

## The Living World

- Living organisms are
  - self replicating
  - self evolving
  - self regulating
  - all of these
- A taxonomic group of any rank is called
  - Clade
  - Category
  - variety
  - Taxon
- Arboretum is a part of botanical gardens where
  - bonsai are made
  - Crop plants are grown
  - seeds are stored
  - big trees are cultivated in the form of forests
- Which of the following is not included under *in situ* conservation?
  - National park
  - Sanctuary
  - Botanical garden
  - Biosphere reserve
- Species is
  - Population of individuals with similar genotypic and phenotypic traits
  - Population of one type
  - Population of interbreeding individuals
  - Group of individuals occurring in a geographical area
- Which is the odd one in the following series?
  - Solanum
  - Petunia
  - Datura
  - Pisum

7. In which book Bentham and Hooker proposed their classification

- a) Genera Plantarum   b) Species Plantarum   c) Historia Plantarum   d) Historia Animalium

8. Numerical taxonomy is based on the

- a) morphological studies of organism  
b) basis of number of shared characters of various organisms  
c) nuclear and chromosomal studies  
d) chemicals present in cells or organism

### **ANSWERS**

1)d, 2)d, 3)d, 4) c, 5)c, 6)d, 7)a, 8) b

### **Biological classification**

1. Which of the following has a doubtful status?

- a) Bacteria   b) Bacteriophage   c) Blue green algae   d) PPLO

2. Four kingdom system was proposed by

- a) Linnaeus   b) E. Haeckel   c) R.H. Whittaker   d) Copeland

3. Virioids have

- a) single stranded RNA not enclosed by protein coat  
b) single stranded DNA not enclosed by protein coat  
c) double stranded DNA enclosed by protein coat  
d) double stranded RNA enclosed by protein coat

4. An antibiotic extracted from a bacteria

- a) Penicillin    b) Bacitracin    c) Streptomycin    d) Cephalosporin

5. Light sensitive structure of euglenoids is

- a) Cilium    b) Eyespot    c) Flagellum    d) Chloroplast

6. An example of symbiotic association

- a) Rhizobium – Leguminous plant    b) Mycorrhiza    d) Puccinia – Wheat    d) (a) & (b)

7. Classification based on their evolution and genetic affinities

- a) Artificial system    b) Natural system    c) Phylogenetic system    d) Paleontologic system

8. Which disease is caused by mycoplasma?

- a) Rust    b) Sandal spike    c) citrus canker    d) sleeping sickness

9. Archaeobacteria differ from eubacteria in the following respect

- a) They inhabit extreme environment  
b) Cell membrane consists of branched lipids  
c) They have unique defense mechanism  
d) (a) & (b)

10. Which organism is used to increase fertility in paddy fields

- a) Rhizobium    b) Mycorrhiza    c) Cyanobacteria    d) (a) & (c)

11. Basidiospores are produced by

- a) Agaricus    b) Rhizopus    c) Aspergillus    d) Trichoderma

12. The three domain system of classification with six kingdoms, based on the molecular level of genes, possesses the three domains

- a) Bacteria, Archae, Eukarya  
b) Bacteria, Prokarya, Eukarya  
c) Prokarya, Eukarya, Plantae  
d) Prokarya, Eukarya, Animalia

13. Most antibiotics have no effect on viruses because

- a) they kill all bacteria which act as host of virus  
b) viruses are too small in size for the antibiotics to act on them  
c) viruses show no metabolism of their own  
d) viruses produce thick covering and encyst themselves as endospores

14. Diatoms are also known as

- a) Cyanobacteria    b) Blue green algae    c) Green algae    d) Golden brown algae

15. Sea water glows during night due to occurrence of

- a) Noctiluca    b) Gonyaulax    c) Euglena    d) Neurospora

16. The branch of botany which deals with study of fungi is called

- a) Parasitology    b) Mycology    c) Phycology    d) Physiology

17. The parasitic fungi take their food from the host with the help of

a) Paraphysis    b) Sori    c) Conidia    d) Haustoria

18. Contractile vacuole's function in Amoeba is

a) Reproduction    b) Digestion    c) Osmoregulation    d) storage of food

19) L.Margulis and K.V. Schwartz have proposed the need of a sixth kingdom for

a) Archaeobacteria    b) Viruses    c) Slimemold    d) (a) & (b)

20. A disease caused by viroid

a) Smut    b) Mad cow disease    c) anthrax    d) Potato spindle tuber

### **ANSWERS**

1) b, 2) d, 3)a, 4)b, 5) b, 6) d, 7) c, 8) b, 9) d, 10) c, 11) a, 12) a, 13) c, 14) d, 15) a, 16) b, 17) d, 18) c, 19) a, 20) d

## **Plant Kingdom**

1. The alga used as protein supplements by space travellers

a) Spirullina    b) Gelidium    c) Laminaria    d) sargassum

2. Mannitol and Laminarin are the stored form of food in

a) Chlorophyceae    b) Phaeophyceae    c) Rhodophyceae    d) (b) & (c)

3. Protonema is the juvenile filamentous stage in the life cycle of

a) Funaria    b) Selaginella    c) Cycas    d) Sunflower

4. An example for monoecious plant

- a) Pinus      b) Cycas      c) Papaya      d) (a) & (c)

5. Double fertilization is a unique feature found in

- a) Algae      b) Bryophyte      c) Pteridophyta      d) Angiosperms

6. Gemmae are asexual reproductive bodies of

- a) algae    b) liverworts    c) mosses    d) all above

7. Dryopteris is not a bryophyte, because

- a) they are terrestrial plants  
b) the plant body is divisible into root stem and leaves  
c) vascular tissue is present  
d) they produce spores

8. Bryophytes and pteridophytes exhibit

- a) haplo-diplontic life where both the sporophytic and gametophytic stages are multicellular and free living  
b) Diplontic life cycle with an independent dominant sporophytic  
c) Haplontic life cycle with a free living dominant gametophyte  
d) Diplontic life cycle with an independent dominant gametophyte

9. Endosperm is a triploid tissue in angiosperms because of

- a) fusion of male gamete with secondary nucleus

- b) double fertilization
- c) fusion of two male gamete with the egg
- d) fusion of male gamete with egg

10. The only gymnosperm which bears flowers

- a) Cedrus
- b) Sequoia
- c) Gnetum
- d) Pinus

#### ANSWERS

1) a, 2) b, 3) a, 4) a, 5) d, 6) b, 7) c, 8) a, 9) a, 10) c

### **Animal Kingdom**

1. Which is a pseudocoelomate?

- a) Platyhelminthes
- b) Aschelminthes
- c) Coelentrata
- d) Cnetophora

2. Metagenesis is

- a) Alternation of generation
- b) Formation of metaphytes
- c) Segmentation of body
- d) Jointed appendages

3. Which of the following cells maintain a current of water in sponges?

- a) Pinacocytes
- b) Porocytes
- c) choanocytes
- d) Myocytes

4. One of the following group of characteristics is always present in all chordates in one or other stage of life

- a) Notochord, scales and dorsal tubular nervous system
- b) Gill slits, vertebral column, notochord
- c) Mammary glands, hair, gill slits
- d) Notochord, gill slits, and dorsal hollow tubular nervous system

5. The missing link between reptiles and birds

- a) Archaeopteryx
- b) Dodo
- c) Rhea
- d) Albatross

6. Which of the following is an exclusive characteristic of class mammalian

- a) Homeothermy
- b) Internal fertilization
- c) Presence of muscular diaphragm
- d) completely four chambered heart

7. Whale is placed in mammals and not in Pisces because it

- a) is aquatic in habit
- b) does not have fins
- c) respire through gills
- d) possess mammary glands

8. Match the following animals in column I with the unique features found in them in column II

Column I

Column II

- A) Elephant
- B) Platypus
- C) Camel
- D) Emu

- i) flightless bird
- ii) nucleated RBC
- iii) egg laying mammal
- iv) abdominal testes

- |    | A   | B   | C  | D   |
|----|-----|-----|----|-----|
| a) | iv  | i   | ii | iii |
| b) | iv  | iii | ii | i   |
| c) | iii | iv  | ii | i   |



d) ii      iii      iv      i

9. All mammals without any exception are characterized by

- a) Viviparity and enucleate RBC
- b) Extra-abdominal testes and a four chambered heart
- c) Presence of three embryonic membranes: amniom, allantois and chorion
- d) A muscular diaphragm and milk producing glands

10. Syrinx is the

- a) V – shaped bone
- b) food storage part in the digestive system
- c) breast bone
- d) sound producing organ

11. Amongst vertebrates the first to invade land are amphibians but they have to return to water for

- a) Excretion      b) Respiration      c) Breeding      d) Feeding

12. Match the following

Column I

Column II

- |              |               |
|--------------|---------------|
| i) Anopheles | A) Filariasis |
| ii) Aedes    | B) Thyphoid   |
| iii) Culex   | C) Malaria    |
| iv) Musca    | D) Dengue     |

- a) i-C,    ii- B,    iii-A,    iv-D
- b) i- B,    ii-D,    iii-A,    iv-C
- c) i-C,    ii-D,    iii-B,    iv-A

d) i-C, ii-D, iii-A, iv-B

13. Larval Echinoderms have ----- symmetry

a) Bilateral      b) Radial      c) Spherical      d) Biradial

14. Pick the incorrect pair

a) Apis – Honey

b) Bombyx mori – Silk

c) Locust – Gregarious pest

d) Tsetse – Chikungunya

15. Water vascular system performs all except one of these functions

a) Excretion    b) Locomotion    c) Respiration    d) Sense organ

16. Which of the following is a flight adaptation?

a) Oil gland at the base of the tail

b) Air sacs

c) Pneumatic bones

d) Extra chambers, the crop and gizzard

17. A non poisonous snake

a) Viper

b) Kraits

c) Cobra

d) Python

18. Which statement is not correct?

a) Crocodile is with three chambered heart

b) Green anaconda gives birth to young ones

c) Draco has patagia which helps in gliding flights

d) Turtle is a reptile

19. A limbless amphibian

a) Salamandra      b) Ichthyophis      c) Bufo      d) Earthworm

20. Which of the following is a fish?

a) Jelly fish      b) Starfish      c) Flying fish      d) Cuttlefish

21. One of these features is not characteristic of phylum chordate

a) Notochord is present

b) Central nervous system is dorsal, hollow and single

c) Heart is ventral

d) Pharynx is not perforated by gill slits

22. The class which belongs to division Agnatha is

a) Cyclostomata      b) Urochordata      c) Tetrapoda      d) Osteichthyes

23. The second largest animal phylum

a) Arthropoda      b) Mollusca      c) Echinodermata      Annelida

24. In which of the following is parthenogenesis a normal mode of development?

a) Man      b) Honeybee      c) Frog      d) Palaemon

## ANSWERS

1) a, 2) a, 3) c, 4) d, 5) a, 6) c, 7) d, 8) b, 9) d, 10) d, 11) c, 12) d, 13) a, 14) d, 15) d, 16) c, 17) d, 18) a, 19) b, 20) c, 21) d, 22) a, 23) b, 24) b

