

## Biology (New Book) - 9th Class Biology Urdu Medium Chapter 2 Preparation

Q1. Difference between Bacteria and Protists

**Ans 1:** Bacteria:

- i. Prokaryotic organisms
  - ii. They are unicellular, filamentous or colonial and are relatively simple in structure
- Example: Bacteria and Cyanobacteria

**Ans 2:** Protists:

- i. Eukaryotic organisms
  - ii. Unicellular or simple multicellular and mostly aquatic
- Example: Amoeba, Euglena, and slime molds.

Q2. What is domain? Name three domains of life.

**Ans 1:** In biology, a domain means the largest of all groups in the classification of life. Domain is a group of kingdoms, or taxonomic category above the kingdoms. The three domains of life are Archaea, Bacteria, and Eukarya.

Q3. Why are the following scientists famous for? Aristotle, Carolus Linnaeus, Carl Woese

**Ans 1:** Aristotle: The Greek philosopher Aristotle was the first person who classified the living organisms.

**Ans 2:** Carolus Linnaeus: He grouped species according to similar physical characteristics. According to earlier classification into two kingdoms, then three kingdoms and then five-kingdom system. He also introduced binomial nomenclature.

**Ans 3:** Carl Woese: In 1990 Carl Woese introduced a three-domain system of classification. The three domains of life are: i. Archaea, ii. Bacteria, iii. Eukarya.

Q4. What are the seven taxonomic ranks used in the Linnaean system.

**Ans 1:** Linnaeus developed a system that went from broadest to most specific. The levels of classification he used are:

**Ans 2:** Kingdom, phylum, class, Order, Family, Genus, and species.

Q5. Compare two-kingdom, Kingdom, and five-kingdom classification systems.

**Ans 1:** Two Kingdom:

- i. It includes two kingdoms: Plantae and Animalia.
- ii. Bacteria and cyanobacteria were placed in the plant kingdom.
- iii. Unicellular or simple multicellular eukaryotes were wrongly placed in the kingdoms Plantae and Animalia.
- iv. Fungi are wrongly placed in the kingdom Plantae.

**Ans 2:** Three Kingdom:

- i. It includes three kingdoms plantae, Animalia, Protista
- ii. Euglena was placed in kingdom protista.
- iii. Multicellular microscopic organisms were separated from unicellular microscopic organisms.
- iv. Fungi were placed in kingdom plantae

**Ans 3:** Five Kingdom:

- i. It includes five kingdoms Monera, protista, Fungi, plantae and Animals
- ii. Bacteria and cyanobacteria are placed in kingdom Monera
- iii. Unicellular or simple multicellular eukaryotes placed in kingdom Protista
- vi. Fungi are placed in kingdom Fungi

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Q6. Define Binomial nomenclature.

**Ans 1:** Binomial nomenclature is the method of giving scientific names to living organisms. Since each name has two parts so it is called binomial nomenclature eg.g. biological name of human being is Homo sapiens. Our genus name is homo and species name is sapiens.

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Q7. What are basis of classification of life into domains?

**Ans 1:** Classification into three domains is based on difference in the sequence of nucleotides in the rRNA of the cell. the cell membrane lipid structure and its sensitivity to antibiotics

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Q8. How does binomial nomenclature facilitate clear communication about organisms across different languages.

**Ans 1:** It facilitates by providing a universal naming system for species.

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Q9. What were the shortcomings of three kingdom classification system.

- Ans 1:**
- i. Some taxonomists disagreed about the position of fungi in kingdom plantae
  - ii. Fungi resemble plants in many ways but are heterotrophs which get their food by absorption
  - iii. They do not have cellulose in their cell wall but possess chitin

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Q10. Describe aims of classification

**Ans 1:** The main aims and objectives of classification are:

1. To determine similarities and differences between organisms.
  2. To arrange organisms on the basis of similarities and differences
  3. Identify the organisms to study them systematically
  4. To find out evolutionary relationship among organisms.
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