

1. The trisomy for 21st chromosome is called
(a) Down's syndrome (b) Turner's syndrome
(c) Sickle cell anaemia
(d) Klinefelter's syndrome
2. 'Mammalian thymus' is mainly concerned with
(a) regulation of body temperature
(b) regulation of body growth
(c) immunological functions
(d) secretion of thyrotropin
3. Which of the following is the largest gland in an adult man?
(a) Thymus (b) Liver
(c) Thyroid (d) Pancreas
4. In *Pheretima*, septa are absent between which segments?
(a) 3/4 and 9/10 (b) 4/5 and 8/9
(c) 5/6 and 7/8 (d) 7/8 and 6/7
5. During emergency which of the following hormone is secreted?
(a) Aldosterone (b) Thyroxin
(c) Adrenaline (d) Calcitonin
6. In which of the following animals, respiration occurs without any respiratory organ?
(a) Frog (b) Fish
(c) Cockroach (d) Earthworm
7. In cockroach, larval and nymphal characters are maintained by
(a) ecdysone (b) salivary glands
(c) parotid gland (d) juvenile hormone
8. Which of the following is a transparent tissue?
(a) Tendon (b) Fibrous cartilage
(c) Hyaline cartilage (d) All of these
9. Rh factor is present in
(a) all vertebrates (b) all mammals
(c) all reptiles
(d) man and rhesus monkey only
10. In rabbit, end of a long bone is connected in another by
(a) tendon (b) ligaments
(c) muscle (d) cartilage
11. Which of the following cell type is capable of giving rise to other cell types in sponges?
(a) Thesocytes (b) Pinacocytes
(c) Cnidocytes (d) Archaeocytes
12. Thigmotaxis is not shown by
(a) *Paramecium* (b) *Amoeba*
(c) *Ascaris* (d) *Hydra*
13. Which is correctly matched?
(a) Apiculture—Honey bee
(b) Pisciculture—Silk moth
(c) Sericulture—Fish
(d) Aquaculture—Mosquito
14. Changes that allow the conversion of larva into adult, is called
(a) metagenesis (b) alternation
(c) metamorphosis (d) metastasis
15. Animals having a built in thermostat to maintain constant body temperature are known as
(a) biothermic (b) poikilothermic
(c) oligothermic (d) homeothermic

16. The intermediate host of *Schistosoma* is
 (a) snail (b) mosquito
 (c) housefly (d) sheep
17. The islets of Langerhans are found in
 (a) pancreas (b) stomach
 (c) liver (d) alimentary canal
18. The vitamin which is essential for blood clotting is
 (a) vitamin-A (b) vitamin-B
 (c) vitamin-C (d) vitamin-K
19. The female genital pore of *Pheretima posthuma* located upon the segment
 (a) 14th (b) 16th
 (c) 18th (d) 15th
20. Polyp phase is absent in
 (a) Hydra (b) *Aurelia*
 (c) *Physalia* (d) *Obelia*
21. In frog heart, there are cardiac muscles which consists of fibres called
 (a) Purkinje fibres (b) myonemes
 (c) telodendria (d) columnae carnae
22. Malpighian tubules are
 (a) excretory organs of insects
 (b) excretory organs of frog
 (c) respiratory organs of insects
 (d) endocrine glands of insects
23. LH and FSH are collectively called
 (a) oxytocin (b) somatotropins
 (c) luteotropic (d) gonadotropins
24. Who is known as "father of Endocrinology"?
 (a) RHWhittaker (b) Pasteur
 (c) Einthoven (d) Thomas Addison
25. Which of the following provides most evident proof of evolution?
 (a) Fossils (b) Morphology
 (c) Embryo (d) Vestigial organs
26. In Mollusca, eye is present over a stalk, called
 (a) ostracum (b) operculum
 (c) ommatophores (d) osphradium
27. Among the following, colonial insects are
 (a) locusts (b) mosquitoes
 (c) white ants (d) bed bug
28. In *Ascaris*, the coelom is
 (a) schizocoelom (b) pseudocoelom
 (c) true coelom (d) haemocoelom
29. 'Turbellarians' are free living
 (a) nematodes (b) cestodes
 (c) flat worms (d) trematodes
30. The characteristic larva of phylum—Coelenterata' is
 (a) planula (b) cysticercus
 (c) rhabdiform (d) wriggler
31. In rabbit, head of epididymis present at the head of the testis is called
 (a) vas deferens (b) cauda epididymis
 (c) gubernaculum (d) caput epididymis
32. Tendons and ligaments are specialized types of
 (a) nervous tissue (b) muscular tissue
 (c) epithelial tissue (d) connective tissue
33. In blood, CO₂ is transported majorly as sodium
 (a) carbonate (b) carboxy haemoglobin
 (c) bicarbonate (d) CO₂ as such
34. Animals undergoes inactive stage during winter, is known as
 (a) aestivation (b) hibernation
 (c) adaptation (d) acclimatization
35. Kupffer cells are present in
 (a) liver (b) small intestine
 (c) pancreas (d) thyroid gland
36. The embryo at 16 celled stage is known as
 (a) morula (b) gastrula
 (c) blastula (d) blastomere
37. Contractile vacuole in protozoan *Amoeba* is meant for
 (a) respiration (b) excretion
 (c) locomotion (d) osmoregulation
38. Jumping genes in maize were discovered by
 (a) Hugo de Vries
 (b) Barbara Me Clintock
 (c) TH Morgan
 (d) Mendel

39. Streptomycin is obtained from
(a) *Streptomyces griseus* (b) *S. aureofaciens*
(c) *S. venezuelae* (d) *S. ramosus*
40. Binomial system of nomenclature was given by
(a) Julian Huxley
(b) Bentham and Hooker
(c) Linnaeus (d) Casper Bauhin
41. Indusium is found in
(a) algae (b) ferns
(c) moss (d) *Cycas*
42. The vacuole is lined by a membrane called
(a) tonoplast (b) jacket
(c) cell membrane (d) tonoplasm
43. Agar-agar is obtained from
(a) *Chlorella* (b) *Spirogyra*
(c) *Ulothrix* (d) *Gelidium*
44. DNA element with ability to change position is called
(a) cistron (b) transposon
(c) intron (d) recon
45. Initiation codon is
(a) UUU (b) UGA
(c) AUG (d) UAG
46. DNA multiplication is called
(a) translation (b) replication
(c) transduction (d) transcription
47. Duramen is present in
(a) inner region of secondary wood
(b) part of sap wood
(c) outer region of secondary wood
(d) region of pericycle
48. In plants, water supply is due to
(a) osmosis (b) imbibition
(c) guttation (d) adhesion force
49. Programmed cell death is scientifically termed as
(a) autotomy (b) cell lysis
(c) apoptosis (d) None of these
50. Paraffin wax is
(a) ester (b) acid
(c) monohydric alcohol (d) cholesterol
51. Which is always present in photochemical smog?
(a) O₃ (b) CO₂
(c) SO₂ (d) CH₄
52. In cell cycle, during which phase, chromosomes are arranged in equatorial plate?
(a) Metaphase (b) Anaphase
(c) Telophase (d) Prophase
53. The soil which is transported by wind is known as
(a) colluvial (b) eolian
(c) aluvial (d) galcial soil
54. Spindle fibre is made up of
(a) tubulin (b) humulin
(c) intermediate filament (d) flagellin
55. Lichen is the pioneer vegetation on which succession?
(a) Hydrosere (b) Lithosere
(c) Psammosere (d) Xerosere
56. Law of limiting factors was given by
(a) Leibig (b) Blackman
(c) Calvin (d) Arnon
57. In *Pinus*, male cone bears a large number of
(a) ligules (b) anthers
(c) micro-sporophylls (d) mega-sporophylls
58. Induction of flowering by low temperature treatment is
(a) vernalization (b) cryobiology
(c) photoperiodism (d) pruning
59. Decomposers are
(a) autotrophs (b) autoheterotrophs
(c) organotrophs (d) heterotrophs
60. Cleavage polyembryony occurs in
(a) *Pinus* (b) Mini *Cycas*
(c) *Cycas* (d) *Ephedra*
61. Edible part of mushroom is
(a) basidiocarp
(b) secondary mycelium
(c) primary mycelium (d) tertiary mycelium

62. Which of the following plant product is the hardest?
(a) Lignin (b) Cutin
(c) Suberin (d) Sporopollenin
63. Calyptra is derived from
(a) archegonia (b) capsule
(c) antheridia (d) columella
64. Clamp connections are observed in
(a) Basidiomycetes (b) Zygomycetes
(c) Ascomycetes (d) Oomycetes
65. Leaf abscission is caused by
(a) ABA (b) cytokinin
(c) auxin (d) gibberellin
66. What is the main cause for the extinction of some species in tropical forest?
(a) Deforestation (b) Afforestation
(c) Pollution (d) Soil erosion
67. Most accepted theory for ascent of sap is
(a) capillarity theory
(b) root pressure theory
(c) pulsation theory
(d) transpiration pull
68. Which enzyme converts glucose into alcohol?
(a) Zymase (b) Diastase
(c) Invertase (d) Lipase
69. Which of the following is not the feature of gymnosperms?
(a) Parallel venation (b) Perennial plants
(c) Distinct branches (long and short branches)
(d) Xylem with vessels
70. Which of the following is important for muscle contraction and nerve impulse transmission?
(a) Ca^{2+} ions (b) Mg^{2+} ions
(c) Both (a) and (b) (d) Fe^{2+} ions
71. The presence of diversity at the junction of territories of two different habitats is known as
(a) bottle neck effect (b) edge effect
(c) junction effect (d) Pasteur Effect
72. In which form does the food transported in plants?
(a) Sucrose (b) Fructose
(c) Glucose (d) Lactose
73. Lady finger belongs to family
(a) Malvaceae (b) Cucurbitaceae
(c) Liliaceae (d) Brassicaceae
74. In *Cycas*, pollination takes place in
(a) 3 celled stage (b) 4 celled stage
(c) 2 celled stage (d) 1 celled stage
75. The bioassay of auxin is
(a) avena curvature test
(b) callus formation
(c) culture of fungus (d) seed dormancy
76. Which of these statements about Huntington's disease is true?
(a) Genetic tests to detect the presence of the allele responsible for Huntington's disease do not exist at this time
(b) The onset of Huntington's disease is typically between birth and three year of age
(c) There is currently no effective treatment of Huntington's disease
(d) Huntington's disease is caused by the expression of a recessive allele
77. Which one is component of Ornithine cycle?
(a) Ornithine, citrulline and alanine
(b) Ornithine, citrulline and arginine
(c) Amino acid are not used
(d) Ornithine, citrulline and fumaric acid
78. Chromosome complement with $2n - 1$ is called
(a) monosomy (b) nullisomy
(c) trisomy (d) tetrasomy
79. Energy transferred from one trophic level to another is
(a) 5% (b) 10%
(c) 15% (d) 20%
80. Small fish get stuck near the bottom of a shark and derives its nutrition from it. This kind of association is called as
(a) antibiosis (b) commensalism
(c) predation (d) parasitism
81. Which of the following is not vestigial in man?
(a) Tail vertebrae (b) Nails
(c) Nictitating membrane
(d) Vermiform appendix

82. A eukaryotic gene contains two kinds of base sequences. Which of these plays an important role in protein synthesis?
 (a) Introns (b) Exons
 (c) Both (a) and (b) (d) None of these
83. The number of hydrogen bonds between adenine and thymine in a DNA molecule is
 (a) two (b) three
 (c) Four (d) eight
84. The group of Anamniota includes
 (a) Reptiles and birds
 (b) Birds and mammals
 (c) Fishes and amphibians
 (d) Reptiles and mammals
85. The excretory material of bony fish is
 (a) urea (b) protein
 (c) ammonia (d) amino acid
86. The leucocytes contain which of the following in large quantity?
 (a) Basophils (b) Neutrophils
 (c) Eosinophils (d) Monocytes
87. During inspiration, the diaphragm
 (a) expands (b) shows no change
 (c) contracts and flattens
 (d) relaxes to become dome-shaped
88. The function of pineal body is to
 (a) lighten the skin colours
 (b) control sexual behaviour
 (c) regulates the period of puberty
 (d) All of the above
89. Synsacrum of fowl consists of about
 (a) 29 vertebrae (b) 3 vertebrae
 (c) 16 vertebrae (d) single vertebrae
90. Which of the following was formed in S Miller's experiment?
 (a) Amino acids (b) Nucleic acids
 (c) UV radiations (d) Microspheres
91. Which of the following variations are temporary and have nothing to do with the last or next generation?
 (a) Hereditary variations
 (b) Discontinuous variations
 (c) Environmental variations
 (d) None of the above
92. The highest cranial capacity is was present in
 (a) Java man (b) Peking man
 (c) Handy man (d) Modern man
93. A marriage between normal visioned man and colourblind woman will produce which of the following types of offspring?
 (a) Normal sons and carrier daughters
 (b) Colourblind sons and carrier daughters
 (c) Colourblind sons and 50% carrier daughters
 (d) 50% colourblind sons and 50% carrier daughters
94. L-shaped chromosomes are also called
 (a) acrocentric (b) telocentric
 (c) sub-metacentric (d) None of the above
95. Which of the following is are grouped under phanerogams?
 (a) Angiosperms (b) Gymnosperms
 (c) Pteridophytes (d) Both (a) and (b)
96. A bacterium divides after every 35 min., if a culture containing 10^5 cells per ml is grown, then cell concentration per ml after 175 min. will be
 (a) 175×10^5 (b) 125×10^5
 (c) 48×10^5 (d) 32×10^5
97. Double fertilization occurs among
 (a) algae (b) bryophytes
 (c) angiosperms (d) gymnosperms
98. Which of the following theory gives the latest explanation for the closure of stomata?
 (a) ABA theory (b) Munch theory
 (c) Starch glucose theory
 (d) Active K^+ transport theory
99. Biological concept of species is mainly based on
 (a) reproductive isolation
 (b) morphological features only
 (c) methods of reproduction only
 (d) morphology and methods of reproduction
100. In the treatment of waste water discharge, which treatment stage involves biological treatment?
 (a) Primary treatment
 (b) Secondary treatment

(c) Tertiary treatment

(d) Reverse osmosis stage

Answer – Key

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