

## **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) F<sub>5</sub> particle (b) F<sub>5</sub> particle
- (c) F<sub>1</sub> particle (d) F<sub>0</sub> 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) 10<sup>th</sup> (b) 9<sup>th</sup>
- (c) 7<sup>th</sup> (d) 5<sup>th</sup>

**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. NADPH<sub>2</sub> 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) CO<sub>2</sub> 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) Mimosis (b) Cycas  
(c) Chlorella (d) Nitrosomonas

**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)**