

Chapter 12: Patterns in Life—Diversity and Classification

Class 9th (NCERT Exploration Series)

Line Spacing: 1.15 | Consistent Arial Typography

Segment 1: Easy Level

Part A: 20 Multiple Choice Questions (Easy)

- Who is widely known as the father of modern taxonomy?
A) Charles Darwin | B) Gregor Mendel | C) Carl Linnaeus | D) Aristotle
- What is the basic, fundamental unit of biological classification?
A) Genus | B) Family | C) Species | D) Kingdom
- In a scientific name, the first word always represents the:
A) Species name | B) Class name | C) Genus name | D) Order name
- Which of the following kingdoms consists entirely of prokaryotic unicellular organisms?
A) Protista | B) Fungi | C) Monera | D) Plantae
- Organisms that can synthesize their own food using sunlight are classified as:
A) Heterotrophs | B) Saprophytes | C) Autotrophs | D) Parasites
- The cell wall of fungi is distinct because it is primarily made of:
A) Cellulose | B) Chitin | C) Peptidoglycan | D) Glycogen
- Amphibians of the plant kingdom are commonly called:
A) Thallophytes | B) Bryophytes | C) Pteridophytes | D) Gymnosperms
- Which group of plants produces seeds enclosed within a fruit?
A) Gymnosperms | B) Pteridophytes | C) Angiosperms | D) Bryophytes
- Which of the following is a non-flowering plant that bears naked seeds?
A) Mango | B) Pinus | C) Fern | D) Moss
- Animals belonging to Phylum Porifera are commonly referred to as:
A) Roundworms | B) Flatworms | C) Sponges | D) Jellyfish
- Which phylum contains animals with a soft, unsegmented body often covered by a hard calcareous shell?
A) Arthropoda | B) Mollusca | C) Annelida | D) Nematoda
- The largest phylum of the animal kingdom in terms of number of species is:
A) Chordata | B) Arthropoda | C) Mollusca | D) Echinodermata
- An example of an animal possessing jointed legs and a chitinous exoskeleton is:
A) Prawn | B) Earthworm | C) Snail | D) Starfish
- Warm-blooded animals that possess mammary glands to nourish their young are called:
A) Aves | B) Reptilia | C) Mammals | D) Amphibia
- Which of the following organisms belongs to the kingdom Protista?
A) Bacteria | B) Amoeba | C) Mushroom | D) Spirogyra
- Bilateral symmetry means the body can be divided into identical halves through:
A) Any plane passing through the center | B) Only one specific vertical plane | C) Two horizontal planes | D) No plane at all
- The framework of classification used today widely relies on the Five Kingdom scheme proposed by:
A) Ernst Haeckel | B) Robert Whittaker | C) Carl Woese | D) Herbert Copeland

18. Which of the following is a characteristic feature of all chordates at some stage of life?
A) Presence of tentacles | B) Jointed appendages | C) Presence of a notochord | D) Chitinous body walls
19. Plants that do not have a well-differentiated body design belong to the group:
A) Pteridophyta | B) Bryophyta | C) Thallophyta | D) Gymnosperms
20. A unique feature of Phylum Echinodermata is the presence of:
A) Flame cells | B) A water vascular system | C) Open blood spaces without vessels | D) Pseudocoelom

MCQ Answer Key (Easy Segment):

1-C, 2-C, 3-C, 4-C, 5-C, 6-B, 7-B, 8-C, 9-B, 10-C, 11-B, 12-B, 13-A, 14-C, 15-B, 16-B, 17-B, 18-C, 19-C, 20-B

Part B: 20 Subjective Questions (Easy)

1. What is biological classification and why do scientists need to classify organisms?
2. State the two structural rules that must be followed when writing a scientific name manually.
3. Name the five kingdoms of life as proposed by Robert Whittaker.
4. How do prokaryotic cells differ fundamentally from eukaryotic cells in their internal structure?
5. Define saprophytic nutrition and name one kingdom where it is the primary mode of feeding.
6. Why are Bryophytes called the "amphibians of the plant kingdom"?
7. What is the difference between gymnosperms and angiosperms regarding their seeds?
8. List two distinct physical features of organisms belonging to Phylum Porifera.
9. What is meant by radial symmetry? Give an example of an animal phylum that shows it.
10. Explain the term 'segmented body' and name one animal phylum that clearly exhibits it.
11. What is the difference between cold-blooded and warm-blooded animals?
12. Name two characteristic features that define the class Aves (Birds).
13. What are cotyledons? How do they help split angiosperms into two smaller groups?
14. Why are lichens considered a unique ecological partnership?
15. Define a species according to biological terms.
16. What is a coelom? Why is its presence or absence important in classification?
17. To which phylum do flatworms belong, and what is their body cavity type?
18. State the primary difference between the cell walls of plants and fungi.
19. Mention two key diagnostic features of Phylum Arthropoda.
20. What are the four main criteria Whittaker used to develop his five-kingdom system?