

1. Heart sound "DUB" is caused due to closing of
(a) valve (b) tricuspid valve
(c) semilunar valve (d) none of these
2. Ornithine cycle is found in
(a) liver (b) kidney
(c) heart (d) muscles
3. Goitre is a pathological condition associated with:
(a) glucagon (b) thyroxine
(c) progesterone (d) testosterone
4. Connecting link between reptiles and birds is:
(a) *Dodo* (b) *Dimetrodon*
(c) *Sphenodon* (d) *Archaeopteryx*
5. Which one of the following is correct?
(a) all enzymes are proteins
(b) all proteins are enzymes
(c) some enzymes are proteins
(d) all fats are enzymes
6. The site of fertilization in mammals is
(a) ovary (b) abdominal
(c) uterus (d) fallopian tube
7. Natural parthenogenesis is found in?
(a) housefly (b) honey bee
(c) *Drosophila* (d) all of these
8. Sex hormones can work without the help of
(a) insulin (b) placenta
(c) pituitary (d) gonadotropins
9. Mammals excrete
(a) urea (b) uric acid
(c) ammonia (d) all of these
10. Correct sequence in cell type is
(a) G_1, G_2, M, S (b) G_1, S, G_2, M
(c) G_1, M, S, G_1 (d) S, M, G_1, G_2
11. Vestigial organ in human being is
(a) incisor (b) canines
(c) molar (d) premolar
12. Aerobic respiration is related with
(a) mitochondria
(b) plasma membrane
(c) golgi bodies
(d) endoplasmic reticulum
13. The connection between two cells is
(a) plasmodesmata (b) microfilaments
(c) sieve tube (d) none of these
14. Natural pearl is
(a) a mollusc (b) an annelid
(c) an arthropod (d) an echinodermate
15. Salient feature of Arthropoda is
(a) aquatic and free living
(b) chitinous excretion and jointed appendages
(c) both 'a' and 'b'
(d) none of these
16. Miller and Urey performed an experiment to prove the origin of life. They took gases NN_3 and H_2 along with
(a) N_2 and H_2O (b) H_2O and CH_4
(c) CH_4 and N_2 (d) CO_2 and NH_3
17. Spermatogenesis is induced by
(a) FSH (b) ACTH
(c) ICSH (d) ATH

18. Which one of the following is the most effective in *Ascaris* infection?
(a) chloroquin
(b) *Cinchona*
(c) *Colchicum*
(d) oil of *Chenopodium*
19. Which one of the following is chemical transmitter for neuro impulse conduction?
(a) glycine (b) GABA
(c) adrenalin (d) acetylcholine
20. During hibernation, frog's respiration is
(a) cutaneous (b) pulmonary
(c) buccopharyngeal (d) pharyngeal
21. Blood carries CO₂ mainly in which form?
(a) Hb.CO₂
(b) NaHCO₃
(c) carbonic acid
(d) Hb.CO₂ and carbon monoxide
22. Which one of the following is necessary to start clotting of blood?
(a) heparin
(b) serotonin
(c) thromboplastin and Ca⁺⁺
(d) fibrinogen and prothrombin
23. During oxidative phosphorylation, the net gain of ATP is
(a) 40 (b) 38
(c) 34 (d) 30
24. Which of the following pairs is correct?
(a) annelida-polychaeta-leech
(b) arthropoda-crustacea-cockroach
(c) mollusca-cephalopoda-Octopus
(d) protozoa-Hydra
25. Nerve impulse initiates with the movements of
(a) K⁺ (b) Na⁺
(c) Ca⁺ (d) Mg⁺
26. Spindle fibres of a mitotic cells are made Up of
(a) actin (b) myosin
(c) collagen (d) tubutin
27. The migrating birds rely on the
(a) anaerobic oxidation of proteins
(b) highly efficient aerobic oxidation of fats
(c) anaerobic oxidation of carbohydrates
(d) all of these
28. Erythrocytes of adult rabbit and other mammals are formed in
(a) liver (b) spleen
(c) kidney (d) red bone marrow
29. Pseudocoel is a cavity found in
(a) *Hydra* (b) *Ascaris*
(c) housefly (d) sponge
30. Sarcolemma is a membrane found over
(a) heart (b) cardiac muscle
(c) muscle fibre (d) nerve fibre
31. Heparin
(a) is antiserum (b) helps in clotting
(c) helps in secretion (d) is anticoagulant
32. Trichocyst and nematocysts are meant for
(a) defense (b) nutrition
(c) respiration (d) excretion
33. Digestion and distribution of nutrients both functions are performed by
(a) blastocoels
(b) coelom
(c) spongocoel
(d) gastrovascular cavity
34. In mammals the digestion of starch starts from
(a) mouth (b) stomach
(c) oesophagus (d) duodenum
35. In which of the following, Nissl's granules are found?
(a) liver cells (b) nerve cells
(c) intestinal cells (d)uriniferous tubules
36. In sponges, food is stored in
(a) porocytes (b) choanocytes
(c) amoebocytes (d) thesocytes
37. Largest egg is of
(a) PPLO
(b) Ostrich
(c) *Hydra*
(d) *Periplanata Americana*

38. Which one of the following is common in annelida and arthropods?
 (a) basal nerve cord
 (b) ventral nerve cord
 (c) dorsal nerve cord
 (d) anterior nerve cord
39. When bath-sponges dries up, which of the following is left?
 (a) spicules (b) tentacles
 (c) spongin fibres (d) none of these
40. Digestion of cellulose in non-ruminants takes place in
 (a) caecum (b) colon
 (c) small intestine (d) large intestine
41. DNA is found in
 (a) nucleus only
 (b) cytoplasm only
 (c) nucleus and cytoplasm
 (d) none of these
42. Cellular respiration occurs in
 (a) nucleus (b) ribosomes
 (c) golgi body (d) mitochondria
43. Joint between humerus and ulna is
 (a) saddle joint (b) hinge joint
 (c) fibrous joint (d) ball and socket
44. Who discovered that malaria is transmitted by mosquitoes?
 (a) Grassi (b) Laveron
 (c) Lancisi (d) Ronald Ross
45. Which one of the following is a source of energy for muscle contraction
 (a) actin (b) myosin
 (c) ATP (d) actomyosin
46. Tube feet are locomotary organs found in
 (a) annelids (b) mollusca
 (c) arthropods (d) echinoderms
47. Anti-A and Anti-B antibodies are not found in which of the following blood group?
 (a) AB (b) O
 (c) A (d) B
48. Incubation period of *Plasmodium vivax* is
 (a) 4 days (b) 6 days
- (c) 14 days (d) 30 days
49. Sympathetic nervous system induces
 (a) heartbeat
 (b) secretion of semen
 (c) secretion of saliva
 (d) secretion of digestive juices
50. Organ of Corti is found in
 (a) heart (b) kidneys
 (c) inner ear (d) nasal chamber
51. Apical dominance is caused by
 (a) I AA (b) I BA
 (c) 2,4-D (d) 2,4,5-T
52. Spore of *Funnria*, on germination, produces
 (a) protonema (b) antheridia
 (c) archegonia (d) vegetative body
53. Plasmids are
 (a) viral RNA in host cells
 (b) viral DNA in host cells
 (c) extra non-genetic element
 (d) extrachromosomal material of E.coli
54. During food chain, maximum energy is stored in
 (a) producer
 (b) primary consumer
 (c) secondary consumer
 (d) decomposer
55. Cold treatment of seeds is called
 (a) vernalization
 (b) stratification
 (c) devernalization
 (d) photophosphorylation
56. Bordered pits are generally found in
 (a) dicots (b) monocots
 (c) gymnosperms (d) bryophytes
57. One gene-one enzyme hypothesis' was given by
 (a) Mendel (b) Darwin
 (c) Robert Hook (d) Beadle and Tatum
58. Cell wall of gram positive bacteria is made up of
 (a) murein (b) cellulose
 (c) lipid and protein (d) cellulose and lipid

59. Which one of the following is a monocarpic plant?
 (a) Pear (b) *Citrus*
 (c) Mango (d) *Bambusa*
60. Megasporophyll of *Cycas* is equivalent to
 (a) stamen (b) sepal
 (c) petal (d) carpel
61. The term leptome is used for
 (a) xylem (b) phloem
 (c) endodermis (d) pericycle
62. The formation of fruits without fertilization is called
 (a) polyspory (b) parthenogenesis
 (c) polyembryony (d) parthenocarpy
63. An alga which is rich in proteins is
 (a) *Ulothrix* (b) *Spirogyra*
 (c) *Nostoc* (d) *Chlorella*
64. Vivipary is seen in
 (a) mangroves (b) xerophytes
 (c) hydrophytes (d) mesophytes
65. Which one of the following is a gymnosperm
 (a) Mango (b) Walnut
 (c) *Funaria* (d) Chilgoza
66. Mycorrhiza helps in
 (a) respiration
 (b) water absorption
 (c) nutrient absorption
 (d) phosphate absorption
67. Bracts enclosing a cluster of flowers are known as
 (a) bracteate (b) involucre
 (c) petaloid (d) polysepalous
68. In *Funaria*, the number of peristomial teeth is
 (a) 6 (b) 10
 (c) 16 (d) 32
69. The lateral roots originate from
 (a) exodermis (b) endodermis
 (c) pericycle (d) vascular bundles
70. Role of calyx and corolla in fruit formation is
 (a) promotory (b) ineffective
- (c) essential (d) all of these
71. Separation of linked genes is called
 (a) linkage (b) segregation
 (c) crossing over (d) genetic mutation
72. Anti-viral substance is
 (a) bacteria (b) antibody
 (c) antigen (d) interferon
73. The enzyme which is used for replication is
 (a) DNA ase (b) aldol ase
 (c) RNA polymerase (d) DNA polymerase
74. C₄-cycle is found in
 (a) fir (b) mango
 (c) sugarcane (d) none of these
75. RuBP is found in
 (a) ETS (b) Calvin cycle
 (c) C₄ plants (d) Krebs cycle
76. Incipient nucleus is found in
 (a) myxophyceae (b) phaeophyceae
 (c) rhodophyceae (d) chlorophyceae
77. Last electron receptor in respiration is
 (a) CO₂ (b) O₂
 (c) H₂ (d) NADH
78. Diadelphous condition is found in
 (a) rosaceae (b) papilionaceae
 (c) leguminosae (d) cucurbitaceae
79. Which of the following algae is parasitic?
 (a) *Nostoc* (b) *Rhodomenia*
 (c) *Cephaleuros* (d) *Polysiphonia*
80. Glycolysis occurs in
 (a) grana (b) stroma
 (c) cytosol (d) mitochondria
81. Nucleosides have
 (a) purine + pyrimidine
 (b) purine or pyrimidine + sugar
 (c) purine + sugar + phosphate
 (d) purine + pyrimidine + phosphate
82. Cladodes are found in
 (a) *Asparagus* (b) *Opuntia*
 (c) *Parkmsonia* (d) *Psidium guajava*

83. R.Q. (respiratory quotient) is less than 1 in
(a) fat (b) glucose
(c) fructose (d) organic acid
84. Blue-green algae has
(a) chlorophyll b (b) xanthophyll
(c) phycocyanin (d) fucoxanthin
85. Connecting link between glycolysis and Krebs cycle is
(a) PGA (b) ketone
(c) aldehyde (d) acetyl-Co A
86. Which of the following fibres is not a plant product?
(a) flax (b) cotton
(c) hemp (d) silk
87. Which one of the following is not commercially produced by yeast?
(a) enzyme (b) vitamin
(c) hormone (d) riboflavin
88. Alcoholic fermentation takes place in the presence of
(a) maltase (b) zvmnse
(c) amylase (d) invertase
89. Which one of the following does not grow in artificial media?
(a) TMV (b) bacteria
(c) yeast (d) *Rhizopus*
90. The RNA like particle, which causes disease is
(a) virion (b) viroid
(c) prion (d) mycoplasma
91. Phytochrome is found in
(a) algae
(b) flowering plants
(c) fungi
(d) vascular cryptogams
92. Replication of DNA takes place during
(a) S-phase (b) prophase
(c) metnphase (d) anaphase
93. Ribosomes are particles about 200Å units in diameter consisting of protein and RNA. The percentage of protein and RNA respectively is:
(a) 60% and 40% (b) 40% and 60%
(c) 80% and 20% (d) 50% and 50%
94. Which of the following process takes place in mitochondria?
(a) photolysis
(b) photophosphorylation
(c) carboxylation
(d) oxidative phosphorylation
95. Fluid mosaic model of cell membrane was given by
(a) Beadle and Tatum
(b) Singer and Nicolson
(c) Watson and Crick
(d) Robertson and Miller
96. Late blight of potato is caused by
(a) *Rhizopus*
(b) *Ustilago*
(c) *Altemnria solani*
(d) *Phytophthorn infestens*
97. Cell membrane is composed of
(a) protein (b) phospholipid
(c) carbohydrate (d) lipid and protein
98. Binomial nomenclature was given by
(a) Darwin (b) Lamarck
(c) Linnaeus (d) Theophrastus
99. Genetic material of virus is
(a) RNA
(b) DNA
(c) carbohydrate
(d) either RNA or DNA
100. Suicidal bags are
(a) lysosomes (b) golgi bodies
(c) ribosomes (d) chloroplast

Answer – Key

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