Class XI Biology Unit Test : The Living world

Time: 1 Hour 30 Minutes Maximum Marks: 40

SECTION A – Multiple Choice Questions (1 × 8 = 8 Marks)

1. The number of species that have been identified and described so far is approximately:
   (a) 0.5–0.6 million (b) 1.7–1.8 million (c) 5–6 million (d) 10–12 million
2. The process of assigning a scientific name to an organism is called:
   (a) Identification (b) Classification (c) Nomenclature (d) Characterisation
3. Who introduced the system of binomial nomenclature?
   (a) Charles Darwin (b) Carolus Linnaeus (c) Ernst Mayr (d) Aristotle
4. Which of the following represents the correct scientific name of mango?
   (a) Mangifera Indica (b) mangifera indica (c) Mangifera indica (d) MANGIFERA INDICA
5. Which is the lowest category in the taxonomic hierarchy?
   (a) Genus (b) Family (c) Species (d) Order
6. The genus Panthera includes:
   (a) Lion, tiger and leopard (b) Cat and dog (c) Dog and wolf (d) Horse and zebra
7. The branch of biology that considers evolutionary relationships among organisms is:
   (a) Ecology (b) Systematics (c) Anatomy (d) Physiology
8. Which taxonomic category includes related families?
   (a) Genus (b) Species (c) Order (d) Class

SECTION B – Very Short Answer Questions (2 × 5 = 10 Marks)

9. Define biodiversity. Mention the approximate number of species described so far.
10. Differentiate between identification and nomenclature.
11. What is binomial nomenclature? Write one suitable example.
12. Define taxon. Give two examples of taxa belonging to different taxonomic levels.
13. Why is classification necessary for studying living organisms?

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SECTION C – Short Answer Questions (3 × 4 = 12 Marks)

14. Explain any three important rules followed while writing scientific names of organisms.
15. Differentiate between taxonomy and systematics.
16. Explain the taxonomic categories of species, genus and family with suitable examples.
17. Why do organisms belonging to higher taxonomic categories share fewer common characteristics than organisms belonging to lower categories?

SECTION D – Long Answer Questions (5 × 1 = 5 Marks)

18. Explain the taxonomic hierarchy in ascending order, starting from species and ending with kingdom. Give suitable examples to illustrate the hierarchy.

SECTION E – Case-Based Question (1 × 5 = 5 Marks)

19. A student collected information about four organisms and their scientific names:

- Mango – Mangifera indica
- Potato – Solanum tuberosum
- Lion – Panthera leo
- Tiger – Panthera tigris

Answer the following questions:

(a) Identify the genus of mango. (1)

(b) What is the specific epithet of potato? (1)

(c) Which two organisms belong to the same genus? (1)

(d) Define genus. (1)

(e) Why are scientific names preferred over local names? (1)