



# BIOLOGY

## BOOKS - MBD

### The Living World

#### Example

1. Define a life.



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2. Define growth and development.



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3. What is reproduction?



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4. What is metabolism?



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5. What is organisation?



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6. Name two ecothermic animals.



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7. How do living things grow?



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**8.** What is the advantage of consciousness in living organisms?



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**9.** Is reproduction a defining characteristic of living organisms?



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**10.** Define systematics.



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**11.** Name the 3 main system of classification.



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**12.** Who devised binomial nomenclature ?



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**13.** What is a type specimen?



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**14.** Give the number and names of obligatory taxonomic categories.



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**15.** Define a taxon.



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**16.** What does the abbreviation ICZN stand for?



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**17.** Why the scientific names are derived from latin or are latinized?



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**18.** Write the full form of ICBN.



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**19.** Write three codes of nomenclature.



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**20.** Why new names are derived from latin or are latinized?



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



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**22.** Where is the largest Herbarium of the World?



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**23.** Where is the largest Herbarium of India?



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**24.** Where is National Botanical Research Institute?



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**25.** Expand : BSI and ZSI.



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**26.** Write short note on : Red data book



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**27.** Where was the first zoological museum started?



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**28.** How do old and modern zoos differ?



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**29.** Mention three aims of a zoological park.



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**30.** Name the two types of keys commonly used for identification.



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**31.** Why people give common vernacular names to organisms?



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



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### 33. Fill in the blanks

A virus differs from bacterium as it contains DNA or RNA as genetic material with no .....organisation.



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### 34. Fill in the blanks

.....organisation is the defining property of life form.



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**35. Fill in the blanks**

The scientific name of mango is written as

.....



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**36. Fill in the blanks**

.....comprises a group of related species which has more characteristics in common.



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### 37. Fill in the blanks

.....is a store house of collected plants that are dried, pressed and preserved on sheets.



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### 38. Fill in the blanks

Amoeba multiplies by .....cell division.



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**39. True or False :**

Classification or systematics is as old as power of speech.



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**40. True or False :**

The method of rearranging and regrouping organisms into various divisions is called identification.



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**41. True or False :**

Basic unit of classification is genus.



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**42. True or False :**

In *Magnifera indica*, *Mangifera* is genus and *Indica* is species.



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**43.** True or False :

Man belongs to phylum chordata.



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**44.** True or False :

Botanical gardens have collection of living plants for reference.



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**45.** True or False :

Linnaeus is considered 'Father of taxonomy'.



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**46.** Give the technical terms used for the following:

Pigment present in beet root.



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**47.** Give the technical terms used for the following:

To determine the exact place or position.



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**48.** Give the technical terms used for the following:

Process of giving scientific names to plants and animals.



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**49.** Give the technical terms used for the following:

Organisms without well developed nucleus.



**Watch Video Solution**

**50.** Give the technical terms used for the following:

Pigment present in beet root.



**Watch Video Solution**

**51.** Give the technical terms used for the following:

Group of common characters in species of a genus.



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**52.** Give the technical terms used for the following:

Book or an essay which gives comprehensive

account of all available information about genus.



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



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



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



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



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



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**59.** Can you identify the correct sequence of taxonomical categories?

Species, order, phylum, family

Genus, species, order, kingdom

Species, genus, family, order



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**60.** 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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**61.** Define and understand the following terms:  
Kingdom



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**62.** Define and understand the following terms: Phylum



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**63.** Define and understand the following terms: Class



**Watch Video Solution**

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



**Watch Video Solution**

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



**Watch Video Solution**

**66.** Define and understand the following terms: Genus



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



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



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**69.** Linnaeus is considered as father of Taxonomy. Name two other botanists known for their contribution to the field of plant taxonomy.



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70. What does ICZN stand for?



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71. Couplet in Taxonomic key means..... .



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72. What is a Monograph ?



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**73.** Amoeba multiplies by mitotic cell division.

Is this phenomena growth or reproduction?

Explain.



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**74.** Define metabolism.



**Watch Video Solution**

**75.** Which is the largest botanical garden in the world? Name a few well known botanical gardens in India.



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**76.** A ball of snow when rolled over snow increases in mass, volume and size. Is this comparable to growth as seen in living organisms ? Why?



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**77.** In a given habitat we have 20 plant species and 20 animal species. Should we call this as 'diversity' or biodiversity'? Justify your answer.



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**78.** International (ICBN) has provided a code for classification of plants. Give hierarchy of units of classification botanists follow while classifying plants and mention different 'Suffixes' used for the units.



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79. A plant species shows several morphological variations in response to altitudinal gradient. When grown under similar conditions of growth, the morphological variations disappear and all the variants have common morphology. What are these variants called?



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**80.** How do you prepare your own herbarium sheets? What are the different tools you carry with you while collecting plants for the preparation of a herbarium? What information should a preserved plant material on the herbarium sheet provide for taxonomical studies?



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**81.** What is the difference between flora, fauna and vegetation? *Eichhornia crassipes* is called

as an exotic species while *Rauwolfia serpentina* is an endemic species in India. What do these terms exotic and endemic refers?



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



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**83.** Brinjal and Potato belong to the same genus *Solanum* but to two different species.

What defines them as separate species?



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**84.** Properties of cell organelles are not always found in the molecular constituents of cell organelles. Justify.



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**85.** The number and kinds of organisms is not constant. How do you explain this statement?



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**86.** What is meant by living ? Give any four defining features of life forms.



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**87.** A scientist has come across a plant which he feels is a new species. How will he go about

its identification, classification and nomenclature.



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**88.** *Brassica campestris* linn

Give the common name of the plant.



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**89.** *Brassica campestris* linn

What do the first two first two parts of the

name denote?



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**90.** *Brassica campestris* linn

Why are they written in italics?



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**91.** *Brassica campestris* linn

What is the meaning of linn written at the end of the name?



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**92.** What are taxonomical aids? Give the importance of herbaria and museums. How are Botanical gardens and zoological parks useful in conserving biodiversity?



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**93.** Define a taxon. What is meant by taxonomic hierarchy. Give a flow diagram from

the lowest to highest category for a plant and an animal. What happens to the number of individuals and number of shared characters as we go up the taxonomical hierarchy?



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**94.** A student of taxonomy was puzzled when told by his professor to look for a key to identify a plant. He went to his friend to clarify what 'Key' the professor was referring to ? What would the friend explain to him?



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**95.** Metabolism is a defining features of all living organisms without exception. Isolated metabolic reactions in vitro are not living things but surely living reactions. Comment.



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**96.** Do you consider a person in comma living on dead?



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**97.** Of what importance is reproduction in the life of an individual ?



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**98.** Define death.



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**99.** What are the two functions performed by biological classification?



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**100.** Name the highest category of classification?



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**101.** What is basic unit of classification?





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**102.** Who is the father of taxonomy ?



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**103.** Are the offspring of inter-specific mating sterile or fertile?



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**104.** Write examples of two species, each belonging to the same genus.



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**105.** How many 'project tiger' are there in our country?



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**106.** Give the full form of BNHS and WPSI.



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**107.** What is museum?



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**108.** What is taxonomic key?



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**109.** What are the role of taxonomic keys?



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**110.** What are the two main objects of biological classification?



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**111.** What are advantages of biological classification?



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**112.** Differentiate taxonomy and systematics.



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**113.** Differentiate classical taxonomy and modern taxonomy.



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**114.** What do you understand by the term identify? Define species.





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**115.** Differentiate Species and Taxon.



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**116.** Name the scholar who classified plants on the basis of form and texture. Mention the name of his book.



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**117.** Explain Binomial nomenclature.



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**118.** Write short note

Linnaeus



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**119.** What is botanical garden?



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**120.** List the functions of botanical gardens.



**Watch Video Solution**

**121.** What kind of plants are grown in botanical gardens?



**Watch Video Solution**

**122.** List five famous botanical gardens of world.





**Watch Video Solution**

**123.** List five main botanical gardens of India.



**Watch Video Solution**

**124.** Write importance of botanical gardens :



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



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**126.** Where was first herbarium set up?



**Watch Video Solution**

**127.** What is the purpose of Herbarium?



**Watch Video Solution**

**128.** List the Major Herbaria of india.



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**129.** Mention three aims of a zoological park.



**Watch Video Solution**

**130.** What is museum?



**Watch Video Solution**

**131.** Differentiate Zoological Parks and Zoological Museums.



**Watch Video Solution**

**132.** What are differences between Botanical gardens and herbarium ?



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**133.** What are taxonomical aids? Name a few such aids.



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**134.** Differentiate Monographs and flora.



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**135.** What is indented key?



**Watch Video Solution**

**136.** What is bracketed key?



**Watch Video Solution**

**137.** Illustrate the use of key in indentification of animals.



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**138.** List the drawbacks of common name.



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**139.** What criteria were used for classification of organisms before Linnaeus? Give examples.



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**140.** Name the criteria used in modern taxonomical studies.



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**141.** Why the binomial system of nomenclature is acceptable to biologists all over the world?



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**142.** Discuss functions of museum.



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**143.** How to prepare herbarium?



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**144.** Write uses of herbarium.



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**145.** Describe the hierarchial system of classification currently followed.



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**146.** Vernacular names given to the organisms in a particular language and region of the world. There are several types of names like English, Hindi, Gujrati, Marathi, Bengali, Tamil, etc. The names have been in use since times immemorial. New names are added whenever outside organisms are introduced into the area.

List any one criteria on which vernacular names are based



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**147.** Vernacular names given to the organisms in a particular language and region of the world.

There are several types of names like English, Hindi, Gujarati, Marathi, Bengali, Tamil, etc. The names have been in use since times immemorial. New names are added whenever outside organisms are introduced into the area.

Write two uses of vernacular names.



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**148.** Veracular names given to the organisms in a particular language and region of the world. There are several types of names like English, Hindi, Gujrati, Marathi, Bengali, Tamil, etc. The names have been in use since times immemorial. New names are added whenever outside organisms are introduced into the area.

Why veracular names can not be used by biologists? Give two reasons.



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## Exercise

1. What is life?



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2. Who is the father of taxonomy ?



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3. Define growth and reproduction.





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4. Name the genus that comprises lion, tiger and leopard.



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5. What does ICZN stand for?



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6. Which is the largest botanical garden in the world? Name a few well known botanical gardens in world.



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7. Differentiate Species and Taxon.



[Watch Video Solution](#)

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



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9. Brinjal and Potato belong to the same genus *Solanum* but to two different species. What defines them as separate species?



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**10.** Write a note on growth.



**Watch Video Solution**

**11.** List the drawbacks of common name.



**Watch Video Solution**

**12.** Describe binomial nomenclature.



**Watch Video Solution**

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



**Watch Video Solution**

**14.** How to prepare herbarium?



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