

Class: IX

Subject: Biology



NCERT Exemplar Problems

Diversity In Living Organisms

Multiple Choice Questions (MCQs):

- Find out incorrect sentence.
 - Protista includes unicellular eukaryotic organisms.
 - Whittaker, considered cell structure, mode and source of nutrition for classifying the organism into five kingdoms.
 - Both monera and protista may be autotrophic and heterotrophic.
 - Monerans have well-defined nucleus.
- Which among the following has specialised tissue for conducting water?
 - thallophyta
 - bryophyta
 - pteridophyta
 - gymnosperms
 - (i) and (ii)
 - (ii) and (iii)
 - (iii) and (iv)
 - (i) and (iv)
- Which among the following produce seeds?
 - thallophyta
 - bryophyta
 - pteridophyta
 - gymnosperms
- Which one is a true fish?
 - jelly fish
 - star fish
 - dog fish
 - silver fish
- Which among the following is exclusively marine?
 - porifera
 - echinodermata
 - mollusca
 - pisces
- Which among the following have open circulatory system?
 - arthropoda
 - mollusca
 - annelida
 - coelenterata
 - (i) and (ii)
 - (iii) and (iv)
 - (i) and (iii)
 - (ii) and (iv)
- In which group of animals, coelom is filled with blood?
 - arthropoda
 - annelida
 - nematoda
 - echinodermata
- Elephantiasis is caused by
 - Wuchereria*
 - pinworm
 - planarians
 - liver flukes
- Which one is the most striking or common character of vertebrates?
 - presence of notochord
 - presence of triploblastic condition
 - presence of gill pouches
 - presence of coelom
- Which among the following have scales?
 - amphibians
 - pisces
 - reptiles
 - mammals
 - (i) and (iii)
 - (iii) and (iv)
 - (ii) and (iii)
 - (i) and (ii)
- Find out the false statement.
 - Aves are warm-blooded, egg-laying and have a four-chambered heart.
 - Aves have feather-covered body, fore limbs are modified as wings and breathe through lungs.
 - Most of the mammals are viviparous.
 - Fishes, amphibians and reptiles are oviparous.
- Pteridophyta do not have
 - roots
 - stem
 - flowers
 - leaves
- Identify the member of porifera.
 - Spongilla*
 - Euglena*
 - Penicillium*
 - Hydra*
- Which is not an aquatic animal?
 - Hydra*
 - Jelly fish
 - Corals
 - Filaria*

15. Amphibians do not have
 (a) three-chambered heart (b) gills or lungs
 (c) scales (d) mucous glands
16. Organisms without nucleus and cell organelles belong to
 (i) fungi (ii) protista
 (iii) cyanobacteria (BGA) (iv) archaeobacteria
 (a) (i) and (ii) (b) (iii) and (iv) (c) (i) and (iv) (d) (ii) and (iii)
17. Which of the following is not a criteria for classification of living organisms?
 (a) body design of the organisms (b) ability to produce one's own food
 (c) membrane-bound nucleus and cell organelles (d) height of the plant
18. The feature that is not characteristic of protochordata.
 (a) presence of notochord (b) bilateral symmetry and coelom
 (c) jointed legs (d) presence of circulatory system
19. The locomotory organs of echinodermata are
 (a) tube feet (b) muscular feet (c) jointed legs (d) parapodia
20. Corals are
 (a) poriferans attached to some solid support (b) cnidarians, that are solitary living
 (c) poriferans present at the sea bed (d) cnidarians that live in colonies
21. Who introduced the system of scientific nomenclature of organisms?
 (a) Robert Whittaker (b) Carolus Linnaeus
 (c) Robert Hooke (d) Ernst Haeckel
22. Two-chambered heart occurs in
 (a) crocodiles (b) fish (c) aves (d) amphibians
23. Skeleton is made entirely of cartilages in
 (a) sharks (b) tuna (c) rohu (d) none of these
24. Which one of the following is not an annelid?
 (a) *Nereis* (b) earthworm (c) leech (d) urchins
25. The book 'Systema Naturae' was written by
 (a) Linnaeus (b) Haeckel (c) Whittaker (d) Robert Brown
26. Karl von Linne was involved with which branch of science?
 (a) Morphology (b) Taxonomy (c) Physiology (d) Medicine
27. Real organs are absent in
 (a) mollusca (b) coelenterata (c) arthropoda (d) echinodermata
28. Hard calcium carbonate structures are used as skeleton by
 (a) echinodermata (b) protochordata (c) arthropoda (d) nematoda
29. Differentiation in segmental fashion occurs in
 (a) leech (b) starfish (c) snails (d) *Ascaris*
30. In taxonomic hierarchy family comes between
 (a) class and order (b) order and genus (c) genus and species (d) division and class
31. Five-kingdom classification was given by
 (a) Morgan (b) R. Whittaker (c) Linnaeus (d) Haeckel
32. Well-defined nucleus is absent in.
 (a) blue-green algae (b) diatoms (c) algae (d) yeast

33. The 'Origin of Species' is written by
 (a) Linnaeus (b) Darwin (c) Haeckel (d) Whittaker
34. Meena and Hari observed an animal in their garden. Hari called it an insect while Meena said it was an earthworm. Choose the character from the following which confirms that it is an insect.
 (a) bilateral symmetrical body (b) body with jointed legs
 (c) cylindrical body (d) body with little segmentation

State whether the following statements are true (T) or false (F). Rewrite the false statements correctly:

- Gymnosperms are characterised by the presence of naked seeds.
- Amphibians have smooth moist skin, rich in mucus and poison glands.
- The organisms belonging to phylum platyhelminthes have dorsoventrally flattened body.
- Rhizoids help in the conduction of food in bryophyta.
- All multicellular organisms having eukaryotic cells with cell walls are placed in kingdom animalia.

Short answer questions:

35. Write True (T) or False (F):

- Whittaker proposed five-kingdom classification.
- Monera is divided into archaeobacteria and eubacteria.
- Starting from class, species comes before the genus.
- Anabaena* belongs to kingdom monera.
- Blue-green algae belongs to the kingdom protista.
- All prokaryotes are classified under monera.

Ans. (a) T (b) T (c) F (d) T (e) F (f) T

36. Fill in the blanks:

- Fungi shows _____ mode of nutrition.
- Cell wall of fungi is made up of _____.
- Association between blue-green algae and fungi is called as _____.
- Chemical nature of chitin is _____.
- _____ has smallest number of organisms with maximum number of similar characters.
- Plants without well-differentiated stem, root and leaf are kept in _____.
- _____ are called as amphibians of the plant kingdom.

Ans. (a) saprophytic (b) chitin (c) lichens (d) carbohydrates
 (e) Species (f) thallophyta (g) Bryophytes

37. You are provided with the seeds of gram, wheat, rice, pumpkin, maize and pea. Classify them whether they are monocot or dicot.

Ans. Monocots - wheat, rice, maize; Dicots - gram, pumpkin, pea

38. Match the column:

Column A


- naked seed
- covered seed
- flagella
- Marchantia*
- Marsilea*
- Cladophora*
- Penicillium*

Column B

- angiosperms
- gymnosperms
- bryophytes
- Euglena*
- thallophyta
- pteridophyta
- fungi

9. In *Pila*, the organ of locomotion is
 (a) mantle (b) tentacles (c) foot (d) legs
10. Starfish belongs to phylum
 (a) mollusca (b) arthropoda (c) coelenterata (d) echinodermata
11. Echinoderms have
 (a) water-vascular system (b) jet propulsion
 (c) canal system (d) book lungs
12. Phylum chordata is named due to occurrence of
 (a) notochord (b) dorsal hollow nerve cord
 (c) post-natal tail (d) pharyngeal gill slits
13. The mode of nutrition in fungi is
 (a) symbiotic (b) autotrophic (c) saprophytic (d) both (a) and (c)
14. *Balanoglossus* belongs to hemichordata which forms connecting link between
 (a) urochordata and cephalochordata (b) urochordata and vertebrata
 (c) cephalochordata and vertebrata (d) non-chordata and chordata
15. Bacteria and cyanobacteria belong to
 (a) monera (b) protista (c) fungi (d) animalia
16. In the bony fish, heart is
 (a) single-chambered (b) three-chambered (c) two-chambered (d) four-chambered
17. In higher chordates, notochord is transformed into
 (a) cranium (b) limbs (c) vertebral column (d) both (b) and (c)
18. A very long tongue and ability to change colour is the feature of
 (a) garden lizard (b) python (c) *Chameleon* (d) tortoise
19. Duck-billed *Platypus* and *Echidna* are
 (a) reptiles (b) marsupial mammals
 (c) egg-laying mammals (d) eutherian mammals
20. After fertilisation, the ovules develop into
 (a) zygote (b) fruits (c) zygosporoes (d) seeds
21. The main plant body of a fern is
 (a) differentiated into root, stem and leaves (b) sporophytic
 (c) green and autotrophic (d) all of these
22. The word 'arthropod' means
 (a) leguminous plants (b) bear fruits (c) jointed legs (d) fused legs
23. Sweat and oil glands are present in the skin of
 (a) mammals (b) aves (c) reptiles (d) amphibia
24. Arthropods possess
 (a) gills (b) lungs (c) jointed legs (d) fused legs
25. Mark the odd one out.
 (a) gills (b) spiracles (c) lungs (d) flying fish

WORKSHEET

 Fill in the blanks:

1. Fungi shows _____ mode of nutrition.
2. Cell wall of fungi is made up of _____.