

Zoology + BOTANY 30 QUESTIONS = 60 QUESTIONS

1. The other name of transposon is
 - a) Walking gene
 - b) Running gene
 - c) Hopping gene
 - d) Jumping gene
2. "The Decent of Man" was authored by
 - a) Lamarck
 - b) Darwin
 - c) J.C. Bose
 - d) Odum
3. cDNA is
 - a) coiled DNA
 - b) complementary DNA
 - c) cytoplasmic DNA
 - d) circular DNA
4. Example of a plasmid is
 - a) pBR 322
 - b) *Eco* RI
 - c) *Alu* I
 - d) *Hind* II
5. The genetic material of HIV is
 - a) Single stranded DNA
 - b) Single stranded RNA
 - c) Double stranded DNA
 - d) None of these
6. *Rana tigrina* is an example of
 - a) Fish
 - b) Amphibia
 - c) Reptilia
 - d) Mammalia
7. Which of the following is not an extra embryonic membrane?
 - a) Amnion
 - b) Chorion
 - c) Coelom
 - d) Allantois
8. Fertilization of Sea Urchin is
 - a) External
 - b) Internal

- c) Terrestrial
- d) Aerial

9. Nervous system of mammals is derived from
- a) Ectoderm
 - b) Mesoderm
 - c) Endoderm
 - d) Mesoglea
10. Budding is seen in
- a) Crab
 - b) Oyster
 - c) Starfish
 - d) Hydra
11. GnRH is secreted from
- a) Testis
 - b) Ovary
 - c) Hypophysis
 - d) Hypothalamus
12. Steps of embryogenesis are
- a) Blastula- morula- zygote- gastrula- embryo
 - b) Zygote- morula- blastula- gastrula- embryo
 - c) Zygote- gastrula- blastula- morula- embryo
 - d) Blastula- morula- gastrula - zygote- embryo
13. Mutation is caused by
- a) Any chemical compound
 - b) Any physical agent
 - c) Mutagens
 - d) None of the above
14. Number of allosome present in a sperm nucleus of human is
- a) 1
 - b) 2
 - c) 22
 - d) 23
15. Acid rain is mainly caused by
- a) NO_2
 - b) SO_2
 - c) O_2
 - d) NO_2 and SO_2
16. Adrenal gland is also called

- a) Supra hepatic gland
 - b) Supra corotic gland
 - c) Supra renal gland
 - d) Supra stomach gland
17. Vasopressin is secreted from
- a) Kidney
 - b) Anterior pituitary
 - c) Hypothalamic neuron
 - d) All of these
18. Number of thoracic ganglia of *Periplaneta americana* is
- a) 2
 - b) 3
 - c) 4
 - d) None of these
19. The enzyme which is known as 'molecular glue' is-
- a) Restriction endonuclease
 - b) DNA ligase
 - c) Exonuclease
 - d) Lipase
20. 'Sea Horse' is a
- a) Mammal
 - b) Fish
 - c) Bird
 - d) Snake
21. Peacock is a
- a) Running bird
 - b) Flying bird
 - c) Both a & b
 - d) None of the above
22. Peacock is a/an
- a) Ammonotelic organism
 - b) Ureotelic organism
 - c) Uricotelic organism
 - d) Proteotelic organism
23. I am an invertebrate with closed blood vascular system. Who am I?
- a) Ring worm
 - b) Earthworm
 - c) Tape worm
 - d) Round worm
24. Haemoglobin contains
- a) Mercury
 - b) Zinc

- c) Copper
 - d) Iron
25. Bronchus is found in
- a) Heart
 - b) Limb
 - c) Lung
 - d) Bone
26. Example of local hormone is
- a) Pepsin
 - b) Trypsin
 - c) Gastrin
 - d) Lipase
27. Elbow joint is an example of
- a) Gliding joint
 - b) Hinge joint
 - c) Pivot joint
 - d) Ball and socket joint
28. Element(s) essential for muscle contraction is/are
- a) Ca ion
 - b) Action potential
 - c) ATP
 - d) All of these
29. Which of the following animal is diploblastic?
- a) Man
 - b) Snail
 - c) Amoeba
 - d) Jelly fish
30. Pseudocoelom is present in the following parasite
- a) *Ascaris*
 - b) *Plasmodium*
 - c) *Taenia*
 - d) *Trypanosoma*

BOTANY-30 QUESTIONS

Q31. In five kingdom classification, the main basis of classification is:

- (a) Structure of nucleus
- (b) Structure of cell membrane
- (c) Mode of nutrition
- (d) Asexual reproduction

Q32. *Spirogyra* mats show an unusual phototactic movement towards:

- (a) Blue light
- (b) Yellow light
- (c) Orange light
- (d) Red light

Q33. Choose the correct pair

- (a) *Cycas*- Simple leaf
- (b) *Dryopteris*- pyrenoid
- (c) *Saccharomyces*- pseudomycelium
- (d) *Funaria*- gemma cup

Q34. A type of modified sub-aerial stem is:

- (a) Thorn
- (b) Runner
- (c) Tuber
- (d) Cladode

Q35. Name the type of aestivation when sepals or petals in a whorl just touch one another at the margin without overlapping:

- (a) Twisted
- (b) Imbricate
- (c) Valvate
- (d) Vexillary

Q36. A group of similar plants which breed freely among themselves constitute a:

- (a) Species
- (b) Genus
- (c) Family
- (d) Order

Q37. Monadelphous stamen is the unique character of:

- (a) Fabaceae
- (b) Brassicaceae
- (c) Asteraceae
- (d) Malvaceae

Q38. Which one among the following will settle down at last during centrifugation?

- (a) Chloroplast
- (b) Mitochondria
- (c) Ribosomes
- (d) Nuclei

Q39. Which of the following constitutes approximately 8%-15% of the cell wall in higher plants?

- (a) Proteins
- (b) Lipids
- (c) Carbohydrates
- (d) Flavonoids

Q40. Enzymes increase the rate of reaction by:

- (a) Lowering the free energy of activation
- (b) Increasing the free energy change of the reaction
- (c) Changing the equilibrium constant of the reaction
- (d) Change the direction of reactions

Q41. The non-histone proteins which hold the sister chromatid pairs of chromosomes during metaphase are:

- (a) Cohesins
- (b) Condensins
- (c) Topoisomerases
- (d) Nucleoplasmin

Q42. In n-hybrid cross the number of phenotypic and genotypic classes are:

- (a) 1^n and 2^n respectively
- (b) 2^n and 3^n respectively
- (c) 3^n and 2^n respectively
- (d) 2^n and 4^n respectively

Q43. *Pisum sativum* has $2n = 14$ chromosomes, the number of linkage group in it will be:

- (a) 7
- (b) 14
- (c) 21
- (d) 28

Q44. In a nucleotide the base is linked to the:

- (a) $1'$ -position of a sugar
- (b) $2'$ -position of a sugar
- (c) $3'$ -position of a sugar
- (d) $5'$ -position of a sugar

Q45. In prokaryotes initiation of transcription requires:

- (a) TATA box and core polymerase
- (b) Sigma factor and RNA pol I
- (c) Sigma factor and core polymerase
- (d) Sigma factor and RNA pol I & II

Q46. Isobilateral leaves are usually:

- (a) Astomatic
- (b) Hypostomatic
- (c) Epstomatic
- (d) Amphistomatic

Q47. In dicot root cork cambium originates from:

- (a) Pith
- (b) Hypodermis
- (c) Pericycle
- (d) Endodermis

Q48. Which of the following statements is incorrect?

- (a) Water is an essential component protoplasm
- (b) Water is indispensable for growth of and development of plants
- (c) Water does not provide medium for biochemical reactions in cells
- (d) In water two hydrogen atoms are joined to oxygen atom by covalent bonds at an angle of 105°

Q49. Sugar moves in phloem elements as:

- (a) Glucose
- (b) Sucrose
- (c) Cellulose
- (d) Starch

Q50. An ion constituent of Oxygen Evolution Centre of Light reaction of photosynthesis is

- (a) Mn^{2+}
- (b) Mg^{2+}
- (c) Fe^{2+}
- (d) Cu^{2+}

Q51. For each glucose molecule that is broken down in glycolysis there is a net gain of:

- (a) 1 ATP molecule
- (b) 2 ATP molecules
- (c) 3 ATP molecules
- (d) 4 ATP molecules

Q52. During non-cyclic electron transport, photophosphorylation occurs at:

- (a) Two places
- (b) Three places
- (c) One place
- (d) Four places

Q53. The number of ATP molecules required for fixation of a single N_2 molecule is:

- (a) 1
- (b) 4
- (c) 8
- (d) 16

Q54. Closure of stomata in plants is induced by:

- (a) IAA
- (b) ABA
- (c) GA_3
- (d) Ethylene

Q55. In vernalization, the cold stimulus is perceived by:

- (a) Lateral meristem
- (b) Apical meristem
- (c) Intercalary meristem
- (d) Cork cambium

Q56. The pioneer in xerarch succession is the:

- (a) Mosses
- (b) Crustose lichens
- (c) Shrubs
- (d) Trees

Q57. In which kind of ecological interaction does one organism benefit while the other is neither harmed nor helped?

- (a) Parasitism
- (b) Commensalism
- (c) Symbiosis
- (d) Mutualism

Q58. Reduction in number and degree of lignification of the tracheary elements is a common adaptive feature of:

- (a) Xerophytes
- (b) Hydrophytes
- (c) Halophytes
- (d) Heliophytes

Q59. Rice bran oil is extracted from:

- | | |
|---------------|----------------|
| (a) Endosperm | (b) Embryo |
| (c) Husk | (d) Coleoptile |

Q60. In which of the following diseases insects act as vector during transmission?

- | | |
|------------------------------|--------------------------------|
| (a) Powdery mildew of peas | (b) Mosaic disease of papaya |
| (c) Bacterial blight of rice | (d) Bacterial blight of potato |

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