BOTANY :: 1999

1. The earlier institute established at Pusa, is now called as
   1) BIs 2) ICAR 3) IARi 4) CsIR
2. Balancing roots are seen in
   (1) Dolichos (2) Pistia (3) Piper (4) Vanda
3. Root, stem and leaf are all modified in
   (1) Dracaena (2) Aloe (3) Asparagus (4) Opuntia
4. The following features is found in both Balanophora and Casuarina
   (1) Parasitism (2) Tree habit (3) Scale leaves (4) Phyllode
5. The following plant produces both offsets and bulbils
   (1) Chrysanthemum (2) Oxalis (3) Agave (4) Bryophyllum
6. Inflorescence in Jatropha is a
   (1) monochasial scorpioid cyme (2) polychasial cyme
   (3) dichasial cyme (4) solitary flower
7. In Fabaceae, the floral structures which enclose the essential organs are
   (1) posterior petals (2) lateral petals (3) sepals (4) anterior petals
8. Geitonogamy is found in
   (1) Sorghum (2) Erythrina (3) Hydrilla (4) Maize
9. Modification of bract in Typhonium is a
   (1) Scale (2) Spathe (3) Involucre (4) Glume
10. Free central placentation is found in
    (1) Raphanus (2) Dianthus (3) Dolichos (4) Helianthus
11. The position of the micropyle' found in an orthotropous ovule are turned down about 160° (degrees) with reference to the funicle. In addition the ovule and embryo sac are curved. Such a type of ovule is called as
    (1) Anatropous (2) Campylotropous (3) Hemitropous (4) Amphitropous
12. Scale bark is seen in
    (1) Terminalia (2) Mangifera (3) Psidium (4) Neem
13. The scientific term which is not related to the primary constriction of a chromosome is
    (1) Centromere (2) Kinomere (3) Kinetochore (4) Chromomere
14. Asafoetida is a
    (1) Tannin (2) oleoresin (3) latex (4) gum resin
15. The haploid Chromosome number in Saccharum officinale is as many times greater in the following as that of Zeamays
    (1) four-fold (2) two-fold (3) six-fold (4) three-fold
16. Tyloses are observed in the lumen of
    (1) Tracheids (2) Sieve tubes (3) Fibre tracheids (4) Xylem vessels

17. The genetical importance of raising haploids in higher plants through tissue culture lies their use in the production of
    (1) homozygous diploids (2) heterozygous diploids
    (3) plants that do not produce flowers (4) hybrid plants
18. As compared to sclerenchyma, parenchyma does NOT function in
    (1) gas exchange (2) nutrient transport

(3) mechanical support (4) support and gas exchange

19. The stele in the root of the following is tetrach
(1) Nicotiana (2) Helianthus (3) Gossypium (4) Trapa natans

20. Triganella belongs to the following family
(1) Brassicaceae (2) Caesalpinaceae (3) Fabaceae (4) Asteraceae

21. The inflorescence in case of Yucca belonging to Liliaceae is
(1) Umbel (2) Catkin (3) Panicle (4) Compound umbel

22. Virus causes swollen shoot disease in
(1) Tomato (2) Brinjal (3) Potato (4) Cocoa

23. The plant without tuberous roots
(1) Rephanus sativus (2) Asparagus racemosus
(3) Solanum tuberosum (4) Ipomaea batatas

24. The general Method of propagation for cultivated varieties of Musa is through
(1) Suckers (2) Stem cuttings (3) Corms (4) Seeds

25. LRG 30 is an important variety of the following crop plant grown in Andhra Pradesh
(1) Sorghum (2) Red gram (3) Bajra (4) Groundnut

26. The bacterium 'Delovibriobacteriovorus' is
(1) Autotroph (2) Parasite (3) Saprophyte (4) Symbiont

27. Which of the following pathogens do .NOT cause smut disease ?
(1) Ustilago (2) Phyllactinia (3) Sphacelotheca (4) Tilletia

28. Butler extensively studied the following disease
(1) Red rot of sugarcane (2) Smut disease of Sorghum
(3) Blast disease of rice (4) Tikka disease of ground nut

29. In the classification of plants, the presence of the following is a primitive character
(1) Zygomorphic flower (2) Epigynous flower
(3) Unisexual flower (4) Bisexual flower

30. Protoxylem in Selaginella stem is
(1) Endarch (2) Mesarch (3) Exarch (4) Monarch

31. In Agaricus, during its development stages, the cells of the following, contain one nucleus
(1) Secondary mycelium only (2) Primary mycelium only
(3) Secondary and tertiary mycelium (4) Primary and secondary mycelium

32. Calyptra in Funaria is from
(1) Archegonum (2) Antheridium (3) Capsule (4) Zygote

33. The following species of Cycas is recorded in the forests of Andhra Pradesh
(1) C. revoluta (2) C. pectinata (3) C. beddomi (4) C. thomsonii

34. The wheat variety introduced from Australia
(1) Ridley (2) Sioux (3) Texas - 2 (4) Dixie

35. The results obtained by mass selection are temporary, because
(1) heterozygosity leads to segregation of characters
(2) varieties are weak and less productive
(3) multilocational adaptability is poor
(4) cross pollination is controlled

36. The Scientist who first carried out experiments' on hybrid vigour in maize was
(1) Mendle (2) Shull (3) Johannsen (4) Kolreuter

37. An example of planktonic flora of pond ecosystem
(1) Diatoms (2) Crustaceans (3) Hydrilla (4) Chara

38. Lotic ecosystem refers to
(1) Static water ecosystem (2) Ecosystem of flowing water
(3) Ecosystem of estuary water (4) Deep marine water ecosystem

39. The following is a Xerophyte containing air spaces in the stem and roots
(1) Eicchornia (2) Opuntia (3) Aloe (4) Rhiiophora

40. The following is a primary consumer
(1) Diatoms (2) Pediastrum (3) Cornivores (4) Rotifers

41. The morphogenetic property of cytokinin was experimentally proved first by ,
(1) Hanning (2) Guha and Maheswari
(3) Skoog and Miller (4) Went

42. In a plant physiology experiment a green plant kept in light was found releasing more units of $^{18}O_2$. Which of the following compounds would have been supplied to that plant?
(1) $C_6H_{12}O_6$ containing ^{18}O (2) CO_2 containing ^{18}O
(3) Ozone containing ^{18}O (4) H_2O containing ^{18}O

43 The number of oxidations involving NADH in Krebs cycle is
(1) 4 (2) 3 (3) 2 (4) 5

44. In noncyclic photophosphorylation, the site of ATP synthesis taking place between the following electron carriers, is
(1) PS II and Q (2) Cyt. b_6 and Cyt. f
(3) Cyt. b_6 and plastocyanin (4) PSI and ferredoxin

45. Stomatal closure is induced by
(1) Indole acetic acid (2) Naphthalene acetic acid
(3) Indole butyric acid (4) Phenyl mercuric acid

46. Which of the following statements is NOT considered as a criterion for the essentiality of elements ?
(1) In its absence, plants fail to reproduce
(2) It plays a role that is replaceable
(3) It is necessary at all stages of development
(4) It affects the metabolism directly

47. Munch Mass flow hypothesis mainly explain the long distance transport of the following
(1) Mineral salts (2) Sugars (3) Proteins (4) Starch

48. The enzyme code of enzyme 2.7.1.1 refers to the following main group
(1) Ligase (2) Hydrolase (3) Transferase (4) Lyase

49. The following hormone induces dormancy in potatoes
(1) 1M (2) Gibberellins (3) Abscisic acid (4) Zeatin

50. The following is a constituent of nitrogenase
(1) magnesium (2) molybdenum. (3) manganese (4) Potassium

ANSWER

(1) 3 (2) 2 (3) 3 (4) 3 (5) 3

(6) 3	(7) 4	(8) 4	(9) 2	(10) 2
(11) 4	(12) 3	(13) 4	(14) 4	(15) 1
(16) 4	(17) 1	(18) 3	(19) 3	(20) 3
(21) 3	(22) 4	(23) 3	(24) 1	(25) 2
(26) 2	(27) 2	(28) 3	(29) 4	(30) 3
(31) 2	(32) 1	(33) 3	(34) 1	(35) 1
(36) 2	(37) 1	(38) 2	(39) 4	(40) 4
(41) 3	(42) 4	(43) 2	(44) 2	(45) Del
(46) 2	(47) 2	(48) 3	(49) 3	(50) 2