

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