

**GRADE: XI WORKSHEET – I DATE: 25/9/22**

**BIOLOGY – THE LIVING WORLD**

Multiple Choice Questions

1. As we go from species to kingdom in a taxonomic hierarchy, the number of common characteristics
   * a. Will decrease
   * b. Will increase
   * c. Remain same
   * d. May increase or decrease
2. Which of the following ‘suffixes’ used for units of classification in plants indicates a taxonomic category of ‘family’.
   * a. – Ales
   * b. – Onae
   * c. – Aceae
   * d. – Ae
3. The term ‘systematics’ refers to:
   * a. Identification and classification of plants and animals
   * b. Nomenclature and identification of plants and animals
   * c. Diversity of kinds of organisms and their relationship
   * d. Different kinds of organisms and their classification
4. Genus represents
   * a. An individual plant or animal
   * b. A collection of plants or animals
   * c. Group of closely related species of plants or animals
   * d. None of these
5. The taxonomic unit ‘Phylum’ in the classification of animals is equivalent to which hierarchial level in classfication of plants
   * a. Class
   * b. Order
   * c. Division
   * d. Family
6. Botanical gardens and zoological parks have
   * a. Collection of endemic living species only
   * b. Collection of exotic living species only
   * c. Collection of endemic and exotic living species
   * d. Collection of only local plants and animals
7. Taxonomic key is one of the taxonomic tools in the identification and classification of plants and animals. It is used in the preparation of
   * a. Monographs
   * b. Flora
   * c. Both a & b
   * d. None of these
8. All living organisms are linked to one another because
   * a. They have common genetic material of the same type
   * b. They share common genetic material but to varying degrees
   * c. All have common cellular organization
   * d. All of above
9. Which of the following is a defining characteristic of living organisms?
   * a. Growth
   * b. Ability to make sound
   * c. Reproduction
   * d. Response to external stimuli
10. Match the following and choose the correct option:

|  |  |
| --- | --- |
| A. Family | i. tuberosum |
| B. Kingdom | ii. Polymoniales |
| C. Order | iii. Solanum |
| D. Species | iv. Plantae |
| E. Genus | v. Solanacea |

1. Options
   * a. i-D, ii-C, iii-E, iv-B, v-A
   * b. i-E, ii-D, iii-B, iv-A, v-C
   * c. i-D, ii-E, iii-B, iv-A, v-C
   * d. i-E, ii-C, iii-B, iv-A, v-D

Very Short Answer Type Questions

1. Linnaeus is considered as Father of Taxonomy. Name two other botanists known for their contribution to the field of plant taxonomy?
2. What does ICZN stand for?
3. Couplet in taxonomic key means \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .
4. What is a Monograph?
5. Amoeba multiplies by mitotic cell division. Is this phenomena growth or reproduction? Explain.
6. Define metabolism.
7. Which is the largest botanical garden in the world? Name a few well known botanical gardens in India.

Short Answer Type Questions

1. A ball of snow when rolled over snow increases in mass, volume and size. Is this comparable to growth as seen in living organisms? Why?
2. In a given habitat we have 20 plant species and 20 animal species. Should we call this as ‘diversity’ or ‘biodiversity’? Justify your answer.
3. International Code of Botanical nomenclature (ICBN) has provided a code for classification of plants. Give hierarchy of units of classification botanists follow while classifying plants and mention different ‘Suffixes’ used for the units.
4. A plant species shows several morphological variations in response to altitudinal gradient. When grown under similar conditions of growth, the morphological variations disappear and all the variants have common morphology. What are these variants called?
5. How do you prepare your own herbarium sheets? What are the different tools you carry with you while collecting plants for the preparation of a herbarium? What information should a preserved plant material on the herbarium sheet provide for taxonomical studies?
6. What is the difference between flora, fauna and vegetation? Eichornia crassipes is called as an exotic species while Rauvolfia serpentina is an endemic species in India. What do these terms exotic and endemic refer to?
7. A plant may have different names in different regions of the country or world. How do botanists solve this problem?
8. Brinjal and potato belong to the same genus Solanum, but to two different species. What defines them as seperate species?
9. Properties of cell organelles are not always found in the molecular constituents of cell organelles. Justify.
10. The number and kinds of organism is not constant. How do you explain this statement?

Long Answer Type Questions

1. What is meant by living? Give any four defining features of life forms.

A scientist has come across a plant which he feels is a new species. How will he go about its identification, classification and nomenclature.