

Paper-1

Biology

1. Perianth is represented by
 - 1) glumes
 - 2) lemma
 - 3) lodicules
 - 4) palea
2. Table sugar is consist of
 - 1) lactose
 - 2) sucrose
 - 3) maltose
 - 4) glucose
3. The terminator gene technology causes
 - 1) failure of seed setting after one generation
 - 2) breakage of seed dormancy
 - 3) early flowering in plants
 - 4) none of the above
4. The term totipotency refers to
 - 1) the capability of organism to regenerate its lost parts
 - 2) capability of somatic cells to produce complete organism
 - 3) the introduction of foreign gene in a cells DNA
 - 4) the technique of growing immature embryos
5. Work of Beadle and Tatum on *Neurospora crassa* proved that
 - 1) replication of DNA is semi-conservative
 - 2) viruses have genetic material
 - 3) every gene is responsible for specific enzymes
 - 4) plant cells are totipotent
6. Polyploidy means occurence of
 - 1) haploid sets of chromosomes
 - 2) diploid sets of chromosomes
 - 3) more than diploid sets of chromosomes

- 4) all of the above
7. The deteriorative processes in plants, that naturally terminate their functional life, are collectively called
- 1) wilting
 - 2) abscission
 - 3) plasmolysis
 - 4) senescence



8. Which pigment involves in photoperiodic change in plants?
- 1) Phytochrome
 - 2) Cytochrome
 - 3) Chlorophyll
 - 4) Anthocyanin
9. Linnaen system of plant classification is based on
- 1) morphological and anatomical characters
 - 2) evolutionary trends
 - 3) floral characters
 - 4) None of the above
10. Succession on secondary base area is
- 1) primosere
 - 2) subsere
 - 3) xerosere
 - 4) None of these

11. An unrestricted reproductive capacity is called
- 1) birth rate
 - 2) biotic potential
 - 3) carrying capacity
 - 4) fertility

12. Ubisch bodies are secreted by
- 1) tapetum
 - 2) exine
 - 3) microspore mother cells
 - 4) endothecium

13. Alginic acid is found in the cell wall of
- 1) Gigartina
 - 2) Laminaria



- 3) Gelidium
- 4) Scytonema

14. Lady finger (bhindi) belongs to

- 1) Malvaceae
- 2) Cruciferae
- 3) Solanaceae
- 4) Liliaceae



15. P-proteins are associated with

- 1) sieve tube elements
- 2) xylem parenchyma
- 3) trichomes
- 4) tracheids and vessels

16. Potato is a modification of

- 1) stem
- 2) rhizome
- 3) root
- 4) leaf

17. Antherozoids of *Dryopteris* are

- 1) multiciliated and coiled
- 2) multiciliated and sickle-shaped
- 3) biciliated and coiled
- 4) biciliated and sickle-shaped



18. Ginger multiplies vegetatively by

- 1) bud
- 2) tuber
- 3) stem
- 4) rhizome

19. In *Gycas* stem, open vascular bundle is characterized by

- 1) phloem being sandwiched between xylem
- 2) cambium present in between xylem and phloem
- 3) xylem being sandwiched between phloem
- 4) xylem and phloem occurring on different radii

20. From which part of coconut coir is obtained?

- 1) Pericarp
- 2) Mesocarp

- 3) Epicarp
- 4) Endocarp

21. Both heterospory and circinate ptyxis occur in

- 1) Dryopteris
- 2) Pinus
- 3) Cycas
- 4) Funaria

22. In *Funaria*, the stomata are found on

- 1) foot
- 2) seta
- 3) capsule
- 4) all of these

23. Tracheophyta consists of

- 1) bryophytes only
- 2) pteridophytes only
- 3) gymnosperms and angiosperms
- 4) Both (2) and (3)

24. Green-house effect is mainly caused by

- 1) CFCs
- 2) CH₄
- 3) CO₂
- 4) CO

25. Nucellar polyembryony occurs in

- 1) Corchorus
- 2) Citrus
- 3) Carthamus
- 4) Zea mays

26. Male gametophyte of angiosperms is reduced to

- 1) one cell
- 2) two cells
- 3) three cells
- 4) four cells

27. In C₃ plants, the first stable product of photosynthesis during dark reaction is

- 1) PGAL
- 2) RuBP
- 3) PGA
- 4) OAA



28. During the formation of embryo sac, the functional megaspore undergoes

- 1) two mitotic divisions
- 2) two meiotic divisions
- 3) three meiotic divisions
- 4) three mitotic divisions

29. The first CO₂ acceptor in C₄ cycle is

- 1) RuBP
- 2) PEP
- 3) PGA
- 4) OAA

30. The water available to plants for absorption is

- 1) gravitational water
- 2) hygroscopic water
- 3) capillary water
- 4) chemically bound water



31. Cell wall of fungi is made up of

- 1) fungal cellulose
- 2) hemicellulose
- 3) fungal chitin
- 4) Both (1) and (3)



32. The plant ash indicates

- 1) organic matter of plant
- 2) mineral salts absorbed by plants
- 3) both mineral salts and organic matter
- 4) silica absorbed by plants

33. During cell cycle, RNA and non-histone proteins are synthesized in

- 1) S-phase
- 2) G₀-phase
- 3) G₂-phase
- 4) M-phase

34. Which one of the following is the terminal electron acceptor?

- 1) Molecular CO₂
- 2) Molecular O₂
- 3) Molecular H₂
- 4) NADPH₂

35. Bract is a modified

- 1) petal
- 2) sepal
- 3) leaf
- 4) involucre

36. Hormone replacing the requirement of vernalization is

- 1) ethylene
- 2) auxin
- 3) gibberellins
- 4) cytokinin



37. Thigmotropism is best seen in

- 1) tendrils
- 2) leaf apex
- 3) root apex
- 4) stem apex

38. Transpiration is measured by

- 1) potometre
- 2) porometre
- 3) auxanometre
- 4) respirometre



39. The function of polymerase chain reaction is

- 1) transduction
- 2) DNA amplification
- 3) translation
- 4) None of these

40. Mutation is more common when it is present in

- 1) recessive condition
- 2) dominant condition
- 3) constant in population
- 4) None of the above

41. The most common type of ovule in angiosperms is

- 1) amphitropous
- 2) atropous
- 3) anatropous
- 4) circinotropous

42. When two hybrids $rrTt$ and $Rrtt$ are crossed, the phenotype ratio of offspring would be

- 1) 3 : 1
- 2) 9 : 3 : 3 : 1
- 3) 1 : 1
- 4) 1 : 1 : 1 : 1

43. One of the most resistant known biological material is

- 1) lignin
- 2) hemicellulose
- 3) sporopollenin
- 4) lignocellulose

44. Energy enters the ecosystem through

- 1) herbivore
- 2) carnivore
- 3) producer
- 4) decomposer

45. In soil profile, humus is present in

- 1) horizon-0
- 2) horizon-A
- 3) horizon-B
- 4) horizon-C

46. The smallest angiospermic flower is

- 1) Wolffia
- 2) Ranunculus
- 3) Rafflesia
- 4) Stellaria

47. The pyramid of energy is always

- 1) opaque
- 2) horizontal
- 3) upright
- 4) inverted

48. The transition zone between the two vegetations of ecosystem is called

- 1) ecotone
- 2) ecocline
- 3) ecosystem
- 4) ecesis

49. Protein in silk thread is



- 1) fibroin
- 2) keratin
- 3) albumin
- 4) globulin

50. Thermoregulatory centre of human body is associated with

- 1) cerebrum
- 2) cerebellum
- 3) hypothalamus
- 4) medulla oblongata



51. Body cavity of adult *Ascaris* is

- 1) haemocoel
- 2) amphicoel
- 3) pseudocoel
- 4) schizocoel

52. Collar cells are characteristic of

- 1) earthworm
- 2) roundworms
- 3) coelenterate
- 4) sponges

53. In honey bee, the drones are

- 1) sterile male
- 2) fertile male
- 3) fertile female
- 4) sterile female



54. Crypts of Leiberkuhn are involved in

- 1) secretion of succus entericus
- 2) secretion of rennin
- 3) secretion of ptyalin
- 4) digestion of food

55. Plasmids are found in

- 1) virus
- 2) bacteria
- 3) fungi
- 4) viroid

56. Oxygen dissociation curve is

- 1) sigmoid
- 2) parabolic
- 3) hyperbolic
- 4) straight line

57. Blood leaving the liver and going towards heart is rich in

- 1) bile
- 2) urea
- 3) ammonia
- 4) oxygen

58. Membrane that covers the vacuole in a plant cell is called

- 1) tonoplast
- 2) tonoplasm
- 3) jacket
- 4) cell membrane

59. In earthworm, gizzard is found, in which of the following segments?

- 1) 9th segment
- 2) 18th segment
- 3) 13th segment
- 4) 16th segment



60. The infective stage of *Entamoeba histolytica* is

- 1) trophozoite stage
- 2) binucleated cyst stage
- 3) tetranucleated cyst stage
- 4) None of the above

61. The initiation codon in eukaryotes is

- 1) AUG
- 2) UGA
- 3) UAG
- 4) UAA

62. Pasteurization temperature is

- 1) 72°C for 20 minutes
- 2) 63°C for 15 seconds
- 3) 70°C for 15 seconds
- 4) 65°C for 30 minutes

63. The number of heart chambers found in cockroach is

- 1) 4
- 2) 7
- 3) 5
- 4) 13

64. The ratio of methane, ammonia and hydrogen in Stanley Miller's experiment was

- 1) 3 : 1 : 2
- 2) 2 : 1 : 2
- 3) 1 : 2 : 1
- 4) 5 : 4 : 1

65. Convergent evolution is shown by

- 1) homologous organ
- 2) analogous organ
- 3) vestigial organ
- 4) All of the above

66. Teichoic acid is present in

- 1) cell wall of Gram positive bacteria
- 2) cell wall of Gram negative bacteria
- 3) capsid of virus
- 4) protoplasm of mycoplasma



67. % sign is used for

- 1) actinomorphic flower
- 2) zygomorphic flower
- 3) incomplete flower
- 4) epigynous flower



68. Crossing over occurs

- 1) single strand stage
- 2) two strand stage
- 3) four strand stage
- 4) eight strand stage

69. "Ontogeny repeats phylogeny" is the statement of which of the following theories?

- 1) Mutation theory
- 2) Inheritance theory
- 3) Recapitulation theory
- 4) Natural selection theory

70. Darwin proposed the theory of

- 1) inheritance of acquired characters
- 2) natural selection
- 3) recapitulation
- 4) continuity of germplasm

71. Which of the following is not Darwin's conclusion?

- 1) Survival of the fittest
- 2) Struggle for existence
- 3) Inheritance of acquired characters
- 4) Origin of species by natural selection

72. Nuclear membrane is continuous with

- 1) rough endoplasmic reticulum
- 2) smooth endoplasmic reticulum
- 3) cell membrane
- 4) Golgi bodies



73. Cosmid is

- 1) extragenetic material in mycoplasma
- 2) circular DNA in bacteria
- 3) extra DNA in bacteria
- 4) fragment of DNA inserted in bacteria for forming copies

74. XO chromosomal abnormality in humans causes

- 1) Turner's syndrome
- 2) Down's syndrome
- 3) Darwin's syndrome
- 4) Klinefelter's syndrome

75. Fertilization of ovum takes place in rabbit, man and other placental mammals in

- 1) ovary
- 2) fallopian tube
- 3) cervix
- 4) uterus

76. At what stage in test tube babies, the zygote is implanted in human female?

- 1) 32-celled stage
- 2) 64-celled stage
- 3) 100-celled stage
- 4) 164-celled stage

77. Pentoses and hexoses are common

- 1) monosaccharides
- 2) disaccharides
- 3) polysaccharides
- 4) oligosaccharides



78. Pheromone is

- 1) a product of endocrine gland
- 2) used for animal communication
- 3) messenger RNA
- 4) always protein

79. Secretion is under control of neurosecretory nerve axons in

- 1) pineal gland
- 2) adrenal cortex
- 3) anterior pituitary
- 4) posterior pituitary

80. If an isolated strain of DNA is kept at 82-90°C than

- 1) it changes into RNA
- 2) it breaks into two fragments
- 3) it breaks into many fragments
- 4) it uncoils and the two strands separate

81. The smallest endocrine gland is

- 1) thyroid
- 2) parathyroid
- 3) pituitary
- 4) adrenal



82. Barr body in mammals represents

- 1) all the heterochromatin in female cells
- 2) one of the two X-chromosomes in somatic cells of females
- 3) all the heterochromatin in male and female cells
- 4) the Y-chromosome in somatic cells of male

83. Gland responsible for calcium metabolism is

- 1) thymus
- 2) thyroid
- 3) parathyroid
- 4) adrenal



84. Which of the following is not a case of epimorphosis?

- 1) Formation of sperms from small clumps of cells
- 2) Regeneration of tail in a lizard
- 3) Replacement of severed arm in starfish
- 4) Replacement of limb in salamander

85. The daughter born to haemophilic father and normal mother could be

- 1) normal
- 2) carrier
- 3) haemophilic
- 4) None of these

86. Removal or absence of thymus in early life shall bring about

- 1) lack of lymphocytes
- 2) lack of antibodies
- 3) lack of lymph nodes
- 4) All of the above



87. Bone marrow is made up of

- 1) muscular fibre and fatty tissue
- 2) fatty tissue and areolar tissue
- 3) fatty tissue and cartilage
- 4) fatty tissue, areolar tissue and blood vessel

88. Mast cells secrete

- 1) serotonin
- 2) heparin
- 3) histamine
- 4) All of these

89. Which one is component of ornithine cycle?

- 1) Ornithine, citrulline and fumaric acid
- 2) Ornithine, citrulline and arginine
- 3) Ornithine, citrulline and alanine
- 4) Amino acids are not used



90. Bidder's canal is present in

- 1) male rabbit
- 2) male frog
- 3) female frog
- 4) Both (2) and (3)

91. Zygomatic arch of rabbit is formed of

- 1) maxilla, periotic and jugal
- 2) periotic, jugal and palatine
- 3) maxilla, squamosal and jugal
- 4) maxilla, premaxilla and squamosal

92. Role of spleen in mammal is
- 1) to control blood pressure
 - 2) to assist liver
 - 3) to act as haemopoietic tissue
 - 4) to assist kidneys

93. Excretory product of spider is
- 1) uric acid
 - 2) ammonia
 - 3) guanine
 - 4) None of the above

94. Green glands present in some arthropods help in
- 1) respiration
 - 2) excretion
 - 3) digestion
 - 4) reproduction



95. Sensation of stomach pain is due to
- 1) interoceptors
 - 2) exteroceptors
 - 3) proprioceptors
 - 4) teloreceptors

96. Right lung of rabbit is divided into
- 1) four lobes
 - 2) two lobes
 - 3) six lobes
 - 4) eight lobes



97. Haemoglobin is having maximum affinity with
- 1) CO_2
 - 2) CO
 - 3) O_2
 - 4) NH_3

98. Veliger larva occurs in phylum
- 1) Mollusca
 - 2) Echinodermata
 - 3) Arthropoda
 - 4) Cnidaria

99. The most recent and direct prehistoric ancestor of present man is

- 1) Cro-magnon
- 2) Pre-Neanderthal
- 3) Neanderthal
- 4) None of these

100. "Darwin's finches" refers to

- 1) fossils of birds collected by Darwin at Galapagos islands
- 2) a type of birds present of Galapagos islands
- 3) migratory birds collected by Darwin at Galapagos islands
- 4) fossils of reptiles collected by Darwin at Galapagos islands



Answer Key

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



www.questionpaperz.in

Unfold Every Question