

Class 9 Science Chapter 12 – Important MCQs

Patterns in Life: Diversity and Classification

 **New NCERT *Exploration* | 2026–27**

These MCQs are prepared according to the **new Chapter 12** in the supplied textbook, covering **biodiversity, classification, five kingdoms, plant groups, animal groups, hierarchy, binomial nomenclature, three-domain system, fossils and biodiversity conservation.**



SECTION A – BIODIVERSITY

1. The immense variety of living organisms on Earth is called:

- A. Classification
- B. Biodiversity
- C. Taxonomy
- D. Adaptation

 **Answer: B. Biodiversity**

2. Biodiversity is important because it:

- A. Makes all organisms identical
- B. Helps maintain ecosystem stability
- C. Prevents reproduction
- D. Reduces food chains

 **Answer: B**

The textbook explains that biodiversity supports ecosystem stability through processes such as oxygen production, decomposition and pollination.

3. Which organisms help decompose dead organic matter?

- A. Only birds
- B. Fungi and bacteria
- C. Only mammals
- D. Only flowering plants

✓ **Answer: B. Fungi and bacteria**

4. Which organisms play an important role in pollination?

- A. Birds, bees and bats
- B. Only fish
- C. Only reptiles
- D. Only fungi

✓ **Answer: A**

5. Species naturally restricted to a particular geographical region are called:

- A. Exotic species
- B. Endemic species
- C. Migratory species
- D. Domestic species

✓ **Answer: B. Endemic species**

6. Which of the following is a biodiversity hotspot associated with India?

- A. Western Ghats
- B. Sahara Desert
- C. Arctic Ocean
- D. Amazon River only

✓ **Answer: A. Western Ghats**

The chapter identifies the **Western Ghats, Indo-Burma, Himalayas and Sundaland** among the biodiversity hotspots relevant to India.



SECTION B – CLASSIFICATION

7. Biological classification means:

- A. Naming only plants
- B. Systematically organising organisms into groups
- C. Counting organisms
- D. Studying only fossils

✓ **Answer: B**

8. Classification helps scientists:

- A. Organise the enormous diversity of life
- B. Make all organisms identical
- C. Stop evolution
- D. Eliminate biodiversity

✓ **Answer: A**

9. Which is a useful basis for classifying organisms?

- A. Cell structure
- B. Nutrition
- C. Reproduction
- D. All of these

✓ **Answer: D. All of these**

The chapter considers characteristics including **cell structure, nutrition, internal structures, reproduction, ecological role and genetic similarity.**

10. Prokaryotic cells lack:

- A. Cell membrane
- B. Cytoplasm

- C. A membrane-bound nucleus
- D. Genetic material

✓ Answer: C

11. Eukaryotic cells have:

- A. No nucleus
- B. A membrane-bound nucleus
- C. No cytoplasm
- D. No genetic material

✓ Answer: B

12. A unicellular organism consists of:

- A. One cell
- B. Two cells
- C. Many cells
- D. No cells

✓ Answer: A

13. A multicellular organism consists of:

- A. One cell only
- B. Many cells
- C. No cells
- D. One nucleus only

✓ Answer: B



SECTION C – HISTORICAL CLASSIFICATION

14. The early classification system associated with two major groups was proposed by:

- A. Aristotle
- B. Whittaker
- C. Linnaeus
- D. Darwin

✓ **Answer: A. Aristotle**

15. Aristotle's classification mainly divided organisms into:

- A. Monera and Protista
- B. Plantae and Animalia
- C. Fungi and Plantae
- D. Bacteria and Archaea

✓ **Answer: B. Plantae and Animalia**

16. The development of microscopes helped scientists discover:

- A. Only large animals
- B. Microscopic organisms
- C. Only flowering plants
- D. Only fossils

✓ **Answer: B**



SECTION D – FIVE KINGDOM CLASSIFICATION

17. The five-kingdom classification was proposed by:

- A. Aristotle
- B. Robert H. Whittaker

- C. Charles Darwin
- D. Linnaeus

✓ **Answer: B. Robert H. Whittaker**

18. How many kingdoms are included in Whittaker's classification?

- A. Three
- B. Four
- C. Five
- D. Six

✓ **Answer: C. Five**

19. Which is NOT one of Whittaker's five kingdoms?

- A. Monera
- B. Protista
- C. Fungi
- D. Archaea

✓ **Answer: D. Archaea**

20. The five kingdoms are:

- A. Monera, Protista, Fungi, Plantae and Animalia
- B. Bacteria, Archaea, Fungi, Plants and Animals
- C. Plants, Animals, Viruses, Bacteria and Fungi
- D. Monera, Plantae, Archaea, Animalia and Viruses

✓ **Answer: A**



SECTION E – KINGDOM MONERA

21. Kingdom Monera mainly includes:

- A. Multicellular eukaryotes
- B. Unicellular prokaryotes
- C. Multicellular fungi
- D. Flowering plants

✓ Answer: B

22. Organisms of Monera generally lack:

- A. Cell membrane
- B. Genetic material
- C. A true nucleus
- D. Cytoplasm

✓ Answer: C

23. Bacteria are generally classified under:

- A. Protista
- B. Monera
- C. Plantae
- D. Animalia

✓ Answer: B



SECTION F – KINGDOM PROTISTA

24. Kingdom Protista mainly contains:

- A. Mostly unicellular eukaryotes
- B. Multicellular prokaryotes
- C. Only animals
- D. Only fungi

✓ Answer: A

25. Amoeba belongs to:

- A. Monera
- B. Protista
- C. Plantae
- D. Animalia

✓ **Answer: B. Protista**

26. Protists generally possess:

- A. No nucleus
- B. A well-defined nucleus
- C. No cell membrane
- D. No genetic material

✓ **Answer: B**

27. A single-celled organism with a well-defined nucleus and cilia is most likely a:

- A. Bacterium
- B. Protist
- C. Fungus
- D. Plant

✓ **Answer: B. Protist**

This matches the type of classification problem included in the textbook's end-of-chapter questions.



SECTION G – KINGDOM FUNGI

28. Fungi are generally:

- A. Autotrophic
- B. Heterotrophic

- C. Photosynthetic animals
- D. Prokaryotic

✓ Answer: B

29. The cell wall of fungi is mainly made of:

- A. Cellulose
- B. Chitin
- C. Protein only
- D. Starch

✓ Answer: B. Chitin

30. Fungi generally obtain nutrients by:

- A. Heterotrophic absorption
- B. Photosynthesis
- C. Hunting only
- D. Chemosynthesis only

✓ Answer: A

31. Which is an example of a fungus?

- A. Yeast
- B. Amoeba
- C. Bacterium
- D. Mango plant

✓ Answer: A. Yeast



SECTION H – KINGDOM PLANTAE

32. Members of Kingdom Plantae are generally:

- A. Autotrophic
- B. Heterotrophic by absorption
- C. Prokaryotic
- D. Unicellular only

✓ **Answer: A. Autotrophic**

33. Plants generally prepare their food by:

- A. Respiration
- B. Photosynthesis
- C. Digestion
- D. Fermentation

✓ **Answer: B. Photosynthesis**

34. Which plant group has a simple, undifferentiated plant body?

- A. Thallophyta
- B. Bryophyta
- C. Pteridophyta
- D. Angiosperms

✓ **Answer: A. Thallophyta**

35. Bryophytes generally require water for:

- A. Photosynthesis
- B. Reproduction
- C. Respiration
- D. Seed formation

✓ **Answer: B. Reproduction**

36. Bryophytes are often called:

- A. Flowering plants
- B. Amphibians of the plant kingdom

- C. Seed plants
- D. Cone-bearing plants

☒ **Answer: B**

37. Pteridophytes have:

- A. Vascular tissues
- B. No reproductive structures
- C. Flowers and fruits
- D. Only unicellular bodies

☒ **Answer: A. Vascular tissues**

38. Which is an example of a pteridophyte?

- A. Fern
- B. Mango
- C. Pine
- D. Moss

☒ **Answer: A. Fern**

39. Gymnosperms are plants whose seeds are:

- A. Enclosed inside fruits
- B. Exposed or naked
- C. Always underground
- D. Absent

☒ **Answer: B. Exposed or naked**

40. Which is a gymnosperm?

- A. Pine
- B. Mango
- C. Fern
- D. Moss

✓ Answer: A. Pine

41. Angiosperms are:

- A. Non-flowering plants
- B. Flowering plants
- C. Fungi
- D. Bacteria

✓ Answer: B. Flowering plants

42. In angiosperms, seeds are generally:

- A. Naked
- B. Enclosed within fruits
- C. Absent
- D. Present only in cones

✓ Answer: B



SECTION I – ANIMAL KINGDOM

43. Animals are generally:

- A. Autotrophic
- B. Heterotrophic
- C. Photosynthetic
- D. Prokaryotic

✓ Answer: B. Heterotrophic

44. Animals without a vertebral column are called:

- A. Vertebrates
- B. Invertebrates

- C. Mammals
- D. Chordates

☒ **Answer: B. Invertebrates**

45. Animals with a vertebral column are:

- A. Invertebrates
- B. Vertebrates
- C. Poriferans
- D. Molluscs

☒ **Answer: B. Vertebrates**

46. A notochord is:

- A. A flexible rod-like supporting structure
- B. A type of muscle
- C. A digestive organ
- D. A reproductive organ

☒ **Answer: A**

47. Which is an invertebrate phylum?

- A. Arthropoda
- B. Chordata
- C. Vertebrata
- D. Mammalia

☒ **Answer: A. Arthropoda**

48. Which group contains animals with jointed legs?

- A. Arthropoda
- B. Annelida
- C. Porifera
- D. Mollusca

✓ **Answer: A. Arthropoda**

The textbook uses **jointed legs** as a key feature for identifying an insect.

49. Which of the following is NOT an invertebrate phylum?

- A. Porifera
- B. Mollusca
- C. Arthropoda
- D. Chordata

✓ **Answer: D. Chordata**

50. Which group includes sponges?

- A. Porifera
- B. Arthropoda
- C. Mollusca
- D. Annelida

✓ **Answer: A. Porifera**



SECTION J – VERTEBRATE GROUPS

51. Which group includes fishes?

- A. Pisces
- B. Amphibia
- C. Reptilia
- D. Mammalia

✓ **Answer: A. Pisces**

52. Frogs belong to:

- A. Reptilia
- B. Amphibia
- C. Aves
- D. Mammalia

 **Answer: B. Amphibia**

53. Snakes and lizards belong to:

- A. Amphibia
- B. Reptilia
- C. Aves
- D. Mammalia

 **Answer: B. Reptilia**

54. Birds belong to:

- A. Aves
- B. Pisces
- C. Amphibia
- D. Mammalia

 **Answer: A. Aves**

55. Which group includes mammals?

- A. Mammalia
- B. Reptilia
- C. Amphibia
- D. Pisces

 **Answer: A. Mammalia**

56. Which of the following is a mammal?

- A. Dolphin
- B. Frog

- C. Lizard
- D. Fish

✓ Answer: A. Dolphin



SECTION K – HIERARCHICAL CLASSIFICATION

57. The basic unit of biological classification is:

- A. Kingdom
- B. Species
- C. Family
- D. Class

✓ Answer: B. Species

58. Which is the correct order from highest to lowest?

- A. Species → Genus → Family → Order → Class → Phylum → Kingdom
- B. Kingdom → Phylum/Division → Class → Order → Family → Genus → Species
- C. Kingdom → Species → Genus → Family → Class → Order
- D. Genus → Species → Kingdom → Family → Class

✓ Answer: B

59. Which taxonomic category is more specific?

- A. Kingdom
- B. Phylum
- C. Genus
- D. Species

✓ Answer: D. Species

60. A genus can contain:

- A. Only one species
- B. Several closely related species
- C. Only one kingdom
- D. Only one individual

✓ **Answer: B**

61. *Panthera tigris* and *Panthera leo* share the same:

- A. Species
- B. Genus
- C. Family only
- D. Kingdom only

✓ **Answer: B. Genus**



SECTION L – BINOMIAL NOMENCLATURE

62. The scientific naming system in which each organism has a two-part name is called:

- A. Binomial nomenclature
- B. Five-kingdom classification
- C. Trinomial nomenclature
- D. Numerical classification

✓ **Answer: A**

63. The scientific name of humans is:

- A. *Homo erectus*
- B. *Homo sapiens*

- C. *Panthera sapiens*
- D. *Homo humanus*

✓ Answer: B. *Homo sapiens*

64. In *Homo sapiens*, Homo represents the:

- A. Species
- B. Genus
- C. Family
- D. Kingdom

✓ Answer: B. Genus

65. In *Homo sapiens*, sapiens represents the:

- A. Genus
- B. Species name
- C. Family
- D. Order

✓ Answer: B. Species name

66. In a scientific name, the genus name begins with:

- A. A capital letter
- B. A small letter
- C. A number
- D. A symbol

✓ Answer: A

67. The second part of a binomial scientific name begins with:

- A. A capital letter
- B. A small letter
- C. A number
- D. Any symbol

✓ Answer: B



SECTION M – THREE-DOMAIN SYSTEM

68. The three-domain system includes:

- A. Monera, Protista and Fungi
- B. Bacteria, Archaea and Eukarya
- C. Plantae, Animalia and Fungi
- D. Bacteria, Protista and Plantae

✓ Answer: B

69. Which domain contains organisms with eukaryotic cells?

- A. Bacteria
- B. Archaea
- C. Eukarya
- D. Monera

✓ Answer: C. Eukarya

70. Bacteria and Archaea are:

- A. Eukaryotic
- B. Prokaryotic
- C. Multicellular animals
- D. Plants

✓ Answer: B. Prokaryotic

71. The three-domain system shows that:

- A. Classification never changes
- B. Scientific classification can change with new evidence
- C. All organisms are identical
- D. Species do not evolve

✓ **Answer: B**

The textbook explicitly explains that classification is an **ongoing process** as new tools and evidence become available.



SECTION N – FOSSILS

72. Fossils are:

- A. Newly formed organisms
- B. Preserved remains or traces of ancient organisms
- C. Living bacteria only
- D. Artificial models

✓ **Answer: B**

73. Fossils are generally found in:

- A. Layers of rocks, sand and mud
- B. Clouds
- C. Fresh leaves only
- D. Ocean water only

✓ **Answer: A**

74. Fossils provide evidence about:

- A. The history and changes of life on Earth
- B. Only present-day organisms
- C. Weather for tomorrow
- D. Photosynthesis

✓ **Answer: A**

75. Generally, older rock layers contain:

- A. More recently evolved complex organisms only
- B. Simpler and older forms of organisms
- C. No fossils
- D. Only flowering plants

✓ **Answer: B**

The chapter explains that fossils act as natural records of how life changed over millions of years.



SECTION O – BIODIVERSITY THREATS & CONSERVATION

76. Which human activity threatens biodiversity?

- A. Deforestation
- B. Pollution
- C. Overuse of natural resources
- D. All of these

✓ **Answer: D**

77. Climate change can:

- A. Affect biodiversity
- B. Have no effect on ecosystems
- C. Eliminate all microorganisms immediately
- D. Stop all adaptation

✓ **Answer: A**

78. When one species disappears from an ecosystem:

- A. No other organism is affected
- B. Organisms depending on it may also decline
- C. Biodiversity always increases
- D. Food chains become stronger

✓ **Answer: B**

The textbook notes that the decline or disappearance of one species can affect other species that depend on it.

79. Conservation of biodiversity is important because:

- A. Every organism plays a role in nature
- B. Only large animals matter
- C. Plants have no ecological role
- D. Microorganisms are useless

✓ **Answer: A**



SECTION P – HIGHER-ORDER MCQs

80. An organism is multicellular, eukaryotic, lacks chlorophyll and obtains nutrients by absorption. It most likely belongs to:

- A. Monera
- B. Protista
- C. Fungi
- D. Plantae

✓ **Answer: C. Fungi**

This matches the type of classification situation included in the chapter's practice material.

81. Fish, dolphins and whales should NOT be placed in one group merely because they:

- A. Have similar DNA
- B. Live in water

- C. Have the same body structure
- D. Belong to the same species

✓ **Answer: B. Live in water**

Habitat alone is not a sufficient basis for biological classification.

82. Which evidence can reveal relationships that may not be obvious from external appearance?

- A. DNA evidence
- B. Body colour only
- C. Habitat only
- D. Body size only

✓ **Answer: A. DNA evidence**

83. Bryophytes and pteridophytes are placed in different groups mainly because:

- A. Both have flowers
- B. Pteridophytes have vascular tissues while bryophytes lack them
- C. Both produce fruits
- D. Bryophytes have seeds

✓ **Answer: B**

84. Viruses are not included in the five-kingdom system mainly because they:

- A. Are always multicellular
- B. Lack cellular organisation
- C. Have chlorophyll
- D. Are flowering organisms

✓ **Answer: B**

The chapter specifically discusses the difficulty of placing viruses because they possess genetic material but lack cellular organisation.

85. Which pair is correctly matched?

- A. Monera — eukaryotic organisms
- B. Protista — mostly unicellular eukaryotes
- C. Fungi — autotrophic organisms
- D. Plantae — prokaryotes

 **Answer: B**

86. Which pair is correctly matched?

- A. Bryophyta — vascular plants
- B. Pteridophyta — ferns
- C. Gymnosperms — seeds enclosed in fruits
- D. Angiosperms — non-flowering plants

 **Answer: B**

87. Which sequence correctly represents plant groups from simpler to more advanced seed-producing groups?

- A. Thallophyta → Bryophyta → Pteridophyta → Gymnosperms → Angiosperms
- B. Angiosperms → Gymnosperms → Pteridophyta → Bryophyta
- C. Fungi → Monera → Plantae → Animalia
- D. Bryophyta → Thallophyta → Angiosperms → Pteridophyta

 **Answer: A**

88. Which characteristic is more fundamental for broad biological classification?

- A. Habitat alone
- B. Cellular organisation
- C. Colour
- D. Body size

 **Answer: B. Cellular organisation**

The textbook explicitly asks why **cellular organisation** is a more fundamental basis than a feature such as xylem and phloem.

89. Classification systems change because:

- A. Scientists change organisms
- B. New evidence and technologies improve our understanding
- C. Organisms change every day
- D. Scientific names are random

✓ **Answer: B**

90. Which statement best describes biological classification?

- A. It is permanently fixed.
- B. It is based only on appearance.
- C. It is an ongoing scientific process that changes with new evidence.
- D. It is useful only for naming animals.

✓ **Answer: C**



QUICK ANSWER KEY

Q	Ans.	Q	Ans.	Q	Ans.	Q	Ans.
1	B	24	A	47	A	70	B
2	B	25	B	48	A	71	B
3	B	26	B	49	D	72	B
4	A	27	B	50	A	73	A
5	B	28	B	51	A	74	A
6	A	29	B	52	B	75	B
7	B	30	A	53	B	76	D

8	B	31	A	54	A	77	A
9	D	32	A	55	A	78	B
10	C	33	B	56	A	79	A
11	B	34	A	57	B	80	C
12	A	35	B	58	B	81	B
13	B	36	B	59	D	82	A
14	A	37	A	60	B	83	B
15	B	38	A	61	B	84	B
16	B	39	B	62	A	85	B
17	B	40	A	63	B	86	B
18	C	41	B	64	B	87	A
19	D	42	B	65	B	88	B
20	A	43	B	66	A	89	B
21	B	44	B	67	B	90	C
22	C	45	B	68	B		
23	B	46	A	69	C		

MUST-REMEMBER FOR EXAMS

Biodiversity

Biodiversity = Variety of living organisms

Classification

Classification = Systematic grouping of organisms based on similarities, differences and relationships

Five Kingdoms

Monera → Protista → Fungi → Plantae → Animalia

Monera

Unicellular + Prokaryotic

Protista

Mostly unicellular + Eukaryotic

Fungi

Heterotrophic + Chitin cell wall

Plantae

Multicellular + Autotrophic

Animalia

Multicellular + Heterotrophic

Major Plant Groups

Thallophyta → Bryophyta → Pteridophyta → Gymnosperms → Angiosperms

Major Vertebrate Groups

Fishes → Amphibians → Reptiles → Birds → Mammals

Classification Hierarchy

Kingdom → Phylum/Division → Class → Order → Family → Genus → Species

Binomial Nomenclature

Genus + Species

Example:

Homo sapiens

Homo → Genus

sapiens → Species name

Three Domains

Bacteria → Archaea → Eukarya

Fossils

Preserved remains/traces of ancient organisms → evidence of history of life

Major Threats

Deforestation • Pollution • Overuse of resources • Climate change

TOP EXAM TOPICS

-  **Biodiversity and biodiversity hotspots**
-  **Need for classification**
-  **Five-kingdom classification**
-  **Monera, Protista and Fungi**
-  **Plant groups**
-  **Animal groups and vertebrates**
-  **Taxonomic hierarchy**
-  **Binomial nomenclature**
-  **Three-domain system**
-  **Fossils and evolution**
-  **Threats to biodiversity and conservation**

These are the core areas identified in the supplied Chapter 12 material.