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**TEST BOOKLET**

Sl. No. **2623**

**Subject Code : 03**

**Subject : Botany**

**LECTURERS FOR NON-GOVT. AIDED COLLEGES OF ODISHA**

**Time Allowed : 2 Hours**

**Maximum Marks : 150**

**: INSTRUCTIONS TO CANDIDATES :**

1. **IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET CONTAINS 16 PAGES AND DOES NOT HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.**
2. You have to enter your **Roll No.** on the Test Booklet in the Box provided alongside. **DO NOT** write anything else on the Test Booklet.  

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3. The Test Booklet contains **100** questions. Each question comprises four answers. You have to select the correct answer which you want to mark (darken) on the **Answer Sheet (OMR Sheet)**. In any case choose **ONLY ONE** answer for each question. If more than one answer is darkened, it will be considered as wrong.
4. You have to mark (darken) all your answers only on the **OMR Answer Sheet** using **BLACK BALL POINT PEN** provided by the State Selection Board. You have to do rough work only in the space provided at the end of the Test Booklet. See instructions in the Answer Sheet.
5. All questions carry equal marks i.e. of one and half mark for each correct answer and each wrong answer will result in negative marking of **0.50** mark.
6. Before you proceed to mark (darken) the answers in the **OMR Answer Sheet** to the questions in the Test Booklet, you have to fill in some particulars in the Answer Sheet as per the instructions in your Admit Card.
7. On completion of the examination, you should hand over the **original Answer Sheet (OMR Sheet)** issued to you to the Invigilator before leaving the Examination Hall. You are allowed to take with you the candidate's copy (carbon copy) of the **OMR Answer Sheet** along with the Test Booklet for your reference.

**SEAL**

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**Candidate's full signature**

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**Invigilator's signature**

IW-2/13

2021

(Turn over)

1. F. F. Fritsch classified algae into :
  - (A) 7 Divisions
  - (B) 11 Classes
  - (C) 9 Phyla
  - (D) 4 Groups
  
2. Which is an algal disease ?
  - (A) Rust of coffee
  - (B) Red rust of tea
  - (C) Rust of wheat
  - (D) White rust of mustard
  
3. In case of **Oedogonium**, dwarf males are borne on which form ?
  - (A) Macrandrous
  - (B) Nanandrous
  - (C) Male
  - (D) Female
  
4. Fucoxanthin occurs in :
  - (A) Chlorophyceae
  - (B) Cyanophyceae
  - (C) Phaeophyceae
  - (D) Rhodophyceae
  
5. The female sex organ in **Polysiphonia** is called :
  - (A) Archegonium
  - (B) Oogonium
  - (C) Nucule
  - (D) Carpogonium
  
6. Aseptate mycelium is the characteristic feature of class :
  - (A) Phycomycetes
  - (B) Ascomycetes
  - (C) Basidiomycetes
  - (D) Fungi Imperfecti
  
7. Gametangial copulation is common in :
  - (A) Phycomycetes
  - (B) Zygomycetes
  - (C) Ascomycetes
  - (D) Myxomycetes
  
8. Typical black colour of bread mold is due to its :
  - (A) Mycelium
  - (B) Sporangium
  - (C) Rhizoids
  - (D) Gametangia
  
9. All species of **Penicillium** bearing ascocarps are :
  - (A) Homothallic
  - (B) Secondary homothallic
  - (C) Bipolar heterothallic
  - (D) Tetrapolar heterothallic

10. Which type of rust **Puccinia graminis tritici** is ?
- (A) Homoecious and microcyclic  
 (B) Homoecious and macrocyclic  
 (C) Heteroecious and microcyclic  
 (D) Heteroecious and macrocyclic
11. Which one of the following comes under hypoplastic disease symptoms of plants ?
- (A) Blight  
 (B) Rot  
 (C) Chlorosis  
 (D) Canker
12. The famous Irish famine in 1845 was caused due to :
- (A) Late blight of potato  
 (B) Smut of sugarcane  
 (C) Rust of wheat  
 (D) Loose smut of wheat
13. Bordeaux mixture, the most commonly used fungicide, is a :
- (A) Silver compound  
 (B) Mercury compound  
 (C) Copper compound  
 (D) Arsenic compound
14. All viruses are :
- (A) Facultative intracellular parasites  
 (B) Facultative intercellular parasites  
 (C) Obligate intracellular parasites  
 (D) Obligate intercellular parasites
15. The capsid of TMV is composed of :
- (A) 2130 identical capsomeres  
 (B) 2130 non-identical capsomeres  
 (C) 21300 identical capsomeres  
 (D) 21300 non-identical capsomeres
16. Bacteriophages which show lysogenic cycle are called :
- (A) Vegetative phages  
 (B) Temperate phages  
 (C) Virulent phages  
 (D) Avirulent phages

17. Nitrifying bacteria are :
- (A) Photoautotrophs
  - (B) Chemoautotrophs
  - (C) Saprophytes
  - (D) Parasites
18. Teichoic acid is found in which group ?
- (A) Gram +ve bacteria
  - (B) Gram -ve bacteria
  - (C) Cyanobacteria
  - (D) Mycoplasma
19. The photosynthetic pigments in Cyanobacterial cells are located in :
- (A) Chromatophore
  - (B) Chromoplasm
  - (C) Centrioplasm
  - (D) Chloroplast
20. Mesosomes of bacteria are analogous to \_\_\_\_\_ of eukaryotic cells.
- (A) Mitochondria
  - (B) Chloroplast
  - (C) Endoplasmic reticulum
  - (D) Lysosome
21. Which is NOT true about bryophytes ?
- (A) Presence of a distinct heteromorphic alternation of generation
  - (B) Plant body represents gametophyte
  - (C) Sexual reproduction is Oogamous type
  - (D) Archegonium possesses 7-8 neck canal cells, 2-3 ventral canal cells and an egg cell
22. *Riccia* thallus possesses :
- (A) Unicellular scales and unicellular rhizoids
  - (B) Multicellular scales and unicellular rhizoids
  - (C) Unicellular scales and multicellular rhizoids
  - (D) Multicellular scales and multicellular rhizoids

23. In case of **Marchantia**, each group of archegonia covered with a protective structure is called :
- (A) Perigynium  
 (B) Perichaetium  
 (C) Peristome  
 (D) Perisperm
24. Which of the statements is true regarding **Anthoceros** ?
- (A) Elaters develop from amphithecium  
 (B) Elaters develop from endothecium  
 (C) Pseudo-elaters develop from amphithecium  
 (D) Pseudo-elaters develop from endothecium
25. Which part of moss capsule is haploid in nature ?
- (A) Operculum  
 (B) Calyptra  
 (C) Annulus  
 (D) Columella
26. Dense surface covering by **Sphagnum** over water bodies gives the appearance of soil. This is called :
- (A) Quacking bog  
 (B) Peat bog  
 (C) Bog roll  
 (D) Bog moss
27. Meristele is a part of :
- (A) Protostele  
 (B) Solenostele  
 (C) Dictyostele  
 (D) Siphonostele
28. In the stele of pteridophytes :
- (A) Vessels are absent but companion cells are present  
 (B) Vessels are present but companion cells are absent  
 (C) Both vessels and companion cells are present  
 (D) Both vessels and companion cells are absent

29. Trabeculae of **Selaginella** are the modification of :
- (A) Epidermis  
(B) Endodermis  
(C) Pericycle  
(D) Cortex
30. Antherozoids of **Equisetum** are :
- (A) Linear and biflagellate  
(B) Spiral and biflagellate  
(C) Linear and multiflagellate  
(D) Spiral and multiflagellate
31. In case of rhizome of **Marsilea**, the stele is :
- (A) Haplostele  
(B) Ectophloic siphonostele  
(C) Amphiphloic siphonostele  
(D) Actinostele
32. Which structure of fern is called frond ?
- (A) Young plant  
(B) Gametophyte  
(C) Rachis  
(D) Spore bearing leaf
33. What is true about **Lycopodium** gametophyte ?
- (A) It is heterothallic in all species  
(B) It is small and inconspicuous in **L. clavatum**  
(C) It is large and subterranean in **L. cernuum**  
(D) It is saprophytic and colourless in **L. phlegmaria**
34. Turpentine oil used in paint industries is obtained from :
- (A) **Cycas** sp.  
(B) **Pinus** sp.  
(C) **Juniperus** sp.  
(D) **Gnetum** sp.
35. Ovule of **Cycas** is :
- (A) Anatropous and unitegmic  
(B) Anatropous and bitegmic  
(C) Orthotropous and unitegmic  
(D) Orthotropous and bitegmic
36. The wood of **Pinus** is :
- (A) Pycnoxylic with vessels  
(B) Pycnoxylic without vessels  
(C) Monoxylic with vessels  
(D) Monoxylic without vessels

37. Dwarf shoot of **Pinus** possesses :
- (A) Scale leaves only
  - (B) Foliage leaves only
  - (C) Both scale and foliage leaves
  - (D) No leaves
38. The embryo sac of **Gnetum** is \_\_\_\_\_ type.
- (A) Tetrasporic
  - (B) Trisporic
  - (C) Bisporic
  - (D) Monosporic
39. The stele of **Lyginopteris** was :
- (A) Monostelic haplostele
  - (B) Monostelic siphonostele
  - (C) Polystelic haplostele
  - (D) Polystelic siphonostele
40. Each flower of **Cycadeoidea** is equivalent to :
- (A) Megasporophyll
  - (B) Microsporophyll
  - (C) Ovule
  - (D) Strobilus
41. Edible part of sweet potato is :
- (A) Tap root tuber
  - (B) Adventitious root tuber
  - (C) Stem tuber
  - (D) Corm
42. A dicotyledonous plant with parallel venation is found in :
- (A) **Callophyllum**
  - (B) **Bryophyllum**
  - (C) **Myriophyllum**
  - (D) **Epiphyllum**
43. In case of **Calotropis**, phyllotaxy is :
- (A) Spiral
  - (B) Opposite superposed
  - (C) Opposite decussate
  - (D) Whorled
44. Opening of the flowers in a cymose inflorescence is :
- (A) Random
  - (B) Acropetal
  - (C) Centripetal
  - (D) Centrifugal

45. The characteristic fruit of family Poaceae is :
- (A) Cypsela
  - (B) Caryopsis
  - (C) Siliqua
  - (D) Lomentum
46. An aspect of flowers shown in floral formula but not in floral diagram is :
- (A) Floral symmetry
  - (B) Bracts and bracteoles
  - (C) Cohesion of floral parts
  - (D) Position of ovary
47. Didynamous androecium is found in family :
- (A) Brassicaceae
  - (B) Fabaceae
  - (C) Asteraceae
  - (D) Lamiaceae
48. According to Hutchinson's system of classification, which group is more advanced in any one genus or family ?
- (A) Climbers
  - (B) Shrubs
  - (C) Trees
  - (D) Perennials
49. Primary meristem is derived from :
- (A) Promeristem
  - (B) Apical meristem
  - (C) Lateral meristem
  - (D) Inter-calary meristem
50. Which of the followings is an internal gland ?
- (A) Nectary
  - (B) Digestive gland
  - (C) Oil gland
  - (D) Hydathode
51. Periderm is composed of :
- (A) Periblem, plerome, phellem
  - (B) Phellem, phellogen, periblem
  - (C) Plerome, phellogen, phellogen
  - (D) Phellem, phellogen, phellogen
52. The cells functionally associated with sieve tubes are :
- (A) Passage cells
  - (B) Companion cells
  - (C) Phloem parenchyma
  - (D) Phloem fibres



53. Anomalous secondary growth in the stem of **Boerhaavia** is due to the formation of :
- (A) Successive rings of cambium
  - (B) Phloem pockets
  - (C) Interxylary phloem
  - (D) Interxylary cork
54. In case of diarch roots, the lateral roots arise from the pericycle at the region :
- (A) Opposite the xylem bundles
  - (B) Opposite the phloem bundles
  - (C) Between the xylem and phloem bundles
  - (D) Opposite both xylem and phloem bundles
55. Maturation of stamens and carpels of a flower at different times is called :
- (A) Dicliny
  - (B) Dichogamy
  - (C) Herkogamy
  - (D) Heterostyly
56. Perisperm is :
- (A) Degenerated synergids
  - (B) A type of endosperm
  - (C) Remains of nucellus
  - (D) Persistent integument
57. Chromosome number of the endosperm cells of hybrid seeds raised by a cross between a diploid female and a tetraploid male angiospermic plant is 16. What will be the chromosome number of the endosperm cells of hybrid seeds raised by a cross between a tetraploid female and a diploid male plant ?
- (A) 16
  - (B) 20
  - (C) 24
  - (D) 32
58. When embryo sac develops from the cells of nucellus or integuments, the phenomenon is called :
- (A) Non-recurrent apomixis
  - (B) Generative apomixis
  - (C) Somatic apomixis
  - (D) Adventive embryony
59. Filiform apparatus is characteristic feature of :
- (A) Cellular endosperm
  - (B) Synergids
  - (C) Endothecium
  - (D) Aleurone

60. Find the odd man out on the basis of seed dispersal mechanism :
- (A) Jaculators  
(B) Wings  
(C) Pappus  
(D) Coma
61. Continuity of cytoplasm from one cell to the adjacent cells in higher plants is established through :
- (A) Apoplast  
(B) Symplast  
(C) Tonoplast  
(D) Leucoplast
62. At incipient plasmolysis, water potential ( $\psi_w$ ) of a cell is assumed to be equal to :
- (A)  $\psi_s + \psi_p$   
(B)  $\psi_p + \psi_m$   
(C)  $\psi_s$   
(D) Zero
63. Copper deficiency causes a disease in fruit trees called \_\_\_\_\_ where gums are secreted and deposited on the bark.
- (A) Whip tail  
(B) Exanthema  
(C) Little leaf  
(D) Brown heart
64. Water absorbed by root hairs from the soil is :
- (A) Surface water  
(B) Gravitational water  
(C) Hygroscopic water  
(D) Capillary water
65. Carbon dioxide acceptor in  $C_4$  plants is :
- (A) Phosphoglyceric acid  
(B) Ribulose 1, 5 diphosphate  
(C) Phosphoenol pyruvate  
(D) Glycolic acid
66. Which pigment system is inactivated during red drop ?
- (A) PS I  
(B) PS II  
(C) Both PS I and PS II  
(D) Neither PS I nor PS II
67. The active form of enzyme Rubisco is :
- (A) Enzyme alone  
(B) Enzyme- $CO_2$  complex  
(C) Enzyme- $CO_2$ - $Mg^{2+}$  complex  
(D) Enzyme- $CO_2$ - $Mn^{2+}$  complex