

Biology 2013

1. Which of the following plant is generally described as a living fossil?

- (a) Cycas (b) Cupressiis
- (c) Taxus (d) Ephedra

Ans. (a)

2. Entamoeba histolytica is:

- (a) found in intestine (b) found in liver
- (c) found in. coelom (d) all of the above

Ans. (a)

3. The base of oxysome is also called as:

- (a) F₅ particle (b) F₅ particle
- (c) F₁ particle (d) F₀ particle

Ans. (d)

4. Phosphate pollution is caused by:

- (a) phosphate rock only
- (b) agriculture fertilizers only
- (c) sewage and phosphate rock
- (d) sewage and agriculture fertilizers

Ans. (d)

5. Angiosperms, to which the largest flower belongs, is:

- (a) total stem parasite
- (b) partial stem parasite
- (c) total root parasite
- (d) partial root parasite

Ans. (c)

6. Heterospory, seed habit is often exhibited by a plant possessing:

- (a) bract (b) spathe
- (c) petiole (d) ligule

Ans. (a)

7. The codons causing chain termination are:

- (a) TAG, TM, TGA (b) GAT, AAT, AGT
- (c) AGT, TAG, UGA (d) UAG, UGA, UAA

Ans. (d)

8. Edible part in litchi is:

- (a) mesocarp (b) fleshy aril
(c) endosperm (d) pericarp

Ans. (b)

9. Which of the following are homologous organs?

- (a) Wings of bird and wings of insect
(b) Wings of bat and wings of cockroach
(c) Wings of bird and hand of human
(d) Nails of human being and claws in animals

Ans. (c)

10. In human beings, multiple genes are involved in the inheritance of:

- (a) colour blindness (b) phenylketonuria
(c) sickle cell anaemia (d) skin colour

Ans. (d)

11. Which of the following plant kingdom is called ‘amphibians’?

- (a) Tracheophyta (b) Bryophyta
(c) Pteridophyta (d) Thallophyta

Ans. (b)

12. Model for DNA structure was proposed by:

- (a) Beadle and Tatum (b) M. C. Chung
(c) Purkinje (d) Watson and Crick

Ans. (d)

13. Cell wall is outer covering of plant cell made up of cellulose it is:

- (a) semipermeable (b) permeable
(c) non permeable (d) all of these

Ans. (b)

14. Protein is the body building material of animals. It is the polymer of:

- (a) glucose (b) nucleotides
(c) amino acids (d) fatty acids

Ans. (c)

15. A molecule of sedoheptulose has carbon atoms numbering:

- (a) 3 (b) 4
(c) 5 (d) 7

Ans. (d)

16. Which of the following disease is the result of ‘thiamine’ deficiency?

- (a) Marasmus (b) Ben-ben

(c) Rickets (d) Kwashiorkor

Ans. (b)

17. Chemically wax is:

- (a) A protein (b) A lipid
(c) A carbohydrate (d) An amino acid

Ans. (b)

18. The chemical formula of chlorophyll-b is:

- (a) $C_{55}H_{70}O_5N_4Mg$ (b) $C_{55}H_{70}O_5N_4Mg$
(c) $C_{55}H_{70}O_6N_4Mg$ (d) $C_{55}H_{70}O_5N_5Mg$

Ans. (c)

19. The reaction of glycolysis occurs in:

- (a) mitochondria (b) ribosome
(c) cytoplasm (d) golgi complex

Ans. (c)

20. In a human being the number of cranial nerves are:

- (a) 10 pairs (b) 12 pairs
(c) 6 pairs (d) 20 pairs

Ans. (b)

21. The plants respond to photo-periods due to the presence of:

- (a) phytochromes (b) stomata
(c) enzymes (d) phytohormones

Ans. (a)

22. The pioneers in the field of organic evolution are:

- (a) Darwin, Lamarck, Hugo de Vries, Huxley
(b) Karl Landsteiner, Hugo de Vries, Malthus, Darwin
(c) Lamarck, Karl Landsteiner, Malthus, Hugo de Vries
(d) Darwin, Lamarck, Karl Landsteiner, Hugo de Vries

Ans. (a)

23. The cell wall of bacteria is composed of:

- (a) murein (b) chitin
(c) cellulose (d) suberin

Ans. (a)

24. The phenomenon, in which an allele of one gene suppresses the activity of an allele of another gene, is known as:

- (a) suppression (b) inactivation
- (c) epistasis (d) dominance

Ans. (c)

25. What is common among amylase, rennin and trypsin?

- (a) These all are proteins
- (b) These all are proteolytic enzymes
- (c) These are produced in stomach
- (d) These all are hormones

Ans. (a)

26. The vagus nerve is the cranial nerve numbering:

- (a) 10th (b) 9th
- (c) 7th (d) 5th

Ans. (a)

27. The kidney of an adult frog is:

- (a) pronephros (b) mesonephros
- (c) metanephros (d) opisthonephros

Ans. (b)

28. Which of the following is free living aerobic, non- photosynthetic nitrogen fixing bacterium?

- (a) Rhizobium (b) Azotobacter
- (c) Nostoc (d) Azospirillum

Ans. (b)

29. If a person shows production of Interferons in his body the chances are that he has got an infection of:

- (a) typhoid (b) measles
- (c) tetanus (d) malaria

Ans. (b)

30. Centriole is a part of:

- (a) ribosomes
- (b) mitochondria
- (c) chromosome
- (d) endoplasmic reticulum

Ans. (c)

31. NADPH₂ is generated through:

- (a) photosystem I (b) photosystem II
- (c) anaerobic respiration (d) glycolysis

Ans. (a)

32. If an angiospermic male plant is diploid and female plant tetraploid, the ploidy level of endosperm will be:

- (a) haploid (b) triploid
- (c) tetraploid (d) pentaploid

Ans. (d)

33. The cheapest source of high energy among fruit crop of India is:

- (a) guava (b) apple
- (c) banana (d) mango

Ans. (c)

34. In soil, water available for plants is:

- (a) capillary water
- (b) hygroscopic water
- (c) gravitational water
- (d) chemically bound water

Ans. (a)

35. Brown algae is characterised by the presence of:

- (a) phycocyanin (b) phycoerythrin
- (c) fucoxanthin (d) haematochrome

Ans. (c)

36. Biofertilizers are:

- (a) cow dung manure and farmyard waste
- (b) quick growing crop ploughed under soil
- (c) Anabaena and Azolla
- (d) none of these

Ans. (c)

37. Net gain of ATP molecules, during aerobic respiration, is:

- (a) 30 molecules (b) 38 molecules
- (c) 40 molecules (d) 48 molecules

Ans. (b)

38. The Nissl's granules of nerves cell are made up of:

- (a) ribosome (b) protein
- (c) DNA (d) RNA

Ans. (a)

39. In ureotelic animals urea is formed by:

- (a) Ornithine cycle (b) Cons cycle
- (c) Kreb's cycle (d) EMP pathway

Ans. (a)

40. The water vascular system performs all but not one function which is that:

- (a) excretion (b) respiration
- (c) food capturing (d)hormone secretion

Ans. (d)

41. Which is not a fish?

- (a) Scoliodon (b) Electric ray
- (c) Whale (d) Sea horse

Ans. (a)

42. Hydra does not perform locomotion by:

- (a) looping (b) somersaulting
- (c) jet propulsion (d) walking

Ans. (c)

43. Which one is not the larval stage of Fasciola?

- (a) Cercaria (b) Miracidium
- (c) Crysticerus (d) Redia

Ans. (c)

44. The main function of flame cells is:

- (a)excretion (b) osmoregulation
- (c) secretion of toxins (d) all of these

Ans. (d)

45. Which part of an active enzyme is denatured by heat:

- (a) apoenzyme (b) coenzyme
- (c) activator (d) holoenzyme

Ans. (a)

46. Secretion of digestive juice in stomach is from:

- (a) Brunner's gland (b) gastric gland
- (c) foveola (d) sub mucosal gland

Ans. (b)

47. Which one is not involved in the immune system?

- (a) B-cells (b) T-cells
(c) Macrophage (d) Erythrocytes

Ans. (b)

48. In man yellow colour of faeces is due to:

- (a) pigments produced by the breakdown of haemoglobin
(b) undigested fat which is yellow coloured
(c) bile juice
(d) pancreatic juice

Ans. (a)

49. Which of the following is not a function of erythrocyte?

- (a) Oxygen transport (b) CO₂ transport
(c) Carriers of antigen (d) Phagocytosis

Ans. (d)

50. Relaxin hormone in mammals is secreted by:

- (a) placenta (b) follicle
(c) ovary (d) testis

Ans. (c)

51. Motile sperms are absent in:

- (a) Mitozoa (b) Cycas
(c) Chlorella (d) Paramecium

Ans. (b)

52. Lomasomes are present in:

- (a) protozoan (b) fungi
(c) bacteria (d) virus

Ans. (b)

53. Tungro disease affects:

- (a) wheat (b) barley
(c) rice (d) sorghum

Ans. (c)

54. Mycorrhizae is a good example of:

- (a) symbiosis (b) commensalism
(c) protooperation (d) competition

Ans. (a)

55. Imperfect fungi are known as:

- (a) Ascomycetes (b) Deuteromycetes
- (c) Basidiomycetes (d) Phycomycetes

Ans. (b)

56. Which acid is riot produced by various species of fungi?

- (a) Gluconic acid (b) Acetic acid
- (c) Sulphuric acid (d) Succinic acid

Ans. (c)

57. FAD coenzyme is made from:

- (a) pantothenic acid (b) thymine
- (c) riboflavin (d) folic acid

Ans. (c)

58. Which of the following is not photoautotroph?

- (a) Purple sulphur bacteria
- (b) Purple non-sulphur bacteria
- (c) Green sulphur bacteria
- (d) Cyanobacteria

Ans. (b)

59. Bacterial chlorophyll absorbs mainly:

- (a) infra red light (b) visible light
- (c) UV rays (d) X-rays

Ans. (a)

60. Cell wall of red algae contains:

- (a) cellulose
- (b) cellulose + alginic acid
- (c) cellulose + pectin
- (d) no cell wall

Ans. (c)

61. Process in which the phosphate group of a compound is removed and directly added to ADP is:

- (a) substrate level phosphorylation
- (b) photophosphorylation
- (c) oxidative phosphorylation
- (d) none of these

Ans. (a)

62. AIDS is confirmed by:

- (a) ELISA (b) Western blot
- (c) Northern blot (d) Southern blot

Ans. (a)

63. The vitamin responsible for antisterile activity is:

- (a) vitamin B (b) vitamin E
- (c) vitamin K (d) vitamin H

Ans. (b)

64. EEG is done to detect:

- (a) heart disorders (b) brain disorders
- (c) liver disorders (d) none of the above

Ans. (b)

65. Which of the following is a banned pesticide?

- (a) DDT (b) CAN
- (c) EDB (d) DNB

Ans. (a)

66. Leaf lamina is modified into two toothed jaws in:

- (a) Nepenthes (b) Dionaea
- (c) Drosera (d) Utricularia

Ans. (b)

67. Name the hydrophyte which is not free floating?

- (a) Wolffia (b) Lemna
- (c) Utricularia (d) Eichhornia

Ans. (c)

68. Root cap is not generally present in:

- (a) mesophytes (b) halophytes
- (c) hydrophytes (d) xerophytes

Ans. (c)

69. Which is not a flightless bird?

- (a) Rhea (b) Dromaeus
- (c) Apteryx (d) Columba

Ans. (d)

70. When the sepals or petals meet by their edges without overlapping the aestivation is:

- (a) imbricate (b) valvate
- (c) twisted (d) axillary

Ans. (b)

71. Boat shaped anterior petal in garden pea is called:

- (a) wing (b) alae
- (c) keel (d) ship

Ans. (c)

72. The process of formation of glucose from non carbohydrate sources is called:

- (a) glycogenesis (b) glycogenolysis
- (c) glyconeogenesis (d) glycolysis

Ans. (c)

73. Northern blotting is used for:

- (a) DNA transfer (b) RNA transfer
- (c) protein transfer (d) all of these

Ans. (b)

74. Heterocysts are found in:

- (a) Aspergillus (b) Nostoc
- (c) Cystopus (d) Ulothrix

Ans. (b)

75. Synthetic vaccines are called:

- (a) first generation (b) second generation
- (c) third generation (d) none of these

Ans. (c)