



# BIOLOGY

## BOOKS - JBD PUBLICATION

### THE LIVING WORLD

#### Exercise

1. Binomial nomenclature means:

A. one names given by two scientists.

B. one name comprising a generic and a specific epithet.

C. two names, one Latinised, other of a person.

D. two names, one scientific, other local.

**Answer:**



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2. The zoological name of frog is *Rana tigrina*.

The word 'tigrina' indicates:

A. order

B. species

C. genus

D. class.

**Answer:**



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3. Binomial nomenclature was introduced by:

A. Linnaeus

B. Darwin

C. Lamarck

D. Tijo and Levan

**Answer:**



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4. Artificial system of classification was first used by:

A. 1. De Candolle

B. 2. Linnaeus

C. 3. Theophrastus

D. 4. Bentham and Hooker

**Answer:**



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5. Linnaeus devised a system of nomenclature called:

A. 1. monomial

B. 2. binomial

C. 3. trinomial

D. 4. polynomial

**Answer:**



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6. Basic unit or lowest taxonomic category is:

A. 1. species

B. 2. family

C. 3. variety

D. 4. kingdom.

**Answer:**



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7. Founder of Binomial Nomenclature was:

A. Linnaeus

B. Mendel

C. Darwin

D. Lamarck

**Answer:**



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8. Species is a group of organisms which,

A. interbreed freely

B. do not interested

C. live together

D. none of these.

**Answer:**



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9. Natural system of classification is based on:

A. ontogeny

B. phylogeny

C. morphology

D. phylogeny and morphology

**Answer:**



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**10.** The term 'New Systematics' was introduced by:

A. Linnaeus

B. Bentham and Hooker

C. Julian Huxley

D. De Candolle

**Answer:**



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**11.** Linnaeus is credited with:

- A. theory of biogenesis
- B. binomial nomenclature
- C. discovery of microscope
- D. discovery of blood circulation.

**Answer:**



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**12.** The specimen used for original publication by the author is:

A. 1. Isotype

B. 2. Syntype

C. 3. Holotype

D. 4. Lectotype

**Answer:**



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**13.** Two or more species occupying the same or overlapping areas are called:

- A. sibling
- B. sympatric
- C. allopatric
- D. subspecies.

**Answer:**



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**14.** Floral features are generally used for identification of angiosperms because:

A. 1. reproductive parts are more conservative

B. 2. flowers are nice to work with

C. 3. flowers have various colours and scents

D. 4. flowers can be safely preserved

**Answer: flowers can be safely preserved**



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15. Which of the following is a category?

A. Order

B. Family

C. Genus

D. All of these.

**Answer:**



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16. A person who studies about the origin, evolution and variations in plants and also about the classification of plants is known as:

- A. 1. herbal taxonomist
- B. 2. classical taxonomist
- C. 3.  $\beta$  – taxonomist
- D. 4.  $\alpha$  – taxonomist

**Answer:**



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17. Species Plantarum and Systema Naturae were written by:

- A. 1. Bentham
- B. 2. Theophrastus
- C. 3. Linnaeus
- D. 4. Hutchinson.

**Answer:**



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**18.** Which of the following taxonomic categories contains organisms least similar to one another?

A. 1. species

B. 2. Genus

C. 3. Family

D. 4. Class

**Answer:**



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**19.** The correct sequence of taxonomic categories is:

A. class, phylum, tribe, order, family, genus, species

B. phylum, order, class, tribe, family, genus, species.

C. division, class, family, tribe, order, genus, species.

D. division, class, order, family, tribe, genus, species

**Answer:**



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**20.** First time Binomial Nomenclature was written in

A. Greek

B. English

C. Latin

D. Italian

**Answer:**



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**21. ICBN stands for:**

A. 1. International Classification of  
Biological Nomenclature

B. 2. International code of Botanical  
Nomenclature

C. 3. International classification of  
Biological Naming

D. 4. International Class of Biological  
Nomenclature.

**Answer:**



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**22.** Phenetic classification of organisms is based  
on:

A. 1. sexual characteristics

B. 2. observed characteristics of existing organisms.

C. 3. ancestral lineage of existing organisms

D. 4. dendrogram based on DNA characteristics

**Answer:**



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**23.** Which of the following is not true for species?

A. Members of a species can interbreed

B. Gene flow does not occur between the populations of a species.

C. Each species is reproductively isolated from other species.

D. Variations occur among members of a species.

**Answer:**



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**24. Huxley is father of:**

- A. 1. Classical taxonomy
- B. 2. Artificial taxonomy
- C. 3. Neo-taxonomy
- D. 4. Adansonian taxonomy

**Answer:**



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**25.** Binomial nomenclature was issued in:

- A. 1. Systema Naturae
- B. 2. Genera Plantarum
- C. 3. Genera Animalium
- D. 4. Historia Plantarum

**Answer:**



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**26.** Species can be identified on the basis of:

- A. 1. interbreed
- B. 2. species diversity
- C. 3. reproductive isolation
- D. 4. none of these.

**Answer:**



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27. Choose the correct sequence in the hierarchy of taxonomic categories in descending order:

- A. species-genus-family-order-class-division.
- B. division-order-class-family-genus-species
- C. species-genus-family-class-order-division
- D. division-class-order-family-genus-species.

**Answer:**



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**28.** New Systematics introduced by Sir Julian Huxley is also called:

- A. 1. Phenetics
- B. 2. Cladistics
- C. 3. Biosystematics
- D. 4. Numerical

**Answer: chemotaxonomy**



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29. In which book Bentham and Hooker proposed their classification?

- A. 1. Genera Plantarum
- B. 2. Species Plantarum
- C. 3. Historia Plantarum
- D. 4. Historia Plantarum

**Answer:**



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30. *Oryza sativa* is the binomial name of the rice plant the *sativa* stands for:

- A. specific name
- B. specific epithet
- C. species name
- D. specific nomenclature.

**Answer:**



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31. When organism is in same class but is not in same family, the taxonomic term is called as:

A. order

B. genus

C. species

D. family

**Answer:**



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**32.** Phylogenetic system of classification is based on:

- A. 1. morphological features
- B. 2. chemical constituents
- C. 3. floral characters
- D. 4. evolutionary relationship

**Answer:**



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**33.** The term biosystematics was coined by:

A. 1. Bentham and Hooker

B. 2. Linnaeus

C. 3. Engler and Plant

D. 4. Camp and Grilly

**Answer:**



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**34.** The basic unit of taxonomy is:

A. 1.genus

B. 2. species

C. 3. order

D. 4. class

**Answer:**



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**35.** The word "phylum" in taxonomy was coined

by:

A. 1. John Ray

B. 2. G.L.Cuvier

C. 3. C.Linnaeus

D. 4. Aristotle

**Answer:**



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**36.** Five kingdom classification was given by:

A. Copeland

B. Haeckel

C. Takhtajan

D. Whittaker

**Answer:**



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**37. Binomial nomenclature was given by:**

A. R.H.Whittaker

B. Linnaeus

C. Aristotle

D. Theophrastus

**Answer:**



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**38.** Botanical name of banana is:

A. 1. *Musa paradisiaca*

B. 2. *Musa orientinum*

C. 3. *Mimoxa pudica*

D. 4. *Iberis amara*

**Answer:**



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**39.** Which of the following statements regarding universal rules of nomenclature is wrong?

A. The first word in a biological name represents the genus.



B. The first word denoting the genus starts with a capital letter.

C. Both the words in a biological name, when handwritten, are separately underlined.

D. Biological names are generally in Greek and written in italics.

**Answer: The second component in a biological name denotes the specific epithet.**



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**40.** Systema Naturae was written by:

A. 1. Ernst Mayr

B. 2. Carl Linnaeus

C. 3. R.H.Whittaker

D. 4. W.M.Stanley

**Answer: M.W.Beijernick**



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**41.** 'Taxa' differs from 'taxon' due to:

A. 1. this being a higher taxonomic category than taxon.

B. 2. this being the lower taxonomic category than taxon

C. 3. this being the plural of taxon

D. 4. this being the singular of taxon

**Answer:**



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**42.** The total number of species, that are known and described range between:

A. A. 0.5-1.0 million

B. B. 1.1-1.2 million

C. C. 1.7-1.8 million

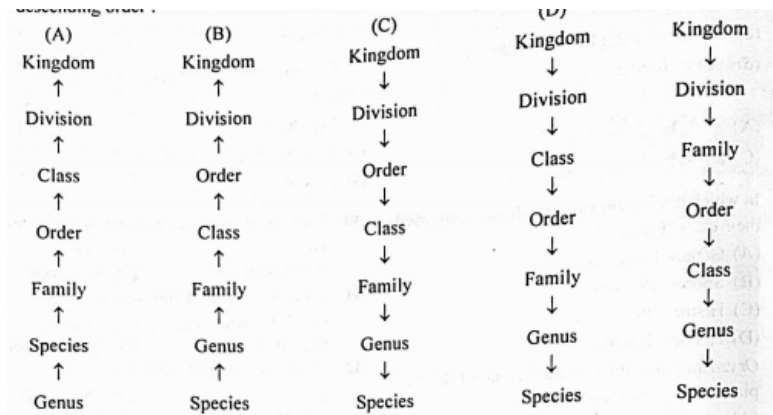
D. D. 2.5-3.0 million

**Answer:**



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43. Which one of the following shows, the hierachial arrangement of taxonomic categories of plants in descending order:



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44. which of the following combinations is correct for wheat?

A. Genus:Triticum, family: anacardiacease,  
order: poales, class:monocotyledonae

B. Genus:Triticum,family:poaceae, order  
poales, class:dicotyledonae

C. Genus:Triticum, family:poaceae, order:  
sapindales, class:monocotyledonae.

D. Genus:Triticum, family:paoceae, order:  
poales, class: monocotyledonae.

**Answer:**



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**45.** A group of individuals which are able to breed among themselves and produce their own kind is known as:

A. genus

B. species

C. family

D. order

**Answer:**



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46. Which one of the following animals is correctly matched with its particular taxonomic category?

- A. Tiger-Tigris, species
- B. Cuttlefish-mollusca, class
- C. Human-primatta, family
- D. Housefly-Musca,order.

**Answer:**





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47. The body of the animal can be divided into identical halves in only one plane is:

- A. 1. asymmetry
- B. 2. bilateral symmetry
- C. 3. radial symmetry
- D. 4. biradial symmetry.

**Answer:**



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48. The space between body wall and alimentary canal lined by mesoderm is called:

- A. acoelom
- B. pseudocoelom
- C. coelom
- D. none of these.

**Answer:**



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**49.** Taxon is the unit of:

A. 1. species

B. 2. order

C. 3. genus

D. 4. taxonomy

**Answer:**



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50. Basic unit or lowest taxonomic category is:

A. species

B. family

C. order

D. kingdom.

**Answer:**



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51. nigrum is one of the species of genus:

A. Mangifera

B. Solanum

C. Triticum

D. Pisum.

**Answer:**



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52. Which taxonomic term may be suggested for any rank in the classification?

A. 1. Class

B. 2. Order

C. 3. Species

D. 4. Taxon.

**Answer:**



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53. The common characteristics between tomato and potato will be maximum at the level of their:

A. 1. family

B. 2. order

C. 3. division

D. 4. genus.

**Answer:**



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54. Class is the category of taxonomy which includes related:

A. families

B. orders

C. genus

D. species

**Answer:**



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**55.** Scientific names of plants are based on principles and criteria agreed by and are given in:

A. 1. IUCN

B. 2. ICZN

C. 3. ICBN

D. 4. ICPN

**Answer:**



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**56.** Which of the following is asexual mode of reproduction:

A. Asexual spore formation

B. Budding

C. Fragmentation

D. All of these.

**Answer:**



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57. Which one is the characteristics of growth in multicellular organism?

- A. 1. Increase in the number of individuals
- B. 2. Increase in the mass
- C. 3. Both (A) and (B)
- D. 4. none of these.

**Answer:**



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**58.** Biodiversity refers to:

A. 1. The number and types of plants and animals present on the earth

B. 2. The number of plants on the earth

C. 3. The number of animals on the earth

D. 4. The number of animals to be discovered.

**Answer:**



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**59.** The process of grouping of organisms into convenient categories on the basis of some easily observable characters is called:

A. Nomenclature

B. Classification

C. Identification

D. Systematics.

**Answer:**



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**60.** Each category referred to as a unit of classification, in fact, represents a rank and is commonly called as:

A. 1. Genus

B. 2. Species

C. 3. Category

D. 4. Taxon.

**Answer:**



**61.** Taxonomic tools that help in identification based on characters are called:

- A. keys
- B. herbarium
- C. taxon
- D. category

**Answer:**



**62.** Which one of the following is a unit of classification?

A. Highest rank in classification

B. Lowest rank in classification

C. Both (A) and (B)

D. Taxon.

**Answer:**



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**63.** Which of the following taxonomic categories contains organisms least similar to one another?

A. Class

B. Genus

C. Order

D. Family

**Answer:**



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**64.** The total number of species, that are known and described range between:

A. 1.1-1.2 millions

B. 3.0-4.5 millions

C. 1.7-1.8 millions

D. 0.5-1.0 millions

**Answer:**



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65. As we go from species to kingdom in a taxonomic hierarchy, the number of common characteristics:

- A. Will increase
- B. Will decrease
- C. May increase or decrease
- D. Remain constant

**Answer:**



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66. Taxonomic unit 'Phylum' in the classification of animals is equivalent to which hierarchical level in the classification of plants:

A. 1. Family

B. 2. Order

C. 3. Class

D. 4. Division

**Answer:**



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67. Taxonomic key is one of the taxonomic tools in the identification and classification of plants and animals. It is used the preparation of

- A. A. monographs
- B. B. flora
- C. C. Both (A) and (B)
- D. D. None of these

**Answer:**



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68. A genus represents

A. 1. An individual animal or plant

B. 2. A collection of animals or plants

C. 3. A group of closely related species of  
plants and animals

D. 4. None of the above

**Answer:**



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69. Monographs contains

- A. Photographs of plants
- B. Photographs of animals
- C. information on any one taxon
- D. Both(A) and (B)

**Answer:**



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## 70. Manuals are useful in

A. providing information for the identification of names of the species found in an area

B. providing information regarding distribution of plants and animals in an area

C. providing information regarding number of animals and plants in that area



D. All of these.

**Answer:**



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## Example

**1. Fill in the blanks**

The name of genus starts with.....letter, and that of species with.....letter.



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## 2. Fill in the blanks

A family is a category higher than .....and lower than..... .



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## 3. Fill in the blanks

A group of related genera are classified as..... .



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#### 4. Fill in the blanks

Rana tigrina is the zoological name of.....

.



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#### 5. Fill in the blanks

Classification based on chromosome number of organisms is known as..... .



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## 6. Fill in the blanks

The highest category in classification of animals is..... .



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## 7. Fill in the blanks

The branch of Biology which is concerned with principles of classifications is called..... .



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## 8. Fill in the blanks

The first natural system of classification was given by..... .



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## 9. Fill in the blanks

The book 'Historia Generalis Plantarum' was published by..... .



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## 10. Fill in the blanks

Scientific name of man is..... .



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## 11. Fill in the blanks

The relationship between comparable structures is called..... .



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## 12. Fill in the blanks

Biology is the science of .....and living processes.



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## 13. Fill in the blanks

.....is the mass and increase in.....of individual are the twin characteristics of growth.



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#### 14. Fill in the blanks

All multicellular organisms grow by..... .



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#### 15. Fill in the blanks

In plants, growth by cell division occurs .....  
throughout their lifespan.



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## 16. Fill in the blanks

Growth is not considered a .....property of living forms.



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## 17. Fill in the blanks

Organisms like Yeast and Hydra reproduce by..... .



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**18. Fill in the blanks**

.....of the body is the defining feature of all life forms.



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**19. Fill in the blanks**

Living organisms are.....and .....interactive systems capable of responding to..... .



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## 20. Fill in the blanks

The total number and types of organisms present on the earth constitute..... .



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## 21. Fill in the blanks

The long and slender stalk of stamen is \_.



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## 22. Fill in the blanks

Each scientific name has two components the .....and..... .



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## 23. Fill in the blanks

Dogs, cats, mammals, wheat, rice, animals, etc. are convenient categories we use to study organisms, the scientific term for these categories is..... .



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## 24. Fill in the blanks

Mangifera indica, Solanum tuberosum and Panthera leo, in all these three names, indica, tuberosum and leo, represent..... .



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## 25. Fill in the blanks

.....is a store house of collected plant specimens that are dried, pressed and preserved.



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## 26. Fill in the blanks

Taxonomic.....are used for identification and classification of organisms.



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## 27. What is a type specimen?



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**28.** Define a taxon.



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**29.** Write three codes of nomenclature.



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**30.** Who coined the term species?



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**31. Species Plantarum and Systema Naturae**  
were written by:



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**32. Define systematics.**



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**33. What are homologous organs? Give examples**







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**34.** What is monotypic genus?



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**35.** How many plant and animal types do exist on earth?



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**36.** What is a Monograph ?



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**37.** ICBN (International Code of Botanical Nomenclature) has given different suffixes for the classification units. What are different suffixes for different units?



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**38.** What is organization?



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**39.** What are interferons? Name one disease controlled by them.



**Watch Video Solution**

**40.** Define metabolism.



**Watch Video Solution**

**41. What is homeostasis?**



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**42. Who said that taxonomy without phylogeny is like bones without flesh?**



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**43.** Write one difference between the growth in non-living and livings?



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**44.** What is reproduction?



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**45.** How fungi reproduce asexually?



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**46.** Give examples of two asexually reproducing organisms.



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**47.** Name the method of asexual reproduction in Planaria.



**Watch Video Solution**

**48.** Define metabolism.



**Watch Video Solution**

**49.** Is Cellular organisation and consciousness are defining features of life forms?



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**50.** Define biodiversity. How is biodiversity important for ecosystem functioning?



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**51.** What is binomial nomenclature ? Illustrate with an example.



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**52.** Who devised binomial nomenclature ?



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**53.** Write the name of phylum, class, order, family of house fly.



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**54.** What you understand by the term 'taxon'?



**Watch Video Solution**

**55.** What is genus?



**Watch Video Solution**

**56.** Define a family?



**Watch Video Solution**

**57.** Write the zoological name of man and mango.



**Watch Video Solution**

**58.** What is herbarium ? How is it used in taxonomy?



**Watch Video Solution**

**59.** Define a zoological park?



**Watch Video Solution**

**60.** What is the function of a key in classification and identification of organisms.



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**61.** Write one function of a monograph.



[Watch Video Solution](#)

**62.** What is taxonomy?



[Watch Video Solution](#)

**63.** List the characteristic of living.



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**64.** With the help of a flow chart show hierarchial arrangement of in ascending order.



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**65.** Why metabolism is considered as the defining feature of life forms?



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**66.** All living forms grow, but growth is not considered a defining property of living forms.



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**67.** A plant may have different names in different regions of the country or world. How do botanists solve this problem?



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**68.** What is living? Describe important characteristics of living forms.



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**69.** Give an account of advantages of scientific names.



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**70.** Describe briefly hierarchy of categories.



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**71.** Write notes on the following:

Herbarium.



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**72.** Write notes on the following:

Botanical gardens.



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**73.** Write notes on the following:

Museum.



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**74.** Write notes on the following:

Zoological parks.



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**75.** Why are living organisms classified?





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76. Why are the classification systems changing every now and then?



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77. What different criteria would you choose to classify people that you meet often?



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78. What do we learn from identification of individuals and populations?



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79. Below is given the scientific name of Mango. Identify the correctly written name.

Mangifera Indica

Mangifera indica

mangifera Indica

mangifera indica

Give reasons in support of your answer.



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**80.** Define a taxon. Give some examples of taxa at different hierarchical levels.



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**81.** Can you identify the correct sequences of taxonomical categories?

*Species* → *Order* → *Phylum* →  $K \in \text{gdom}$

*Geus* → *Speices* → *Order* →  $K \in \text{gdom}$

*Species* → *Geus* → *Order* → *Phylum*



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**82.** Try to collect all the currently accepted meanings for the word 'species'. Discuss with your teacher the meaning of species in case of higher plants and animals on one hand, and bacteria on the other hand.



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**83.** Define and understand the following terms:

Phylum



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**84.** Define and understand the following

terms: Class



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**85.** Define and understand the following terms: Family



**Watch Video Solution**

**86.** Define and understand the following terms: Order



**Watch Video Solution**

**87.** Define and understand the following terms:

Genus



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**88.** How is a key helpful in the identification and classification of an organism?



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**89.** Illustrate the taxonomical hierarchy with suitable examples of a plant and a animal.



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