QB365 Question Bank Software

11th Biology CBSE case study questions for The Living World - 2024

11th Standard

Biology

SECTION-A

4 x 4 = 16

1) All living phenomena are due to the underlying interactions, which result in emergent properties at higher levels of organisation. It is true in the hierarchy of organisational complexity at all levels.
(a) Give two examples to substantiate the above statement.
(b) Define living organisms based on this property

Answer : (a) (i) Properties of tissues are not present in the constituent cells.
(ii) Properties of cellular organelles are not present in their molecular constituents.
(b) Living organisms can be defined as the selfreplicating, evolving and self-regulating interactive systems capable of responding to external stimuli.

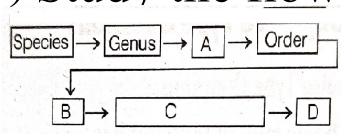
2) There are millions of plants and animals in the world and they are known by their local names in their area. The local names do vary from place to place, even within a country. Hence, scientists have established procedures to assign a scientific name to each organism, which is acceptable to biologists all over the world.
(a) Name the system of naming organisms given by Linnaeus.
(b) Mention the two components in each scientific name.
(c) Give the scientific name of:
(i) human beings
(ii) wheat.

Answer : (a) Binomial nomenclature
(b) Generic name and specific name.
(c) (i) Homo sapiens
(ii) Triticum aestivum

3) Taxonomists refrain from using vernacular names of living organisms. They widely use binomial nomenclature as it has universal acceptance and explicitness. The scientific name of each organism is assigned by esteemed organisations, viz, ICBN and ICZN.
Consider the above given information and answer the following questions.
(i) What do the two components of binomial nomenclature represent?
(ii) (a) Who proposed binomial nomenclature and what is the origin of biological names? (or)
(b) There are universal rules for naming an organism.Comment.
(iii) How is the author's name mentioned in binomial nomenclature?

Answer : (i) The two components of binomial nomenclature : generic name and specific epithet.
(ii) (a) Carl Linnaeus proposed binomial nomenclature.
Scientific names are based in Latin or Greek.
(or)
(b) **The rules framed by Linnaeus and by these codes are as follows :**
(a) The names are generally in Latin and written in Italics. They are Latinised or derived from Latin irrespective of their origin.
(b) The first word in a biological name represents the genus while, the second word denotes the specific epithet.
(c) Both the words in a biological name, when handwritten, are separately underlined or printed in Italics to indicate their Latin origin.
(d) The first word denoting the genus starts with a capital letter while, the specific epithet starts with a small letter, e.g. Mangifera indica.
(e) Name of the author appears after the specific epithet, i.e. at the end of the biological name and is written in an abbreviated form, e.g. Mangifera indica Linn, Linn is for Linnacus.
(f) Generic and common names may be same, e.g. Gorilla gorilla.
(iii) Name of the author appears after the specific epithet, i.e. at the end of the biological name. It is generally written in abbreviated form, eg. Mangifera indica Linn. It indicates that this species was first described by Linnaeus.

4) Study the flowchart given below and answer a questions that follows



(i) Choose the incorrect match.
(a) A-Family **(b) B-Class**
(c) C-Kingdom **(d) D-Kingdom**
(ii) The taxonomic category 'D' includes
(a) Fungi **(b) Monera**
(c) Protista **(d) All of these**
(iii) Which of the following is not a taxon, but category?
(a) Division **(b) Dicotyledons**
(c) AngiospermsPolypetalae **(d)**
(iv) Which one of the following has a real existence?
(a) Genus **(b) Species**
(c) **(d)**