

CLASS-11
Subject-BIOLOGY
Chapter-THE LIVING WORLD
SYNOPSIS

Characteristics of living being: the most important aspect is that all living beings have the same structural and functional unit- CELL.

They can perform metabolic functions like respiration, excretion, reproduction etc.

Need for Classification-

- To organise vast groups of living beings into categories and groups to study them.
- It helps in understanding evolutionary trends.
- Facilitate identification and interpretation.

Taxonomy means lawful arrangement.

It includes Identification, Nomenclature and Classification.

Types of Taxonomy-

1. Numerical taxonomy-
2. Cytotaxonomy-
3. Chemotaxonomy-

Systematics –Discipline dealing with diversity of organisms & their comparative & evolutionary relationship.

- Species- A group of organisms which can interbreed among themselves. It is the basic unit of classification
- Major Taxonomical Hierarchies-The arrangement of taxonomic group in a definite order from higher to lower categories.
- Rules Of Binomial Nomenclature-
 1. Botanical nomenclature is independent of zoological nomenclature
 2. Priority of publication forms the basics of nomenclature of a taxonomic rank.
 3. Each taxonomic group can bear only one correct name which is in two parts-genus and species name.
 4. Scientific names are always in LATIN.
 5. The rules of nomenclature are RETROACTIVE.
- Advantages of using Scientific Names-
 1. Universal acceptance
 2. Avoids confusion
 3. Standardised concept for all
 4. Easier to classify and study.

Aids for study of Taxonomy:

1. Museum-
2. Herbaria
3. Zoological parks
4. Botanical garden

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Taxonomical Keys- simple tool to identify plant or animal species, based on similarities and dissimilarities in characters.

SYSTEMS OF CLASSIFICATION-

1. ARTIFICIAL SYSTEM
2. NATURAL SYSTEM
3. PHYLOGENETIC SYSTEM

Three Domains of Life-Living organisms are classified into 3 domains.

1. DOMAIN EUKARYA
2. DOMAIN BACTERIA
3. DOMAIN ARCHAEA

WORKSHEET

SHORT ANSWER TYPE QUESTIONS-

1. Define – Herbaria, Taxonomical keys, Botanical garden, Systematics.
2. Explain chemotaxonomy with examples.
3. Classify Man according to major taxonomical hierarchies.
4. What is the basic difference between systematic and taxonomy?
5. What is concept of species?

LONG ANSWER TYPE QUESTIONS-

1. Explain the rules of binomial nomenclature.
2. What is the utility of museum? Give any 1 example of Zoological parks.
3. Explain 3 domains of life.
4. What are the characteristics of living things? Why do we need classification?