

**CBSE Class 9 Science**  
**NCERT Exemplar Solutions**  
**Chapter - 7**  
**Diversity in Living Organisms**

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**Multiple Choice Questions**

**1. Find out the incorrect statement.**

- (a) Protista includes unicellular eukaryotic organisms.
- (b) Whittaker considered cell structure, mode and source of nutrition for classifying the organisms into five kingdoms.
- (c) Both Monera and Protista may be autotrophic and heterotrophic.
- (d) Monerans have well defined nucleus.

**Ans. (d)** Monerans have well defined nucleus

**Explanation:** Monerans are prokaryotes, i.e., they do not have well defined nucleus.

**2. Which among the following has specialised tissue for conduction of water?**

- (i) Thallophyta
- (ii) Bryophyta
- (iii) Pteridophyta
- (iv) Gymnosperms

- (a) (i) and (ii)
- (b) (ii) and (iii)
- (c) (iii) and (iv)
- (d) (i) and (iv)

**Ans. (c)** (iii) and (iv)

**Explanation:** Specialised conductive tissues are not found in thallophytes and bryophytes. They first appear in pteridophytes.

**3. Which among the following produce seeds?**

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

**Ans. (d)** Gymnosperms

**Explanation:** Gymnosperms and angiosperms are seed bearing plants, but plants of lower groups do not bear seeds.

**4. Which among the following is a true fish?**

- (a) Jellyfish
- (b) Starfish
- (c) Dogfish
- (d) Silverfish

**Ans. (c)** Dogfish

**Explanation:** Dogfish is a cartilaginous fish. Jellyfish is a coelenterate, Starfish belongs to Echinodermata and Silverfish belongs to Arthropoda.

**5. Which among the following is exclusively marine?**

- (a) Porifera
- (b) Echinodermata
- (c) Mollusca
- (d) Pisces

**Ans. (b)** Echinodermata

**Explanation:** Porifera, Mollusca and Pisces are found in freshwater also.

**6. Which among the following have open circulatory system?**

- (i) Arthropoda
- (ii) Mollusca
- (iii) Annelida
- (iv) Coelenterata

- (a) (i) and (ii)
- (b) (iii) and (iv)
- (c) (i) and (iii)
- (d) (ii) and (iv)

**Ans. (a)** (i) and (ii)

**7. In which group of animals, coelom is filled with blood?**

- (a) Arthropoda
- (b) Annelida
- (c) Nematoda
- (d) Echinodermata

**Ans. (a)** Arthropoda

**Explanation:** Blood is not present in other groups in the options.

**8. Elephantiasis is caused by**

- (a) *Wuchereria*
- (b) Pinworm
- (c) Planarians
- (d) Liver flukes

**Ans. (a)** *Wuchereria*

**9. Which one is the most striking or (common) character of the vertebrates?**

- (a) Presence of notochord
- (b) Presence of triploblastic condition
- (c) Presence of gill pouches
- (d) Presence of coelom

**Ans. (a)** Presence of notochord

**Explanation:** Triploblastic condition, gill pouches and coelom are present in many invertebrates as well.

**10. Which among the following have scales?**

- (i) Amphibians
- (ii) Pisces
- (iii) Reptiles
- (iv) Mammals

- (a) (i) and (iii)
- (b) (iii) and (iv)
- (c) (ii) and (iii)
- (d) (i) and (ii)

**Ans. (c)** (ii) and (iii)

**Explanation:** Amphibians and mammals do not have scales on their body.

**11. Find out the false statement**

- (a) Aves are warm blooded, egg laying and have four chambered heart
- (b) Aves have feather covered body, fore limbs are modified as wings and breathe through lungs
- (c) Most of the mammals are viviparous
- (d) Fishes, amphibians and reptiles are oviparous

**Ans. (d)** Fishes, amphibians and reptiles are oviparous

**Explanation:** Some fishes and reptiles are viviparous. Amphibians show external fertilization and hence cannot be kept under either oviparous or viviparous animals.

**12. Pteridophyta do not have**

- (a) Root
- (b) Stem
- (c) Flowers
- (d) Leaves

**Ans. (c)** flowers

**Explanation:** Flower are present only in angiosperms.

**13. Identify a member of porifera**

- (a) *Spongilla*
- (b) *Euglena*
- (c) *Penicillium*
- (d) *Hydra*

**Ans. (a) *Spongilla***

**Explanation:** *Euglena* belongs to Protozoa, *Penicillium* belongs to Fungi and *Hydra* belongs to Coelenterata.

**14. Which is not an aquatic animal?**

- (a) *Hydra*
- (b) Jelly fish
- (c) Corals
- (d) *Filaria*

**Ans. (d) *Filaria***

**Explanation:** *Filaria* is a disease which happens because of *Wuchereria*.

**15. Amphibians do not have the following**

- (a) Three chambered heart
- (b) Gills or lungs
- (c) Scales
- (d) Mucus glands

**Ans. (c) Scales**

**Explanation:** Three chambered heart is found in Amphibians. Lungs are present in adults and gills are present in tadpoles. Mucus gland is present on skin of Amphibians.

**16. Organisms without nucleus and cell organelles belong to**

- (i) Fungi
- (ii) Protista
- (iii) Cyanobacteria
- (iv) Archaeobacteria

- (a) (i) and (ii)
- (b) (iii) and (iv)
- (c) (i) and (iv)
- (d) (ii) and (iii)

**Ans. (b)** (iii) and (iv)

**Explanation:** Both are prokaryotes.

**17. Which of the following is not a criterion for classification of living organisms?**

- (a) Body design of the organism
- (b) Ability to produce one's own food
- (c) Membrane bound nucleus and cell organelles
- (d) Height of the plant

**Ans. (d)** Height of the plant

**Explanation:** A small shrub and a large tree; both belong to angiosperms. This shows that heights of a plant cannot be a criterion for classification.

**18. The feature that is not a characteristic of protochordata?**

- (a) Presence of notochord
- (b) Bilateral symmetry and coelom
- (c) Jointed legs
- (d) Presence of circulatory system

**Ans. (c)** Jointed legs

**Explanation:** Jointed legs are found in Arthropoda; which does not come under Chordata.

**19. The locomotory organs of Echinodermata are**

- (a) Tube feet
- (b) Muscular feet
- (c) Jointed legs
- (d) Parapodia

**Ans. (a)** Tube feet

**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

**Ans. (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

**Ans. (b)** Carolus Linnaeus

**Explanation:** It was Carolus Linnaeus who proposed binomial nomenclature of organisms.

**22. Two chambered heart occurs in**

- (a) Crocodiles
- (b) Fish
- (c) Aves
- (d) Amphibians

**Ans. (b)** Fish

**Explanation:** Amphibians have three-chambered heart. Crocodiles and aves have four-chambered heart.

**23. Skeleton is made entirely of cartilage in**

- (a) Sharks
- (b) Tuna
- (c) Rohu
- (d) None of these

**Ans. (a)** Sharks

**Explanation:** Sharks belong to Cartilaginous fish; while others belong to the category of Bony fish.

**24. One of the following is not an Annelid**

- (a) *Nereis*
- (b) Earthworm
- (c) Leech
- (d) Urchins

**Ans. (d)** Urchins

**Explanation:** Sea urchins belong to Coelenterate.

**25. The book Systema Naturae was written by**

- (a) Linnaeus
- (b) Haeckel
- (c) Whittaker
- (d) Robert Brown

**Ans. (a)** Linnaeus

**26. Karl Von Linne was involved with which branch of science?**

- (a) Morphology
- (b) Taxonomy
- (c) Physiology
- (d) Medicine



**Ans. (b)** Taxonomy

**27. Real organs are absent in**

- (a) Mollusca
- (b) Coelenterata
- (c) Arthropoda
- (d) Echinodermata

**Ans. (b)** Coelenterata

**Explanation:** Coelenterates show tissue level of organization and hence real organs are absent in them.

**28. Hard calcium carbonate structures are used as skeleton by**

- (a) Echinodermata
- (b) Protochordata
- (c) Arthropoda
- (d) Nematoda

**Ans. (a)** Echinodermata

**29. Differentiation in segmental fashion occurs in**

- (a) Leech
- (b) Starfish
- (c) Snails
- (d) *Ascaris*

**Ans. (a)** Leech

**Explanation:** Leech belongs to annelida which show metameric body segmentation.

**30. In taxonomic hierarchy family comes between**

- (a) Class and Order
- (b) Order and Genus
- (c) Genus and Species

(d) Division and Class

**Ans. (b)** Order and Genus

**Explanation:** The sequence is: Division → Class → Order → Family → Genus → Species.

**31. 5-Kingdom classification has given by**

- (a) Morgan
- (b) R. Whittaker
- (c) Linnaeus
- (d) Haeckel

**Ans. (b)** R. Whittaker

**32. Well defined nucleus is absent in**

- (a) Blue green algae
- (b) Diatoms
- (c) Algae
- (d) Yeast

**Ans. (a)** Blue green algae

**Explanation:** Blue green algae belong to Monera which are prokaryotes and hence well-defined nucleus is absent in them.

**33. The 'Origin of Species' is written by**

- (a) Linnaeus
- (b) Darwin
- (c) Haeckel
- (d) Whittaker

**Ans. (b)** Darwin

**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

**Ans. (b)** Body with jointed legs

**Explanation:** Presence of jointed legs is a salient feature of arthropoda and insects belong to arthropoda.