

1. Perianth is represented by  
(a) glumes (b) lemma  
(c) lodicules (d) palea
2. Table sugar is consist of  
(a) lactose (b) sucrose  
(c) maltose (d) glucose
3. The terminator gene technology causes  
(a) failure of seed setting after one generation  
(b) breakage of seed dormancy  
(c) early flowering in plants  
(d) None of the above
4. The term totipotency refers to  
(a) the capability of organism to regenerate its lost parts  
(b) capability of somatic cells to produce complete organism  
(c) the introduction of foreign gene in a cells DNA  
(d) the technique of growing immature embryos
5. Work of Beadle and Tatum on *Neurospora rassa* proved that  
(a) Replication of DNA is semi-conservative  
(b) viruses have genetic material  
(c) every gene is responsible for specific enzymes  
(d) plant cells are to tipotent
6. Polyploidy means occurrence of  
(a) haploid sets of chromosomes  
(b) diploid sets of chromosomes  
(c) more than diploid sets of chromosomes  
(d) All of the above
7. The deteriorative processes in plants, that naturally terminate their functional life, are collectively called  
(a) wilting (b) abscission  
(c) plasmolysis (d) senescence
8. Which pigment involves in photoperiodic change in plants?  
(a) Phytochrome (b) Cytochrome  
(c) Chlorophyll (d) Anthocyanin
9. Linnaen system of plant classification is based on  
(a) morphological and anatomical characters  
(b) evolutionary trends  
(c) floral characters  
(d) None of the above
10. Succession on secondary base area is  
(a) primosere (b) subsere  
(c) xerosere (d) None of these
11. An unrestricted reproductive capacity is called  
(a) birth rate (b) biotic potential  
(c) carrying capacity (d) fertility
12. Ubisch bodies are secreted by  
(a) tapetum  
(b) exine  
(c) microspore mother cells  
(d) endothecium
13. Alginic acid is found in the cell wall of  
(a) *Gigartina* (b) *Laminaria*  
(c) *Gelidium* (d) *Scytonema*
14. Lady finger (bhindi) belongs to

15. P-proteins are associated with  
(a) sieve tube elements  
(b) xylem parenchyma  
(c) trichomes  
(d) tracheids and vessels
16. Potato is a modification of  
(a) stem (b) rhizome  
(c) root (d) leaf
17. Antherozoids of *Dryopteris* are  
(a) multiciliated and coiled  
(b) multiciliated and sickle-shaped  
(c) biciliated and coiled  
(d) biciliated and sickle-shaped
18. Ginger multiplies vegetatively by  
(a) bud (b) tuber  
(c) stem (d) rhizome
19. In *Cycas* stem, open vascular bundle is characterized by  
(a) phloem being sandwiched between xylem  
(b) cambium present in between xylem and phloem  
(c) xylem being sandwiched between phloem  
(d) xylem and phloem occurring on different radii
20. From which part of coconut coir is obtained?  
(a) Pericarp  
(b) Mesocarp  
(c) Epicarp  
(d) Endocarp
21. Both heterospory and circinate ptyxis occur in  
(a) *Dryopteris* (b) *Pinus*  
(c) *Cycas* (d) *Funaria*
22. In *Funaria*, the stomata are found on  
(a) foot (b) seta  
(c) capsule (d) All of these
23. Tracheophyta consists of  
(a) bryophytes only  
(b) pteridophytes only  
(c) gymnosperms and angiosperms  
(d) Both (b) and (c)
24. Green-house effect is mainly caused by  
(a) CFCs (b)  $\text{CH}_4$   
(c)  $\text{CO}_2$  (d)  $\text{CO}$
25. Nucellar polyembryony occurs in  
(a) *Corchorus* (b) *Cirrus*  
(c) *Carthamus* (d) *Zea mays*
26. Male gametophyte of angiosperms is reduced to  
(a) one cell (b) two cells  
(c) three cells (d) four cells
27. In  $\text{C}_3$  plants, the first stable product of photosynthesis during dark reaction is  
(a) PGAL (b) RuBP  
(c) PGA (d) OAA
28. During the formation of embryo sac, the functional megaspore undergoes  
(a) two mitotic divisions  
(b) two meiotic divisions  
(c) three meiotic divisions  
(d) three mitotic divisions
29. The first  $\text{CO}_2$  acceptor in  $\text{C}_4$  cycle is  
(a) RuBP (b) PEP  
(c) PGA (d) OAA
30. The water available to plants for absorption is  
(a) gravitational water  
(b) hygroscopic water  
(c) capillary water  
(d) chemically bound water
31. Cell wall of fungi is made up of  
(a) fungal cellulose (b) hemicellulose  
(c) fungal chitin (d) Both (a) and (c)
32. The plant ash indicates  
(a) organic matter of plant  
(b) mineral salts absorbed by plants  
(c) both mineral salts and organic matter  
(d) silica absorbed by plants
33. During cell cycle, RNA and non-histone proteins are synthesized in  
(a) S-phase (b)  $\text{G}_0$ -phase  
(c)  $\text{G}_2$ -phase (d) M-phase
34. Which one of the following is the terminal electron acceptor?  
(a) Molecular  $\text{CO}_2$  (b) Molecular  $\text{O}_2$   
(c) Molecular  $\text{H}_2$  (d)  $\text{NADPH}_2$

35. Bract is a modified  
(a) petal (b) sepal  
(c) leaf (d) involucre
36. Hormone replacing the requirement of vernalization is  
(a) ethylene (b) auxin  
(c) gibberellins (d) cytokinin
37. Thigmotropism is best seen in  
(a) tendrils (b) leaf apex  
(c) root apex (d) stem apex
38. Transpiration is measured by  
(a) potometre (b) porometre  
(c) auxanometre (d) respirometre
39. The function of polymerase chain reaction is  
(a) transduction (b) DNA amplification  
(c) translation (d) None of these
40. Mutation is more common when it is present in  
(a) recessive condition  
(b) dominant condition  
(c) constant in population  
(d) None of the above
41. The most common type of ovule in angiosperms is  
(a) amphitropous (b) atropous  
(c) anatropous (d) circinotropous
42. When two hybrids  $rrTt$  and  $Rrtt$  are crossed, the phenotype ratio of offspring would be  
(a) 3 : 1 (b) 9 : 3 : 3 : 1  
(c) 1 : 1 (d) 1 : 1 : 1 : 1
43. One of the most resistant known biological material is  
(a) lignin (b) hemicellulose  
(c) sporopollenin (d) lignocelluloses
44. Energy enters the ecosystem through  
(a) herbivore (b) carnivore  
(c) producer (d) decomposer
45. In soil profile, humus is present in  
(a) horizon-0 (b) horizon-A  
(c) horizon-B (d) horizon-C
46. The smallest angiospermic flower is  
(a) *Wolffia* (b) *Ranunculus*  
(c) *Rafflesia* (d) *SteHana*
47. The pyramid of energy is always  
(a) opaque (b) horizontal  
(c) upright (d) inverted
48. The transition zone between the two vegetations of ecosystem is called  
(a) ecotone (b) ecocline  
(c) ecosystem (d) ecesis
49. Protein in silk thread is  
(a) fibroin (b) keratin  
(c) albumin (d) globulin
50. Thermoregulatory centre of human body is associated with  
(a) cerebrum (b) cerebellum  
(c) hypothalamus (d) medulla oblongata
51. Body cavity of adult Ascaris is  
(a) haemocoel (b) amphicoel  
(c) pseudocoel (d) schizocoel
52. Collar cells are characteristic of  
(a) earthworm (b) roundworms  
(c) coelenterata (d) sponges
53. In honey bee, the drones are  
(a) sterile male (b) fertile male  
(c) fertile female (d) sterile female
54. Crypts of Leiberkuhn are involved in  
(a) secretion of succus entericus  
(b) secretion of rennin  
(c) secretion of ptyalin  
(d) digestion of food
55. Plasmids are found in  
(a) virus (b) bacteria  
(c) fungi (d) viroid
56. Oxygen dissociation curve is  
(a) sigmoid (b) parabolic  
(c) hyperbolic (d) straight line
57. Blood leaving the liver and going towards heart is rich in  
(a) bile (b) urea  
(c) ammonia (d) oxygen



58. Membrane that covers the vacuole in a plant cell is called  
(a) tonoplast (b) tonoplasm  
(c) jacket (d) cell membrane
59. In earthworm, gizzard is found, in which of the following segments?  
(a) 9<sup>th</sup> segment (b) 18<sup>th</sup> segment  
(c) 13<sup>th</sup> segment (d) 16<sup>th</sup> segment
60. The infective stage of *Entamoeba histolytica* is  
(a) trophozoite stage  
(b) binucleated cyst stage  
(c) tetranucleated cyst stage  
(d) None of the above
61. The initiation codon in eukaryotes is  
(a) AUG (b) UGA  
(c) UAG (d) UAA
62. Pasteurization temperature is  
(a) 72°C for 20 minutes  
(b) 63°C for 15 seconds  
(c) 70°C for 15 seconds  
(d) 65°C for 30 minutes
63. The number of heart chambers found in cockroach is  
(a) 4 (b) 7  
(c) 5 (d) 13
64. The ratio of methane, ammonia and hydrogen in Stanley Miller's experiment was  
(a) 3 : 1 : 2 (b) 2 : 1 : 2  
(c) 1 : 2 : 1 (d) 5 : 4 : 1
65. Convergent evolution is shown by  
(a) homologous organ (b) analogous organ  
(c) vestigial organ (d) All of these
66. Teichoic acid is present in  
(a) cell wall of Gram positive bacteria  
(b) cell wall of Gram negative bacteria  
(c) capsid of virus  
(d) protoplasm of mycoplasma
67. % sign is used for  
(a) actinomorphic flower  
(b) zygomorphic flower  
(c) incomplete flower  
(d) epigynous flower
68. Crossing over occurs  
(a) single strand stage (b) two strand stage  
(c) four strand stage (d) eight strand stage
69. "Ontogeny repeats phylogeny" is the statement of which of the following theories?  
(a) Mutation theory  
(b) Inheritance theory  
(c) Recapitulation theory  
(d) Natural selection theory
70. Darwin proposed the theory of  
(a) inheritance of acquired characters  
(b) natural selection  
(c) recapitulation  
(d) continuity of germplasm
71. Which of the following is not Darwin's conclusion?  
(a) Survival of the fittest  
(b) Struggle for existence  
(c) Inheritance of acquired characters  
(d) Origin of species by natural selection
72. Nuclear membrane is continuous with  
(a) rough endoplasmic reticulum  
(b) smooth endoplasmic reticulum  
(c) cell membrane  
(d) Golgi bodies
73. Cosmid is  
(a) extragenetic material in mycoplasma  
(b) circular DNA in bacteria  
(c) extra DNA in bacteria  
(d) fragment of DNA inserted in bacteria for forming copies
74. XO chromosomal abnormality in humans causes  
(a) Turner's syndrome  
(b) Down's syndrome  
(c) Darwin's syndrome  
(d) Klinefelter's syndrome
75. Fertilization of ovum takes place in rabbit, man and other placental mammals in  
(a) ovary (b) fallopian tube  
(c) cervix (d) uterus
76. At what stage in test tube babies, the zygote is implanted in human female?  
(a) 32-celled stage (b) 64-celled stage  
(c) 100-celled stage (d) 164-celled stage

77. Pentoses and hexoses are common  
(a) monosaccharides (b) disaccharides  
(c) polysaccharides (d) oligosaccharides
78. Pheromone is  
(a) a product of endocrine gland  
(b) used for animal communication  
(c) messenger RNA  
(d) always protein
79. Secretion is under control of neurosecretory nerve axons in  
(a) pineal gland (b) adrenal cortex  
(c) anterior pituitary (d) posterior pituitary
80. If an isolated strain of DNA is kept at 82-90°C then  
(a) it changes into RNA  
(b) it breaks into two fragments  
(c) it breaks into many fragments  
(d) it uncoils and the two strands separate
81. The smallest endocrine gland is  
(a) thyroid (b) parathyroid  
(c) pituitary (d) adrenal
82. Ban body in mammals represents  
(a) all the heterochromatin in female cells  
(b) one of the two X-chromosomes in somatic cells of females  
(c) all the heterochromatin in male and female cells  
(d) the Y-chromosome in somatic cells of male
83. Gland responsible for calcium metabolism is  
(a) thymus (b) thyroid  
(c) parathyroid (d) adrenal
84. Which of the following is not a case of epimorphosis?  
(a) Formation of sperms from small clumps of cells  
(b) Regeneration of tail in a lizard  
(c) Replacement of severed arm in starfish  
(d) Replacement of limb in salamander
85. The daughter born to haemophilic father and normal mother could be  
(a) normal (b) carrier  
(c) haemophilic (d) None of these
86. Removal or absence of thymus in early life shall bring about  
(a) lack of lymphocytes (b) lack of antibodies  
(c) lack of lymph nodes (d) All of the above
87. Bone marrow is made up of  
(a) muscular fibre and fatty tissue  
(b) fatty tissue and areolar tissue  
(c) fatty tissue and cartilage  
(d) fatty tissue, areolar tissue and blood vessel
88. Mast cells secrete  
(a) serotonin (b) heparin  
(c) histamine (d) All of these
89. Which one is component of ornithine cycle?  
(a) Ornithine, citrulline and fumaric acid  
(b) Ornithine, citrulline and arginine  
(c) Ornithine, citrulline and alanine  
(d) Amino acids are not used
90. Bidder's canal is present in  
(a) male rabbit (b) male frog  
(c) female frog (d) Both (b) and (c)
91. Zygomatic arch of rabbit is formed of  
(a) maxilla, periotic and jugal  
(b) periotic, jugal and palatine  
(c) maxilla, squamosal and jugal  
(d) maxilla, premaxilla and squamosal
92. Role of spleen in mammal is  
(a) to control blood pressure  
(b) to assist liver  
(c) to act as haemopoietic tissue  
(d) to assist kidneys
93. Excretory product of spider is  
(a) uric acid (b) ammonia  
(c) guanine (d) None of these
94. Green glands present in some arthropods help in  
(a) respiration (b) excretion  
(c) digestion (d) reproduction
95. Sensation of stomach pain is due to  
(a) interoceptors (b) exteroceptors  
(c) proprioceptors (d) teloreceptors

96. Right lung of rabbit is divided into  
 (a) four lobes (b) two lobes  
 (c) six lobes (d) eight lobes
97. Haemoglobin is having maximum affinity with  
 (a) CO<sub>2</sub> (b) CO  
 (c) O<sub>2</sub> (d) NH<sub>3</sub>
98. Veliger larva occurs in phylum  
 (a) Mollusca (b) Echinodermata  
 (c) Arthropoda (d) Cnidaria
99. The most recent and direct prehistoric ancestor of present man is  
 (a) Cro-magnon (b) Pre-Neanderthal  
 (c) Neanderthal (d) None of these
100. "Darwin's finches" refers to  
 (a) fossils of birds collected by Darwin at Galapagos islands  
 (b) a type of birds present of Galapagos islands  
 (c) migratory birds collected by Darwin at Galapagos islands  
 (d) fossils of reptiles collected by Darwin at Galapagos islands

## Answer – Key

1. c	2. b	3. a	4. b	5. c	6. c	7. d	8. a	9. c	10. b
11. b	12. a	13. b	14. a	15. a	16. a	17. a	18. d	19. b	20. b
21. c	22. c	23. d	24. c	25. b	26. c	27. c	28. d	29. b	30. c
31. d	32. b	33. c	34. b	35. c	36. c	37. a	38. a	39. b	40. b
41. c	42. d	43. c	44. c	45. b	46. a	47. c	48. a	49. a	50. c
51. c	52. d	53. b	54. a	55. b	56. a	57. b	58. a	59. a	60. c
61. a	62. d	63. d	64. b	65. b	66. a	67. b	68. c	69. c	70. b
71. c	72. a	73. d	74. a	75. b	76. a	77. a	78. b	79. d	80. d
81. c	82. b	83. c	84. a	85. b	86. d	87. d	88. d	89. b	90. b
91. c	92. c	93. c	94. b	95. a	96. a	97. b	98. a	99. a	100. b