

1. What is biology?

Biology is the study of living organisms and life processes.

2. Name any two inanimate matter.

Stone and water.

3. What do you mean by anthropocentric?

Anthropocentric means believing that human beings are the most important entity in the universe.

4. Who was called the Darwin of 20th century?

Ernst Mayr was called the Darwin of the 20th century.

5. Name the fields in which the research of Ernst Mayr spanned.

Evolution, taxonomy, ornithology, genetics, and history of science.

6. Who gave the present definition of biological species?

Ernst Mayr gave the present definition of biological species.

7. Which prizes in Biology comprise triple crown?

Nobel Prize, Crafoord Prize, and Kyoto Prize.

8. When did Mayr join Harvard's Faculty of Arts and Sciences?

In 1953.

9. What indeed is life? Explain two implicit questions in it.

It includes two questions:

- What are living organisms made of?
- What distinguishes living organisms from non-living things?

10. Give any two characteristics of living organisms.

Growth and reproduction.

11. Which are two characteristics of growth?

- Increase in mass
- Increase in number of cells/individuals

12.What do you call the increase of body mass?
Growth.

13.How can non-living objects grow in size? Can we call it growth in biological terms?
They grow by accumulation of material on the surface. No, it is not biological growth.

14.What is reproduction?
Reproduction is the process by which organisms produce new individuals of their own kind.

15.Name two organisms in which budding is observed.
Hydra and yeast.

16.What is true regeneration? Name the organism in which it takes place.
True regeneration is the formation of a complete organism from body fragments. It occurs in Planaria.

17.Name three organisms in which fermentation takes place.
Yeast, bacteria, and fungi.

18.In which organisms is reproduction synonymous with growth?
Unicellular organisms.

19.Draw a well-labeled diagram of Hydra.
Refer to NCERT

20.Draw a well-labeled diagram of Planaria.
Refer to NCERT

21.Name three organisms/types which do not reproduce.
Mule, worker bee, and infertile human couples.

22.What is metabolism?
Metabolism is the sum total of all chemical reactions occurring in the body.

23. What do you mean by in vitro?

In vitro means outside the living body under laboratory conditions.

24. Name any three external factors to which plants respond.

Light, temperature, and water.

25. What do you understand by the term prokaryote?

Prokaryotes are organisms without a true nucleus and membrane-bound organelles.

26. What do you mean by eukaryotes?

Eukaryotes are organisms having a true nucleus and membrane-bound organelles.

27. What is photoperiodism?

Photoperiodism is the response of plants to the duration of light and darkness.

28. Which is the only organism aware of himself?

Human beings.

29. What type of story is Biology?

Biology is the story of life on Earth.

30. What is the range of known species in the world?

About 1.7–1.8 million species.

31. Can we use local names of plants and animals for study? If not, why?

No, because local names vary from place to place and create confusion.

32. What is nomenclature?

Nomenclature is the system of scientific naming of organisms.

33. What do you mean by identification?

Identification is recognizing and assigning an organism to its correct group.

34. What is the full form of ICBN?

International Code of Botanical Nomenclature.

35.What is the full form of ICZN?

International Code of Zoological Nomenclature.

36.What do we ensure by using a scientific name?

Universal identification of organisms.

37How is description useful?

It helps in identification and classification of organisms.

38.Which are the two components of a scientific name?

Genus and species.

39.What do you call the system in which two words are used for naming?

Binomial nomenclature.

40.Who gave the present system of naming organisms?

Carl Linnaeus.

41.What is the scientific name of mango?

Mangifera indica.

42.To which genus does mango belong?

Mangifera.

43.In which language are biological names generally written?

Latin.

44.What is represented by the first and second word in a biological name?

The first word represents genus and the second word represents species.

45.What should we do when writing scientific names in handwritten manuscripts?

Underline both words separately.

46.How are scientific names printed?

In italics.

47. Which word starts with a capital letter in a scientific name?

The genus name.

48. Where is the author's name written in a scientific name?

After the scientific name.

49. In which form is the author's name written?

In abbreviated form.

50. What do you mean by classification in biology?

Classification is arranging organisms into groups based on similarities and differences.

51. What is the scientific term for various categories?

Taxa.

52. What forms the basis of modern taxonomic studies?

External and internal structure, cell structure, development process, and ecological information.

53. Which processes are basic to taxonomy?

Identification, nomenclature, and classification.

54. Which were the basic needs in the early years?

Identification and classification of organisms.

55. What is systematics?

Systematics is the study of diversity and relationships among organisms.

56. Who wrote Systema Naturae?

Systema Naturae was written by Carl Linnaeus.