

1. The adipose tissue in the skin is found in the :
 - (a) dermis
 - (b) subcutaneous layer
 - (c) Malpighian layer
 - (d) epidermal layer
2. In horses, rabbits, hares, the cellulose gets digested in the :
 - (a) caecum
 - (b) stomach
 - (c) appendix
 - (d) rumen
3. The process of breathing is controlled by
 - (a) spinal cord
 - (b) cerebellum
 - (c) medulla oblongata
 - (d) hypothalamus
4. A person with type 'A' blood group may safely receive a transfusion of :
 - (a) type AB
 - (b) type A and type O
 - (c) type A and type AB
5. If a man who is colour blind marries a woman who is pure normal for colour vision, the chances of their sons having colour blindness is :
 - (a) 100%
 - (b) 50 : 50
 - (c) 0% (zero)
 - (d) 75 : 25
6. Brachydactyly is due to :
 - (a) dominant gene on the autosome
 - (b) recessive gene on the autosomc
 - (c) dominant gene on the sex chromosome
 - (d) none of the above
7. The cause of Cat-cry syndrome is due to:
 - (a) loss of a segment of X-chromosome
 - (b) loss of a segment of 5th chromosome
 - (c) loss of segment of Y-chromosome
 - (d) none of the above
8. Lateral roots are originated from :
 - (a) concx
 - (b) pericycle
 - (c) endodermis
 - (d) pith
9. What will be the sequence of nucleorides in m-RNA if DNA have ATTGGC sequence?
 - (a) TAAGGG
 - (b) UGATCA
 - (c) ATAGCG
 - (d) UAACCG
10. Parasexuality is involved with:
 - (a) fusion of gamete and protoplast
 - (b) fusion of male gamete with secondary nucleus
 - (c) fusion of protoplast
 - (d) fusion of male and female gamete
11. How many types of gametes may be produced by genotype D/d: E/e:F/f ?
 - (a) 27
 - (b) 8
 - (c) 3
 - (d) 6
12. In which of the following pyrenoids are present?
 - (a) *Marchantia*
 - (b) *Riccia*
 - (c) *Anthoceros*
 - (d) All of these
13. Liquid part of coconut is called :
 - (a) male gametophyte
 - (b) nucellus
 - (c) endosperm
 - (d) embryo
14. Kaziranga is associated with :
 - (a) *Rhinoceros*
 - (b) tigers
 - (c) birds
 - (d) lions
15. The red colour of 'red sea' is due to which of the following blue-green algae?
 - (a) *Chlamydomonas nivalis*
 - (b) *Anabaena*
 - (c) *Microcystis*
 - (d) *Trichodesmium*

16. The function of restriction enzyme is :
 (a) cleavages of protein
 (b) cleavages of DNA
 (c) cleavages of fat
 (d) cleavages of starch
17. Cystolith is made up of:
 (a) calcium oxide (b) calcium oxalate
 (c) calcium carbonate (d) calcium chloride
18. The algae used in space research is :
 (a) *Cephaleuros* (b) *Gelidium*
 (c) *Chlorella* (d) *Gracilaria*
19. Mendel was not imagine about which of the following?
 (a) Linkage-
 (b) Incomplete dominance
 (c) Dominance
 (d) Segregation of alleles
20. Sunnhemp is obtained from :
 (a) *Crotalaria juncea*
 (b) *Linum usitatissimum*
 (c) *Corchorus capsularis*
 (d) None of the above
21. The enzyme involved in Fixation of CO₂ in C₄ plants is :
 (a) PEP carboxylase (b) RuDP carboxylase
 (c) RuDP oxydase (d) both (a) and (c)
22. Which of the following follows Chargaff rule?
 (a) A+G=T+C (b) A = C
 (c) G = T (d) $\frac{A+T}{G+C} = 1$
23. The endosperm of gymnosperm is :
 (a) haploid (b) diploid
 (c) triploid (d) tetraploid
24. Which type of movement is present in *Mimosa pudica*?
 (a) Nycnastic (b) Seismonastic
 (c) Chemonastic (d) Phototropic
25. Respiratory roots and viviparous reproduction are the characteristic of:
 (a) hydrophytes (b) xerophytes
 (c) mesophytes (d) mangroves
26. Amphivasal vascular bundle possess :
 (a) xylem around phloem
 (b) phloem around xylem
 (c) phloem on both sides of xylem
 (d) phloem towards centre and xylem towards periphery
27. During development of embryo in archegonium of Bryophyta its posterior part form protective embryo cover which is called :
 (a) calyptra (b) paraphysis
 (c) apophysis (d) hypophysis
28. Which of the following is the example of structural protein?
 (a) Myosin (b) Collagen
 (c) Keratin (d) All of these
29. Infectious stage of *Plasmodium* is :
 (a) ookinete (b) sporozoite
 (c) oocyst (d) gametocytes
30. Nematoblast of *Hydra* are :
 (a) sensory
 (b) complicated
 (c) with nematocyst apparatus
 (d) all of the above
31. In Krebs cycle formation of:
 (a) 34 ATP takes place
 (b) 38 ATP takes place
 (c) 15 ATP from each acetyl Co-A takes place
 (d) 12 ATP from each acetyl Co-A takes place
32. Which of the protozoan is responsible for kala azar disease?
 (a) *Trypanosoma* (b) *Giardia*
 (c) *Monocystis* (d) *Leishmania*
33. Hardest part in animal body is :
 (a) bone (b) hair
 (c) dentine (d) enamel
34. In which direction cristae of rabbit ear helps in maintaining balance?
 (a) Circular position of longitudinal axis of semicircular canals
 (b) Transverse position of longitudinal axis of semicircular canals
 (c) Parallel to longitudinal axis of semicircular canals
 (d) All of the above

35. Function of thyroxin hormone is :
(a) to grow
(b) to develop
(c) self immunization
(d) to control metabolism
36. The number of chromosomes becomes half in :
(a) anaphase-I (b) anaphase-II
(c) telophase-I (d) telophase-H
37. O₂ does not evolved in photosynthesis of :
(a) BGA (b) green algae
(c) bacteria (d) autotrophic plant
38. Stratification occurs in:
(a) desert (b) tropical forest
(c) deciduous forest (d) tundra
39. Heroin is :
(a) diacetyl morphine
(b) triaceiyl morphine
(c) letra acetyl morphine
(d) mono acetyl morphine
40. Conditions helpful in photo respiration are :
(a) more O₂ and less CO₂
(b) less O₄ and more CO₃
(c) more temperature and less O₂
(d) more humidity and less temperature
41. Which of the following is the result of double fertilization?
(a) Cotyledon (b) Nucellus
(c) Endosperm (d) None of these
42. Who discovered the super bugs?
(a) H.G. Khorana
(b) Dilip Sah
(c) Anand Mohan Chakarwarty
(d) Robert Hooke
43. Book lungs are the respiratory organs in :
(a) protozoans (b) cnidarians
(c) ar-thropodes (d) amphibians
44. Which is the function of nor-epinephrin?
(a) Increase blood pressure
(b) Urine formation
(c) Increase secretion of adrenalin
(d) None of the above
45. Phenomenon of industrial melanism demonstrates :
(a) reproductive isolation
(b) genetic isolation
(c) natural selection
(d) geographical isolation
46. Primary acceptor of CO₂ in photosynthesis is :
(a) phosphoric acid
(b) ribulose phosphate
(c) glucose
(d) ribulose 1, 5 biphosphate
47. In the following how the sap wood is converted into heart wood?
(a) By degeneration of protoplast of living cells
(b) Tyiosis formation
(c) By deposition of resins, oil, gums
(d) All of the above
48. The difference in phloem of gymnosperms and angiosperms is due to :
(a) parenchyma (b) sieve cell
(c) companion cell (d) fibres
49. When tall and dwarf plants are crossed, from which cross 1 : 1 ratio is obtained?
(a) Tt and tt (b) tt and tt
(c) Tt × Tt (d) TT and Tt
50. Botanical name of species which cause white rust of crucifers?
(a) *Peronospora parasitica*
(b) *Puccinia graminis*
(c) *Pythium debarganum*
(d) *Albugo Candida*
51. Root cap is absent in :
(a) mesophyics (b) hydrophytes
(c) epiphytes (d) xerophyies
52. Which type of rhizoids are present in Riccia?
(a) Unicellular smooth
(b) MulticelluSar smooth
(c) Unicellular smooth and tuberculated
(d) Multicetlular smooth and tuberculated
53. In *Mirabilis* a hybrid for red (RR) and white (rr) flower produces pink (R-r) flower. A plant with pink flower is crossed with white flower the expected phenotypic ratio is :

- (a) red : pink : white (1:2:1)
 (b) pink : white (1 : 1)
 (c) red : pink (1 : 1)
 (d) red .-white (3:1)
54. Which of the following is the site of lipid synthesis?
 (a) Rough ER (b) Smooth ER
 (c) Golgi bodies (d) Ribosome
55. Ciliated epithelium is present in;
 (a) trachea (b) ureter
 (c) intestine (d) nasal chamber
56. Pulp cavity of teeth is lined by :
 (a) odontohlast (b) chondroblast
 (c) osteoblast (d) amyloblast
57. Which of the following is not a source of vitamin-A?
 (a) Carrot (b) Mango
 (c) Apple (d) Yeast
58. Complete metamorphosis is found in :
 (a) house-fly and mosquito
 (b) house-fly and cockroach
 (c) mosquito and cockroach
 (d) none of the above
59. Down syndrome is due to :
 (a) chromosome number increase in 21st pair autosome
 (b) chromosome number decrease in 21st pair autosome
 (c) chromosome number increase in 18th pair autosome
 (d) chromosome number decrease in 18th air Autosome
60. Colour blindness is due to :
 (a) recessive female chromosome
 (b) dominant female chromosome
 (c) recessive male chromosome
 (d) dominant male chromosome
61. Genetic recombination is due to :
 (a) fertilization and meiosis
 (b) mitosis and meiosis
 (c) fertilization and mitosis
 (d) none of the above
62. Legume plants are important for atmosphere because they :
 (a) help in NO₂ fixation
 (b) do not help in NO₃ fixation
 (c) increase soil fertility
 (d) all of the above
63. Community is :
 (a) a group of independent and interacting population of different species
 (b) a group of independent and interacting population of same species
 (c) a group of independent and interacting population of same species in a specific area
 (d) a group of independent and interacting population of different species in a specific area
64. Quiescent centre is present in :
 (a) shoot apex
 (b) root apex
 (c) both (a) and (b)
 (d) meristemacic tissue
65. Connecting link between reptiles and birds is :
 (a) *Dodo* (b) *Dimetrodon*
 (c) *Sphenodon* (d) *Archaeopteryx*
66. Vestigial organ in human being is :
 (a) incisor (b) canines
 (c) molar (d) premolar
67. Miller and Urey performed an experiment to prove the origin of life. They took gases NH₃ and H₂ along with :
 (a) N₂ and H₂O (b) H₂O and CH₄
 (c) CH₄ and N₂ (d) CO₂ and NH₃
68. Nerve impulse initiates with the movements of:
 (a) K⁺ (b) Na⁺
 (c) Ca⁺ (d) Mg⁺
69. In which of the following, Nissl's granules are found?
 (a) Liver cells (b) Nerve cells
 (c) Intestinal cells (d) Uriniferous tubules
70. Sympathetic nervous system induces :
 (a) heart beat
 (b) secretion of semen
 (c) secretion of saliva

(d) secretion of digestive juices

71. Organ of Corti is found in :
(a) heart (b) kidneys
(c) inner ear (d) nasal chamber
72. During food chain, maximum energy is stored in :
(a) producer (b) primary consumer
(c) secondary consumer (d) decomposer
73. Cold treatment of seeds is called :
(a) vernalization
(b) stratification
(c) devernization
(d) photophosphorylation
74. One gene-one enzyme hypothesis was given by:
(a) Mendel (b) Darwin
(c) Robert Hooke (d) Beadle and Tatum
75. The formation of fruits without fertilization is called :
(a) polyspory (b) parthenogenesis
(c) polyembryony (d) parthenocarpy
76. Mycorrhiza helps in :
(a) respiration
(b) water absorption
(c) nutrient absorption
(d) phosphate absorption
77. Last electron receptor in respiration is :
(a) CO_2 (b) O_2
(c) H_2 (d) NADH
78. Which of the following algae is parasitic?
(a) *Nostoc* (b) *Rhodomenia*
(c) *Cephaleuros* (d) *Polysiphonia*
79. Alcoholic fermentation takes place in the presence of:
(a) maltase (b) zymase
(c) amylase (d) invertase
80. Fluid mosaic model of cell membrane was given by:
(a) Beadle and Tatum
(b) Singer and Nicolson
(c) Watson and Crick
(d) Roberson and Miller
81. Suicidal bags are :
(a) lysosomes (b) Golgi bodies
(c) ribosomes (d) chloroplast
82. Heterochromatin remains condensed in which part of chromosome?
(a) Secondary constriction-I
(b) Secondary constriction-II
(c) Telomeres
(d) Both (a) and (b)
83. Tracheids differ from vessels in having :
(a) thick wall
(b) bordered pits
(c) discontinuous intercalary wall
(d) spiral thickening
84. Chlorosis in leaf occurs due to the deficiency of:
(a) chloride (b) magnesium
(c) phosphate (d) molybdenum
85. The anti-transpirant is :
(a) PMA (b) ABA
(c) both (a) and (b) (d) none of these
86. Pneumatophores are found in :
(a) Orchid (b) Piper
(c) *Rhizophora* (d) *Ficus*
87. Plant which was used by Hugo de Vries for mutation experiment was :
(a) *Oenothera lamarckiana*
(b) *Solanum tuberosum*
(c) *Ficus elastica*
(d) None of the above
88. Agar-agar is obtained from :
(a) *Chlorella*
(b) *Chlamydomonas*
(c) *Nostoc*
(d) *Gracilaria* and *Gelidium*
89. Hypanthodium in inflorescence is found in :
(a) *Ficus* (b) *Tuisi*
(c) *Cedrus* (d) *Calotropis*
90. Green-house gases are :
(a) CF_4 , CO_2 , NH_4 , and NO_2
(b) O_2 , N_3 , NO_2
(c) N_2 , CO_2 , NH_4
(d) None of the above

91. Respiration pigment of blood in cockroach is :

- (a) haemozoin (b) haemocyanin
(c) haemoglobin (d) absent

92. From acrosome which secretes :

- (a) hyaluronic acid (b) hyaluronidase
(c) TSH (d) fertilizing

93. Malignant malaria is caused by :

- (a) *Plasmodium falciparum*
(b) *Plasmodium ovale*
(c) *Plasmodium vivax*
(d) *Plasmodium malariae*

94. Retrogressive metamorphosis is present in

- (a) *Herdmania* (b) *Balanoglossus*
(c) *Amphioxus* (d) All of these

95. Corpus luteum secretes :

- (a) LH (b) progesterone
(c) estrogen (d) FSH

96. Origin of nervous system from :

- (a) meso-endoderm (b) mesoderm
(c) endoderm (d) ectoderm

97. Which parasite is present in seminal vesicle of earthworm?

- (a) *Monocystis* (b) *Nosema*
(c) *Sarcocystis* (d) *Nictotherus*

98. Ribonucleoprotein particles of protoplasm are:

- (a) ribosomes (b) plastid
(c) Golgi body (d) cristae

99. Main function of ribosomes is :

- (a) fat synthesis (b) sterol synthesis
(c) protein synthesis (d) none of these

100. Which of the following is shift in chloride-shift?

- (a) O_2 and CO_2 (b) Bicarbonate ions
(c) CO_2 (d) O_2

Answer – Key

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