

## Botany and Zoology

1. Era of mammals is known as
  - A. Cenozoic
  - B. Mesozoic
  - C. Paleozoic
  - D. Pre-cambrian
2. Last stage in complete aerobic respiration of a molecule of glucose involving in the production of ATP results in
  - A. breakdown of fumaric acid
  - B. break down of malic acid
  - C. succinic acid
  - D. none of the above
3. Which of the following relationships between cell-structure and their respective function is not correct?
  - A. Cell wall-support
  - B. Cilia –chief site of diffusion
  - C. Chromosome- contain control information
  - D. Ribosomes-site of enzyme synthesis
4. Who was the first one to isolate T.M.V?
  - A. W.M.Stanely
  - B. K.M.Smith
  - C. D.Iwanowsky
  - D. S.L.Miller
5. Duplication of chromosomes occurs during
  - A. mitosis only
  - B. mitosis and meiosis only
  - C. meiosis only
  - D. none of the above
6. A compound which is produced by an organism and inhibit the growth of other organism is called as
  - A. Antiseptic
  - B. Anti coagulant
  - C. Anti allergy
  - D. Anti biotic

7. Chromosomes are made up of small structures called
- A. Nuclei
  - B. Genes
  - C. Nucleoli
  - D. Buds
8. A DNA strand is directly involved in the synthesis of all the following except
- A. Another DNA strand
  - B. Protein molecule
  - C. t- RNA molecule
  - D. m-RNA molecule
9. Genetic mutation occurs in
- A. DNA
  - B. RNA
  - C. Chromosome
  - D. Nucleus
10. Transcription is a process by which
- A. two daughter strands of DNA are synthesized
  - B. amino acids are joined to form polypeptides
  - C. an RNA molecule is synthesized within a ribosome
  - D. an RNA molecule is synthesized on a DNA strand
11. Which of the following is a climatic factor in ecology?
- A. Altitude
  - B. Soil structure
  - C. Temperature
  - D. Oxygen
12. Water absorbed by roots from the soil is
- A. rainwater
  - B. free running water
  - C. dew
  - D. hygroscopic water
13. Plants are killed in winter by frost because
- A. water in the plants freezes
  - B. water expand breaks the cell
  - C. desiccation
  - D. no photosynthesis takes place at low temperature

14. With regard to ecological food chain man is a

- A. consumer
- B. producer
- C. both consumer and producer
- D. producer and decomposer

15. Xylem conducts water from

- A. roots to leaves
- B. leaves to roots
- C. tracheid to vessels
- D. fiber to tracheids

16. Cork cells are impervious because of

- A. cellulose
- B. cutin
- C. lignin
- D. suberin

17. Wood is the common name of

- A. cambium
- B. phloem
- C. secondary xylem
- D. vascular xylem

18. Where would you find *climbing* roots?

- A. *Pandanus*
- B. *Banyan*
- C. *Broyophyllum*
- D. *Piper* plant

19. Where would you find tuberous root?

- A. *Radish*
- B. *Dahlia*
- C. *Mirabilis*
- D. *Orchid*

20. What is the usual method of propagation in rose?

- A. By bulbs
- B. By cut stems
- C. By cut roots
- D. By Rhizome

21. Ginger is a stem and not root because

- A. it stores food
- B. it is better in taste
- C. it has distinct nodes and internodes
- D. it is a defensive organ

22. Bulb is the modification of

- A. stem
- B. root
- C. plumule
- D. radicle

23. Which of these following have compound leaves?

- A. *Mango*
- B. *Drosera*
- C. *Sunflower*
- D. *Fern*

24. Phyllotaxy in *Calotropis* is

- A. alternate
- B. opposite decussate
- C. opposite superposed
- D. whorled

25. Male part of the flower is

- A. thalamus
- B. androecium
- C. calyx
- D. gynoecium

26. In *Leguminosae* family the number of carpel is

- A. One
- B. Two
- C. Three
- D. Four

27. Rosaceous corolla is found in

- A. Tea
- B. Radish
- C. Mustard
- D. *Dianthus*

28. When the filaments are united into two bundles stamens are said to be

- A. monadelphous
- B. diadelphous
- C. polyadelphous
- D. syngenesious

29. A spike of unisexual flowers is found in

- A. Bottle brush
- B. Wheat
- C. Mulberry
- D. Amaranthus

30. Verticillaster is a type of

- A. Inflorescence
- B. Flower
- C. Fruit
- D. Stem modification

31. The main function of the sepals is to

- A. Attract insects to the flower
- B. Produce scent or nectar
- C. Protect the flower when it is in bud
- D. Provide a platform for insects to alight on

32. A condition in which the gynoecium matures before androecium of the same flower is called

- A. protogyny
- B. protandry
- C. herkogamy
- D. heterostyly

33. The transfer of pollen from anther of one plant to the stigma of another plant of the same species is known as

- A. autogamy
- B. allogamy
- C. homogamy
- D. cleistogamy

34. Cleistogamy is found in

- A. *Commelina*
- B. *Ficus*
- C. *Vallisneria*
- D. *Anthocephalus*

35. Fusion of two dissimilar gametes is known as

- A. fertilization
- B. dichogamy
- C. autogamy
- D. allogamy

36. Who was the first to describe the double fertilization?

- A. Mendel
- B. Huxley
- C. Nawaschin
- D. Darwin

37. The edible part of the coconut is

- A. endosperm
- B. mesosperm
- C. aril
- D. thalamus

38. The outer layer of the seed coat is called

- A. tegmen
- B. testa
- C. funicle
- D. hilum

39. A true fruit is developed from

- A. Ovary
- B. Thalamus
- C. Calyx
- D. Receptacle

40. The edible part of mango is

- A. endosperm
- B. mesocarp
- C. epicarp
- D. thalamus

41. Parthenocarpy is

- A. formation of fruit without fertilization
- B. formation of seed without fertilization
- C. formation of seedless fruit
- D. none of the above

42. Mango, peach and coconut fruits are

- A. berry
- B. drupe
- C. pepo
- D. pome

43. What is the study of algae called as?

- A. Bryology
- B. Phycology
- C. Mycology
- D. Urology

44. Gram's stain is

- A. a stain prepared out of gram seed
- B. a trade mark
- C. a staining technique developed by the Danish scientist Gram for the differentiation of bacteria
- D. none of the above

45. Common human intestinal bacterium is

- A. *Streptococcus*
- B. *Escherichia coli*
- C. *Mycobacterium*
- D. *Diplococcus*

46. Dark reaction in photosynthesis is known as

- A. Blackman reaction
- B. Calvin cycle
- C. Smutt's cycle
- D. Bose reaction

47. In *Aspidium* and *Pteris* the stele is

- A. protostelic
- B. ectopholic
- C. amphipholic
- D. dictyosteliic

48. In which of the following manner gymnosperms differ from angiosperms?

- A. In formation of endosperm before fertilization
- B. In production of naked ovules in gymnosperms
- C. In formation of pollen tubes
- D. None of the above

49. Water from soil is absorbed by

- A. root tip
- B. root hair
- C. primary root
- D. endodermis

50. In the first stage of photosynthesis light energy is used to

- A. move water molecules
- B. denature chlorophyll
- C. split water molecules
- D. produce osmotic pressure

51. Which one of these is the most recent ancestor of *Homo sapiens*?

- A. *Pithecanthropus*
- B. Cro-Magnon man
- C. Heidelberg man
- D. *Ramapithecus*

52. Fossils contents of alimentary are known as

- A. casts
- B. trails
- C. coprolite
- D. impression

53. Darwin's concepts of evolution

- A. are accepted today *in toto*
- B. have been completely refuted
- C. rejected the inheritance of aquired characters
- D. are the basis of modern theories of evolution

54. Leydigs cells are meant to

- A. secrete testosterone
- B. support testes
- C. support epididymis
- D. support vas deference

55. Allantois of the developing mammalian embryo helps the embryo in

- A. respiration
- B. nutrition
- C. protection
- D. excretion

56. Dropsy means

- A. accumulation of toxins in the body parts
- B. accumulation of watery fluid in any part of the body
- C. enlargement of kidney
- D. defective muscles of eye

57. Cretinism is caused due to deficiency of

- A. Pituitary
- B. Thyroid
- C. Pancreas
- D. Adrenal

58. Which of the following process does not require metabolic energy?

- A. Blood circulation
- B. Muscle contraction
- C. Passage of a nerve impulse across a synapse
- D. Passage of nerve impulse along an axon

59. Diuresis is a condition which

- A. increases the volume of urine excreted
- B. decreases the volume of urine excreted
- C. increases electrolyte balance
- D. decreases electrolyte balance

60. Arteriosclerosis is the condition in which

- A. Hardening of arteries takes place
- B. Deposition of lipids occurs in the arterial wall
- C. Destruction of arteries takes place
- D. Hardening of veins takes place

61. Purkinje's fibres are associated with

- A. SA Node
- B. Veins
- C. arteries
- D. Tricuspid valve

62. Which of the following does not produce any digestive enzyme?

- A. Intestinal mucosa
- B. Gastric mucosa
- C. Pancreas
- D. Liver

63. Which word best describes the action of bile?

- A. Neutralizes
- B. Digests
- C. Emulsifies
- D. Absorbs

64. The function of Iris is

- A. to stir aqueous humor
- B. to protect lens
- C. to regulate the size of pupil
- D. to direct the rays of light to the retina

65. The structure that helps a person maintain his balance is

- A. semi-circular canal
- B. cochlea
- C. eustachian tube
- D. malleus

66. When pungent chemical substances get into the nasal cavity

- A. they are picked up by olfactory lobes of the brain
- B. they go into solution with mucus
- C. they are dissolved in the water of the nasal bones
- D. they diffuse into the brain

67. The number of cranial nerves in frog are

- A. 10 pairs
- B. 11 pairs
- C. 12 pairs
- D. 13 pairs

68. In mammals corpus callosum joins

- A. Two cerebral hemispheres
- B. Two optic lobes
- C. Two olfactory lobes
- D. Optic chiasma

69. Goblet or mucous neck cells are produced inside

- A. Colon
- B. Gall bladder
- C. Liver
- D. Kidney

70. In frogs Bidder's canal is meant for the passage of

- A. urine
- B. sperm
- C. water
- D. ova

71. In man, the kidneys are

- A. in the thoracic cavity
- B. in the groin
- C. attached to the dorsal wall of the abdominal cavity
- D. just under the diaphragm

72. CCK is responsible for the contraction of

- A. Liver
- B. Heart
- C. Gall bladder
- D. Kidney

73. pulmonary breathing is accelerated when frog is

- A. hibernating
- B. excited
- C. under water
- D. waiting for prey

74. Blood returns from lungs to heart through

- A. Right auricle
- B. Right ventricle
- C. Left ventricle
- D. Left auricle

75. Muscular movements of the alimentary canal which move the food is called

- A. Contraction
- B. Expansion
- C. Peristalsis
- D. Reflex action.

76. The largest organ in human body is

- A. Brain
- B. Liver
- C. Kidney
- D. Heart

77. How much KJ of energy is produced by 1 ATP?

- A. 22 KJ
- B. 42 KJ
- C. 34 KJ
- D. 32 KJ

78. Vitamin D is synthesized by

- A. Liver
- B. Skin
- C. Gall bladder
- D. Pancreas

79. Which contractile fibers are found in the muscles?

- A. Elastic fibres
- B. White
- C. Microfibrils
- D. Myofibrils

80. The ratio between body weight and blood volume in man is

- A. 1/6
- B. 1/13
- C. 1/16
- D. 7/20

81. Neutrophils serve as

- A. Shock troops
- B. Mopping up
- C. Histiocytes
- D. Macrophages

82. From where the spider prepares the web

- A. Mouth
- B. Legs
- C. Spinners
- D. Salivary glands

83. What is the name of the full-grown larva of *Musca domestica*?

- A. Puparium
- B. Maggot
- C. Caterpillar
- D. Cocoon

84. Mouth parts of mosquito are of

- A. biting type
- B. sucking type
- C. piercing and sucking type
- D. chewing type

85. Which one of these is a poisonous lizard?

- A. Varanus
- B. Chameleon
- C. Heloderma
- D. Hemidactylus

86. The main function of the blood of Cockroach is to

- A. Take up Carbon di-oxide from the haemolymph
- B. Circulate the hormones
- C. Transport the foods
- D. Carry metabolic wastes to the excretory organ.

87. What would you call the study of fishes?

- A. Ichthyology
- B. Herpetology
- C. Saurology
- D. Ornithology

88. Where would you find *Ascaris lumbricoides*?

- A. Human blood
- B. Intestine of man
- C. Spleen of man
- D. Urinary bladder of man

89. Which of these is a secondary host of *Taenia solium*?

- A. Human being
- B. Pig
- C. Dog
- D. Snail

90. Nematocysts of *Hydra* are derived from

- A. Digestive cells
- B. Interstitial cells
- C. Musculo-epithelial cells
- D. Mesogloea

91. What is the most common composition of skeleton of sponges?

- A. Cartilage
- B. Spicules and sporgin fibres
- C. Mesenchyme
- D. Myonemes

92. What is the main function of contractile vacuoles in *Paramecium*?

- A. Elimination of CO<sub>2</sub>
- B. Elimination of nitrogenous wates
- C. Control of body fluids
- D. Elimination of undigested food

93. Hydra belongs to phylum

- A. Protozoa
- B. Porifera
- C. Cnidaria
- D. Mollusca

94. Which of the following species of plasmodium causes beningn or tertian malarial fever?

- A. *Plasmodium falcifarum*
- B. *Plasmodium malariae*
- C. *Plasmodium ovale*
- D. *Plasmodium vivex*

95. Water percolating through the soil removing soluble substances and nutrients is known as

- A. Humification
- B. Leaching
- C. Reverse osmosis
- D. Passive absorption

96. In which of these cyst is not formed?

- A. *Amoeba proteus*
- B. *Entamoeba gingivalis*
- C. *Entamoeba histolytica*
- D. *Entamoeba coli*

97. Which of the following is given as a gift in Japan?

- A. *Hyalonema*
- B. *Euplectella*
- C. *Tethya*
- D. *Pheronema*

98. Which of these is Aristotle's classification of animals?

- A. Vertebrata and Invertebrata
- B. Chordata and Non-chordata
- C. Protozoa and Metazoa
- D. Enaima and Anaima

99. What is the name of science dealing with the study of improvement of human race?

- A. Genetics
- B. Eugenics
- C. Euthenics
- D. Biomterics

100. Who introduced the term 'Biology'?

- A. Linnaeus
- B. Lamarck
- C. Aristotle
- D. Lamarck and Treviranus