (1) mitochondria
  - (2) lysosomes ✓
  - (3) chloroplast
  - (4) nucleus
90. The plant part used as inoculum in tissue culture is known as
- (1) Explant ✓
  - (2) Callus
  - (3) Spawn
  - (4) Cosmid

91. Azolla is associated with
- (1) Nostoc
  - (2) Anabaena✓
  - (3) Spirulina
  - (4) Chlorella
92. The casual organism of Blast of Rice
- (1) Cercospora
  - (2) Phytophthora
  - (3) Pyricularia✓
  - (4) Pythium
93.  $\alpha$ -amylase is an example to
- (1) Oxidoreductase
  - (2) Hydrolase✓
  - (3) Ligase
  - (4) Lyase
94. The substance employed to facilitate protoplast fusion is
- (1) PMA
  - (2) PEG
  - (3) LSD
  - (4) EDTA✓
95. Which of the following is phylogenetically advanced one?
- (1) Spirally arranged floral parts
  - (2) Umbel inflorescence✓
  - (3) Twisted corolla
  - (4) Simple fruit
96. Kranz anatomy is characterized by the presence of
- (1) Bundle sheath✓
  - (2) Exodermis
  - (3) Palisade Parenchyma
  - (4) Sunken Stomata
97. The carbon dioxide component of earth's atmosphere is
- (1) 3%
  - (2) 0.3%
  - (3) 0.03%✓
  - (4) 0.003%

98. Phospholipids with no net charge at neutral pH are called as

- (1) positive phospholipids
- (2) negative phospholipids
- (3) neutral phospholipids
- (4) acidic phospholipids

99. Stomatal opening occurs when

- (1) Malic acid in the guard cells is converted to starch
- (2) Malic acid in the guard cells is high
- (3) pH of guard cells is high
- (4)  $K^+$  ions move out of guard cells

100. Wall matrix of newly formed wall is secreted by

- (1) Ribosomes
- (2) Golgi bodies
- (3) Spherosomes
- (4) Phragmoblasts

101. Microinjection requires

- (1) protoplast
- (2) complete cell
- (3) group of cells
- (4) all of the above

102. Rhizobium is

- (1) organic fertilizer
- (2) bio fertilizer
- (3) inorganic fertilizer
- (4) none

103. Cellulose is a polymer formed by

- (1)  $\beta$  1,4 D glucan
- (2)  $\beta$  1, 3 D glucan
- (3)  $\beta$  1, 4 L glucan
- (4)  $\beta$  1, 3 L glucan

104. The structural gene 'Y' of lac operon

- (1)  $\beta$  galactosidase
- (2) permease
- (3) transacetylase
- (4) transketolase

105. The requirement of assimilatory power for the fixation of 6 molecules of  $CO_2$  through Calvin cycle is

- (1) 6 ATP, 6 NADPH
- (2) 18 ATP, 12 NADPH
- (3) 12 ATP, 18 NADPH
- (4) 18 ATP, 18 NADPH



106. In lac operon, the gene which encodes the repressor protein is
- (1) 'z'
  - (2) 'a'
  - (3) 'o'✓
  - (4) 'i'
107. The specimen selected to serve as nomenclatural type when the original materials is lost is called
- (1) Neotype
  - (2) . Isotype✓
  - (3) Syntype
  - (4) Paratype
108. Tunica-carpus theory was proposed by
- (1) Schmidt
  - (2) Hanstein
  - (3) Nageli
  - (4) Smith
109. Kochs postulates were first formulated in relation to diseases of
- (1) Animals
  - (2) Plants
  - (3) Birds
  - (4) Human beings✓
110. Synergid degeneration occurs due to increase in the concentration of
- (1) IAA
  - (2) IBA
  - (3) GA3
  - (4) ABA
111. Which of the following is the biggest threat to species survival?
- (1) International wildlife trade
  - (2) Habitat distribution
  - (3) Genetic and demographic changes
  - (4) Predation, Competition and disease
112. Distance between genes is expressed in
- (1) microns
  - (2) recombination percentages
  - (3) centimorgans
  - (4) kilobases
113. The pollutant cadmium causes
- (1) respiratory damage
  - (2) neural damage
  - (3) dental damage
  - (4) renal damage

114. Origin of species published in

- (1) 1844
- (2) 1858
- (3) 1859
- (4) 1860

115. The families rich in alkaloid species are

- (1) Ranunculaceae and Annonaceae
- (2) Solanaceae and Boraginaceae
- (3) Leguminosae and Rosaceae
- (4) Berberidaceae and Ranunculaceae

116. Karaya Gum is yielded from

- (1) Sterculia urens
- (2) Anogeissus latifolia
- (3) Acacia senegal
- (4) Ceratonia siliqua

117. The largest phase of Meiosis I is

- (1) Prophase I
- (2) Metaphase I
- (3) Anaphase I
- (4) Telophase I

118. Who is regarded as father of genetics?

- (1) Morgan
- (2) G.J. Mendel
- (3) Lamarck
- (4) Hugo de vris

119. Plant hormone used as anti transpirant is

- (1) IAA
- (2) GA<sub>3</sub>
- (3) Ethylene
- (4) ABA

120. The wood used for making musical instruments is obtained from

- (1) Dalbergia
- (2) Hardwickia
- (3) Quercus
- (4) Pterocarpus

121. Griseofulvin is produced by

- (1) streptomyces
- (2) penicilium griseofulvum
- (3) streptovercillium
- (4) bacillus subtilis ✓

122. During microsporogenesis the gametophytic phase starts from this cell

- (1) pollen mother cell
- (2) microspore ✓
- (3) primary sporogenous cell
- (4) aschesporial cell

123. The substrate for photorespiration is

- (1) oxaloacetate
- (2) serine ✓
- (3) glycolate
- (4) succinate

124. The jute variety mainly grown in India

- (1) corchorus acutangulus
- (2) corchorus olitorius
- (3) hibiscus cannabimus
- (4) hibiscus sabdariffa

125. In a pond ecosystem wolffia belongs to

- (1) phytoplankton
- (2) submerged macrophyte
- (3) marginal macrophyte
- (4) floating macrophyte ✓

126. Endemic plants are

- (1) cosmopolitan in distribution
- (2) restricted to certain area ✓
- (3) gregarious in habit
- (4) found only in arctic region

127. Gynostegium is seen in the family

- (1) poaceae
- (2) brassicaceae
- (3) asclepiadaceae ✓
- (4) fabaceae

128. The term biodiversity was coined by

- (1) Thomas Lovejoy
- (2) W.G. Roseu
- (3) W.G. Lovejoy
- (4) Thomas Roseu

129. Bulliform cells are seen in the leaves at the family
- (1) poaceae ✓
  - (2) cucurbitacea
  - (3) lamiaceae
  - (4) annonacea
130. A genetic unit that codes for the amino acid sequence of a polypeptide chain is a
- (1) cistron ✓
  - (2) recon
  - (3) muton
  - (4) regulon
131. Type of ovule found in gymnosperms
- (1) orthotropous
  - (2) anatropous ✓
  - (3) amphitropous
  - (4) campylotropous
132. Chicory powder, which is mixed with coffee is obtained from
- (1) roots ✓
  - (2) leaves
  - (3) seeds
  - (4) stems
133. Seed vigour is controlled by
- (1) Water availability
  - (2) O<sub>2</sub> availability
  - (3) Environmental factors
  - (4) Genetic constitution
134. Link between glycolysis and krebs cycle
- (1) Citric acid
  - (2) Acetyl CoA ✓
  - (3) Succinic acid
  - (4) Oxalo acetic acid
135. IUCN published list of threatened species in
- (1) red data book ✓
  - (2) animal data book
  - (3) extant species book
  - (4) black data book
136. Inter connected food chains are called
- (1) trophic level
  - (2) food web ✓
  - (3) ecological pyramid
  - (4) food supply

137. Para rubber is obtained from the latex of

- (1) *Hevea brasiliensis*
- (2) *Achras sapota*
- (3) *Ficus elastica* ✓
- (4) *Carica papaya*

138. The plant in which the secondary rachis is modified into a green, flattened structure to perform photosynthesis is

- (1) asparagus
- (2) clematis
- (3) oxalis
- (4) parkinsonia ✓

139. Which one of the following is Amentiferae?

- (1) Casuarinaceae ✓
- (2) Alismataceae
- (3) Orchidaceae
- (4) Apiaceae

140. Nitrogenous wastes are converted into ammonia by

- (1) fungi
- (2) virus
- (3) bacteria ✓
- (4) water

141. The pyramid of biomass is inverted in

- (1) pond ecosystem
- (2) forest ecosystem
- (3) grassland ecosystem
- (4) desert ecosystem ✓

142. Boron effects

- (1) flower opening
- (2) fruit ripening
- (3) bud formation
- (4) translocation of solutes ✓

143. Cork Cambium is also known as

- (1) Phellem
- (2) Phelloderm
- (3) Phellogen ✓
- (4) Periderm

144. In negative regulation on inhibitor is present in the cell and prevents prescription. This inhibitor is called

- (1) inducer
- (2) repressor
- (3) corepreser
- (4) co-inhibitor

145. Matric potential is an important factor in the uptake of water by

- (1) osmosis
- (2) guttation
- (3) imbibition✓
- (4) plasmolysis

146. Central drug research institute is situated at

- (1) Delhi
- (2) Mumbai
- (3) Chennai
- (4) Lucknow

147. "Die Naturlichen pf lanzen familien" is written by

- (1) Bentham and Hooker
- (2) Engler and Prantle✓
- (3) Linnaeus
- (4) Hutchinson

148. Enrichment of water bodies through human activity is

- (1) denudation
- (2) eutrophication ✓
- (3) naturosis
- (4) leaching ,

149. Water storage tissue is present in

- (1) opuntia ✓
- (2) casuarina
- (3) nerium
- (4) avicennia

150. Guttation takes place through

- (1) stomata
- (2) chloroplast
- (3) hydathodes✓
- (4) lenticells