

**CHOOSE AND WRITE THE CORRECT OPTIONS.**

1. Artificial system of classification of plants was proposed by a  
a. British botanist      b. Swedish botanist      c. German botanist      d. Indian botanist
2. Which of the following classification is a sexual system of classification?  
a. Artificial system      b. Natural system      c. Phylogenetic system      d. Natural selection
3. The botanist who introduced binomial system is  
a. Carolus Linnaeus      b. Gaspard Bauhin      c. Sir Joseph Dalton Hooker      d. Adolf Engler
4. Genera plantarum of Bentham and Hooker was published in  
a. a single volume      b. two volumes      c. three volumes      d. four volumes
5. In Bentham and Hooker classification of plants, the present day ‘orders’ were referred to by them as  
a. series      b. cohorts      c. orders      d. families
6. Plants having flowers with free petals are placed under  
a. Monochlamydeae      b. Monocotyledons      c. Gamopetalae      d. Polypetalae
7. Inferae includes  
a. 6 orders and 34 families      b. 4 orders and 23 families  
c. 3 orders and 9 families      d. 5 orders and 27 families
8. How many families were described by Bentham and Hooker in their classification?  
a. 204      b. 212      c. 202      d. 102
9. In Bentham and Hooker’s classification of plants, the present by “families” were referred to by them as  
a. families      b. cohorts      c. orders      d. series
10. Thalamiflorae includes  
a. 4 orders and 23 families      b. 6 orders and 34 families  
c. 5 orders and 27 families      d. 3 orders and 12 families
11. Which one of the following series includes the epigynous flowers?  
a. Thalamiflorae      b. Disciflorae      c. Inferae      d. Heteromerae
12. The family included under the series Unisexuales is  
a. Solanaceae      b. Euphorbiaceae      c. Malvaceae      d. Musaceae
13. *Thespesia populnea* belongs to  
a. Solanaceae      b. Euphorbiaceae      c. Malvaceae      d. Musaceae
14. Malvaceae is placed in the series  
a. Thalamiflorae      b. Inferae      c. Heteromerae      d. Disciflorae
15. Anthers are monotheous in  
a. Solanaceae      b. Euphorbiaceae      c. Malvaceae      d. Musaceae
16. In *Abelmoschus esculentus*, the fruit is  
a. drupe      b. schizocarp      c. regma      d. loculicidal capsule
17. Binomial of lady’s finger is  
a. *Hibiscus cannabinus*      b. *Thespesia populnea*  
c. *Gossypium barbadense*      d. *Abelmoschus esculentus*
18. Solanaceae is placed under  
a. Malvales      b. Polemoniales      c. Unisexuales      d. Ranales.
19. In which of the following plants the midrib and veins are found with yellowish spines  
a. *Solanum melongena*      b. *Datura metal*      c. *Solanum xanthocarpum*      d. *Petunia hybrida*.
20. The carpels are obliquely placed in the members of  
a. Malvaceae      b. Solanaceae      c. Euphorbiaceae      d. Musaceae
21. Euphorbiaceae includes about

- a. 82 genera.      b. 90 genera      c. 300 genera      d. 254 genera.
22. *Ricinus communis* is a  
a. herb      b. shrub      c. tree      d. cladode.
23. An example of cladode is  
a. *Phyllanthus emblica*      b. *Ricinus communis*  
c. *Jatropha curcas*      d. *Euphorbia tirucalli*.
24. In *Hevea brasiliensis*, the leaves are  
a. simple      b. trifoliately compound      c. sessile      d. palmately lobed.
25. "The bird of paradise flower" refers to  
a. *Musa paradisiaca*      b. *Strelitzia reginae*      c. *Ravenala madagascariensis*      d. *Heliconia sp.*
26. The phyllotaxy in *Musa* is  
a. alternate      b. opposite      c. distichous      d. spiral
27. In inflorescence in *Ravenala madagascariensis* is  
a. compound cyme      b. compound raceme      c. branched spadix      d. simple raceme
28. The number of fertile stamens in *Ravenala madagascariensis* is  
a. Three      b. four      c. five      d. six
29. The change from meristematic tissue to permanent tissue is called  
a. differentiation.      b. self perpetuating      c. photosynthesis.      d. cell division.
30. The type of tissue presents in the petioles of banana and *Canna*, is  
a. stellate parenchyma      b. prosenchyma      c. aerenchyma      d. chlorenchyma.
31. The tissue generally present in all organs of plant is  
a. parenchyma      b. chlorenchyma      c. collenchyma      d. sclerenchyma
32. The lamellar collenchyma is seen in the hypodermis of  
a. *Datura*      b. *Helianthus*      c. *Ipomoea*      d. *Nicotiana*
33. The root hairs are produced from  
a. rhizodermis      b. trichomes      c. accessory cells      d. trichoblasts
34. The osteosclereids are seen in  
a. seed coat of *Crotalaria*      b. seed coat of *Pisum*  
c. pulp of *Pyrus*      d. petioles of banana
35. Bicollateral vascular bundles are seen in the members of  
a. Malvaceae      b. Musaceae      c. Solanaceae      d. Cucurbitaceae
36. The root hairs originate from  
a. trichoblasts      b. endodermis      c. hypodermis      d. pericycle.
37. The casparian strips are found in the endodermis of  
a. dicot stem      b. dicot root      c. monocot stem      d. dicot leaf.
38. The passage cells are found in endodermis of  
a. dicot stem      b. monocot stem      c. dicot root      d. dicot leaf.
39. The polyarch condition is found in  
a. monocot leaf      b. dicot leaf      c. dicot stem      d. monocot root
40. The inner most layer of the cortex is  
a. epidermis      b. hypodermis      c. endodermis      d. pericycle
41. The vascular bundle with protoxylem facing centre of the stem is  
a. exarch      b. endarch      c. tetrarch      d. polyarch
42. When the xylem and the phloem lie in the same radius, the vascular bundle is called  
a. conjoint      b. radial      c. open      d. closed.
43. The vascular bundles are skull shaped in  
a. dicot root      b. monocot root      c. dicot stem      d. monocot stem.
44. The protoxylem lacuna is present in the vascular bundles of

- a. dicot root      b. monocot root      c. dicot stem      d. monocot stem
45. Isobilateral leaf is present in  
a. grass      b. Cucurbita      c. sunflower      d. bean
46. The vascular bundle in the leaf is  
a. collateral and open      b. collateral and closed.      c. bicollateral and open      d. collateral and exarch
47. The term chromosome was introduced by  
a. Bridges      b. Waldeyer      c. Balbiani      d. Flemming
48. Who had first proved that the genes are carried by the chromosome?  
a. Bridges      b. Waldeyer      c. Balbiani      d. Flemming
49. The coupling test cross ratio is  
a. 1:7:7:1      b. 7:1:1:7      c. 1:1:1:1      d. 9:3:3:1
50. Recombination of chromosome takes place in \_\_\_\_\_ stage of prophase I of meiosis.  
a. leptotene      b. zygotene      c. pachytene      d. diplotene
51. Hugo de Vries first used the term mutation based on his observation on  
a. Sorghum      b. Neurospora      c. *Oenothera lamarckiana*      d. *Cicer gigas*
52. Biochemical mutants of \_\_\_\_\_ failed to synthesize certain amino acids.  
a. Sorghum      b. Neurospora      c. *Cicer arietinum*      d. *Cicer gigas*
53. The gametes of *Drosophila melanogaster* carry  
a. Three chromosomes      b. four chromosomes      c. seven chromosomes      d. eight chromosomes
54. Nullisomy is represented by  
a.  $2n - 1$       b.  $2n + 1$       c.  $2n + 2$       d.  $2n - 2$ .
55. Double helix DNA model was proposed by \_\_\_\_\_  
a. Watson and Crick      b. O.T. Avery et al.      c. Griffith      d. Stinberg
56. The width of DNA molecule is  
a. 18 Å      b. 20 Å      c. 34 Å      d. 35 Å
57. RNA is universally present in all organisms except in \_\_\_\_\_  
a. TMV      b. bacteria      c. algae      d. DNA viruses
58. mRNA is about \_\_\_\_\_ of the RNA content of the cell  
a. 10 - 20%      b. 5 - 10%      c. 3 - 5%      d. 20 - 30%
59. In bacterial cell, there are more than \_\_\_\_\_ tRNAs  
a. 200      b. 70      c. 300      d. 400
60. Restriction enzymes are synthesized by  
a. bacteria only      b. Yeast and bacteria only      c. eukaryotic cells only      d. all kinds of cells
61. Each restriction enzyme cleaves a molecule only at  
a. the ends of genes      b. methyl groups  
c. nucleotide sequence      d. the time of DNA replication
62. One of the following process is employed to introduce a foreign gene into a cell  
a. electrolysis      b. electroporation      c. plasmid      d. ligation
63. The number of transgenic plants available to-day are approximately  
a. six      b. two      c. twelve      d. fifty
64. A toxic protein called delta endotoxin is insecticidal and it is produced by  
a. *Escherichia coli*      b. *Streptomyces griseus*      c. *Bacillus thuringiensis*      d. *Bacillus lactii*
65. *Pseudomonas putida* is an engineered bacterium that can  
a. produce a hormone      b. produce an antibiotic  
c. digest crude oil slick      d. pollute the soil
66. The inherent potential of any living plant cell to develop into entire organism is called  
a. differentiation      b. organogenesis      c. morphogenesis      d. totipotency
67. The function of cytokinin is to increase

- a. cell elongation      b. fruit initiation      c. cell division      d. differentiation
68. By the application of tissue culture, one important product is formed  
 a. artificial synthetic seeds      b. many seeded fruit  
 c. triploid endosperm      d. induction of flowers
69. The two protoplasts are fused with a fusogen called  
 a. polyethylene glycol (PEG)      b. Polyvinyl chloride (PVC)  
 c. Polyethane glycol (PEG)      d. Phosphoric ethane
70. Somatic hybrids are produced through  
 a. asexual fusion      b. protoplasmic fusion  
 c. vegetative propagation      d. grafting
71. One of the following organism is a SCP  
 a. *Alcoholigenes*      b. *Rhizobium*      c. *Mushroom*      d. *Spirulina*
72. Enriched vitamin tablets are produced from the following organism for human consumption  
 a. *Nostoc*      b. *yeast*      c. *Spirulina*      d. *Mushroom*
73. Photosynthesis takes place in  
 a. mitochondria      b. peroxisomes      c. chloroplasts      d. ribosomes
74. During cyclic electron transport, which one of the following is produced  
 a. NADPH<sub>2</sub> only      b. ATP only      c. NADH<sub>2</sub> only      d. both ATP and NADPH<sub>2</sub>
75. Which one of the following is a five carbon compound?  
 a. fructose      b. erythrose      c. ribose      d. DHAP
76. Which one of the following is a C<sub>4</sub> plant?  
 a. rice      b. wheat      c. sugarcane      d. potato
77. The essential component for the formation of chlorophyll  
 a. Mg      b. Fe      c. Cl      d. Mn
78. The pigment which is highly efficient in absorbing solar energy is  
 a. phycobilins      b. chlorophyll      c. carotinoids      d. xanthophylls
79. Which of the following bacterium oxidizes ammonia to nitrate  
 a. *Nitrosomonas*      b. *Rhizobium*      c. *Closteridium*      d. *E. coli*
80. Which of the following is a total parasite  
 a. *Cuscuta*      b. *Viscum*      c. *Drosera*      d. *Monotropa*
81. Which of the following wavelengths of light is most effective for photosynthesis  
 a. 100 nm to 200 nm      b. 200 nm to 300 nm  
 c. 400 nm to 700 nm      d. 700 nm to 900 nm
82. Dark respiration is the function of  
 a. peroxisomes      b. mitochondria      c. chloroplast      d. ribosomes
83. The gas evolved during photosynthesis is  
 a. carbondioxide      b. nitrogen      c. hydrogen      d. oxygen
84. Dark reaction is also known as  
 a. Krebs cycle      b. Calvin cycle      c. pentosephosphate pathway      d. photorespiration
85. C<sub>4</sub> pathway is otherwise known as  
 a. EMP pathway      b. Hatch-Slack pathway      c. photorespiration      d. electron transport chain
86. Photorespiration is otherwise called as  
 a. C<sub>2</sub> cycle      b. C<sub>3</sub> cycle      c. C<sub>4</sub> cycle      d. C<sub>5</sub> cycle
87. An example for insectivorous plant is  
 a. *Drosera*      b. *Viscum*      c. *Monotropa*      d. *Vanda*
88. Which of the following is regarded as primary pigment?  
 a. Carotenoid      b. Xanthophyll      c. Chlorophyll 'a'      d. Chlorophyll 'b'
89. The dark reactions of photosynthesis were discovered by

90. Which of the following is a 5C compound?  
a. Glucose    b. Fructose    c. Phosphoglyceric acid    d. RuBP
91. In  $C_3$  plants light reactions and dark reactions occur in  
a. bundle sheath cells    b. mesophyll cells    c. epidermal cells    d. vascular cells
92. In  $C_3$  pathway acceptor molecule of  $CO_2$  is  
a. Phosphoenol pyruvate    b. RuBP    c. PGA    d. DHAP
93. Which of the following is not a  $C_4$  plant?  
a. Maize    b. Tribulus    c. Amaranthus    d. Wheat
94. Vanda plant is a/an ----  
a. total parasite    b. partial parasite    c. epiphyte    d. saprophyte
95. The reducing power produced in the light reaction is  
a. NADP    b. ATP    c. ADP    d. NADPH<sub>2</sub>
96. Which of the following is not accessory pigments?  
a. Phycobilins    b. Chlorophylls    c. Carotenoids    d. Xanthophylls
97. The photosynthetic pigments are located in  
a. Cristae    b. Cisternae    c. Thylakoid    d. Stroma
98. Which of the following is the common respiratory substrate?  
a. Proteins    b. Lipids    c. Carbohydrates    d. Vitamins
99. The number of high energy terminal bonds present in ATP is  
a. one    b. two    c. three    d. four
100. The first step in aerobic respiration is  
a. glycolysis    b. Krebs cycle    c. terminal oxidation    d. cyclic photophosphorylation
101. Fructose 1,6-bisphosphate is cleaved to two molecules of 3 carbon compounds by  
a. aldolase    b. enolase    c. pyruvic kinase    d. hexokinase
102. Cisaconitic acid is converted into isocitric acid by the addition of a molecule of water. This reaction is catalyzed by  
a. citric acid synthetase    b. fumarase    c. malic dehydrogenase    d. aconitase
103. Complete oxidation of one molecule of glucose yields  
a. 38 ATP    b. 36 ATP    c. 35 ATP    d. 2 ATP
104. Oxidative decarboxylation of pyruvic acid is catalyzed by  
a. pyruvic dehydrogenase    b. pyruvic kinase  
c. pyruvic mutase    d. pyruvic isomerase
105. Ketoglutaric acid is a \_\_\_\_\_ carbon compound  
a. two    b. three    c. four    d. five
106. Glucose is phosphorylated to glucose-6-phosphate by  
a. aldolase    b. kinase    c. mutase    d. hexokinase
107. Respiratory quotient of glucose is  
a. zero    b. unity    c. more than one    d. less than one
108. One molecule of  $FADH_2$  on oxidation yields  
a. One ATP    b. two ATP    c. three ATP    d. four ATP
109. One molecule of  $NADH_2$  on oxidation yields  
a. One ATP    b. two ATP    c. three ATP    d. four ATP
110. Formation of ATP during electron transport chain is known as  
a. dephosphorylation    b. phtophosphorylation  
c. oxidative phosphorylation    d. substate level phosphorylation

111. Which of the following is referred to as EMP pathway?
- Glycolysis
  - Krebs cycle
  - Electron transport chain
  - Pentose phosphate pathway
112. The total amount of energy released from one molecule of glucose on oxidation is about
- 1600 kJ
  - 2300 kJ
  - 2500 kJ
  - 2900 kJ
113. Which of the following is a 5C compound?
- Phosphoglyceraldehyde
  - Erythrosephosphate
  - Xylulose phosphate
  - Sedoheptulose phosphate
114. Which one of the following plant hormones was first discovered?
- Auxin
  - Gibberellin
  - Cytokinin
  - Ethylene
115. An example for synthetic auxin is
- IAA
  - PAA
  - ABA
  - NAA
116. Apical dominance is due to
- ethylene
  - auxin
  - gibberellin
  - cytokinin
117. Bakanae disease in paddy is caused by
- abscisic acid
  - phenyl acetic acid
  - naphthelene acetic acid
  - gibberellic acid
118. In sigmoid curve the rapid growth phase is designated as
- lag phase
  - log phase
  - dormant phase
  - steady state phase
119. Auxin prevents
- apical dominance
  - ageing process
  - parthincarpy
  - abscission
120. "Foolish seedling" disease of rice is caused by
- auxin
  - gibberellins
  - cytokinin
  - abscisic acid
121. Closure of stomata is caused by
- auxin
  - gibberellins
  - cytokinin
  - abscisic acid
122. The chemical used in the field to eradicate weeds is
- 2, 4 - D
  - IAA
  - ABA
  - urea
123. Abscission is prevented by
- Auxin
  - Gibberellin
  - Cytokinin
  - Ethylene
124. The response of a plant to the relative lengths of light and dark periods is known as
- vernalization
  - photorespiration
  - photosynthesis
  - photoperiodism
125. Photoperiodic response in flowering was first observed in
- wheat
  - Maryland Mammoth
  - Oats
  - Chrysanthemum
126. Which of the following is a short day plant?
- wheat
  - tobacco
  - sunflower
  - maize
127. Which of the following is a long day plant?
- tobacco
  - sunflower
  - maize
  - wheat
128. Which pathogen causes the blast disease of rice?
- Cercospora personata*
  - Pyricularia oryzae*
  - Xanthomonas citri*
  - Tungro virus*
129. What is the collateral host plant of *Pyricularia oryzae*?
- Oryza sativa*
  - Digitaria marginata*
  - Arachis hypogea*
  - Citrus plant
130. Which pathogen causes Tikka disease of groundnut?
- Cercospora personata*
  - Pyricularia oryzae*
  - Xanthomonas citri*
  - Tungro virus*
131. Acalyphine is extracted from
- Acalypha indica*
  - Aegle marmelos*
  - Cissus quadrangularis*
  - Mimosa pudica*
132. Binomial of 'vilvum' is
- Acalypha indica*
  - Aegle marmelos*
  - Cissus quadrangularis*
  - Mimosa pudica*

**BIO – BOTANY**  
**Book Back 1 Mark Questions Answer Key**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
b	a	b	c	b	d	c	c	c	b	c	b	c	a	c
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
d	d	b	c	b	c	b	d	b	b	d	a	d	a	a
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
a	b	a	b	d	d	b	c	d	c	b	a	d	d	a
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
b	b	a	b	c	c	b	b	d	a	b	d	c	b	a
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
c	b	d	c	c	d	c	a	a	b	d	d	c	b	c
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
c	a	b	a	a	c	b	d	b	b	a	a	c	b	d
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
b	b	d	c	d	b	c	c	b	a	a	d	a	a	b
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
d	b	b	c	c	a	d	c	a	d	b	d	b	d	b
121	122	123	124	125	126	127	128	129	130	131	132			
b	a	a	d	b	b	d	b	b	a	a	b			