



BIOLOGY

BOOKS - SANTRA BIOLOGY (BENGALI ENGLISH)

TAXONOMY AND SYSTEMATICS

**Exercise Objective Type Questions A Multiple
Choice Questions Mcq**

1. Systematics is

A. Nomenclature

B. Relationships and classification

C. Identification

D. all of them

Answer: D



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2. The term taxonomy was coined by

A. Therophrstus

B. Pliny

C. Linnaeus

D. De Candolle

Answer: D



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3. The book which has left the maximum influence on the thinking of taxonomist is

A. Origin of species

B. Systema Nature

C. Species Plantarum

D. Historia Plantarum

Answer: A



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4. New Systematics differs from Classical Systematics in employing

A. Biochemical and Cytotaxonomy

B. All biological Parameters

C. Numerical taxonomy

D. Experimental taxonomy

Answer: B



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5. Karyotaxonomy is a component of

A. Numerical taxonomy

B. Biochemical taxonomy

C. Experimental taxonomy

D. Cytotaxonomy

Answer: D



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6. The term taxon was given by

A. Linnaeus

B. Mayer

C. Candolle

D. Lamarck

Answer: D



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7. Father of Botany is

A. Aristotle

B. Plato

C. Theophrastus

D. Hippocrates

Answer: C



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8. A genus with a single species is

A. Typical

B. Atypical

C. Polytypic

D. Monotypic

Answer: D



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9. Which is not a category?

A. Order

B. Genus

C. Species

D. Ecotype

Answer: D



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10. ICZN was adopted in

A. 1970

B. 1964

C. 1974

D. 1960

Answer: B



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11. Several genera resembling one another in their major anatomical and reproductive characters are placed together in

- A. Family
- B. Species
- C. Order
- D. Genus

Answer: A



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12. Who is father of taxonomy?

A. Lamarck

B. Parasara

C. Darwin

D. Linnaeus

Answer: D



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13. Common names are

A. Scientific

B. Morphological

C. Universal

D. Non scientific

Answer: D



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14. The category of family is between

- A. Order and genus
- B. Genus and species
- C. Kingdom and class
- D. Phylum and genus

Answer: A



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15. The lowest category in taxonomic hierarchy is

A. class

B. kingdom

C. species

D. phylum

Answer: C



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16. Species belonging to different time periods are

A. Synchronic species

B. Allopatric species

C. Parapatric species

D. Allochronic species

Answer: D



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17. Neosystematics is based on

A. Cytology and biochemistry

B. Genetics

C. Morphology and anatomy

D. all fo them

Answer: D



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18. Chemotaxonomy is connected with the study of

A. Serum tests

B. Metabolic pathways

C. Secondary metabolites

D. Biochemicals

Answer: C



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19. Taxon is

- A. Unit of classification
- B. Highest rank of classification
- C. Group of closely related organisms
- D. Species

Answer: C



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20. Which of the following is less general in characters as compared to genus?

A. Family

B. Class

C. Division

D. Species

Answer: D



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21. Descending arrangement of categories is called

A. Key

B. Hierarchy

C. Taxonomy

D. Classification

Answer: B



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22. The term new systematics was given by Julian Huxley in

A. 1940

B. 1840

C. 1901

D. 1809

Answer: A



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23. Place of keeping and studying dry plants is

A. Museum

B. Vasculum

C. Herbarium

D. Arboretum

Answer: C



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24. Who wrote 'Species Plantarum' and provided a basis for classification of plants?

A. Robert Hooks

B. Leeuwenhoek

C. Linnaeus

D. Darwin

Answer: C



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25. BNHS is abbreviation of

A. Bombay Natural History Society

B. Banaras Natural History Society

C. Biological Natural History Society

D. Botanical North Himalayan Survey

Answer: A



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26. Identify from the following the only category that has a real existence

A. Genus

B. Species

C. Phylum

D. Kingdom

Answer: D



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27. Which is different in different groups?

A. Family

B. Plankton

C. Species

D. Taxon

Answer: D



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28. Scala Naturae was written by

A. Aristotle

B. Linnaeus

C. Whittaker

D. Darwin

Answer: A



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29. The famous botanical garden of Kew is located in

A. France

B. Germany

C. England

D. India

Answer: C



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30. Related genera belong to same

A. Family

B. Species

C. Variety

D. None of them

Answer: A



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31. Lions are found in

A. Madhya Pradesh

B. Corbett National Park

C. Weterm Ghats

D. Gir Forest

Answer: D



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32. Animals and Plants are best protected in

A. Botanical gardens

B. Zoos

C. National Parks

D. Sanctuaries

Answer: C



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33. Which of the following is an endangered animal?

A. Langur

B. Hanuman monkey

C. Lion tailed macaque

D. Antelope

Answer: C



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34. Animal that has become extinct in India is

A. Cheetah

B. Wolf

C. Hippopotamus

D. Snow Leopard

Answer: A



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35. Rajaji National Park is in

- A. Assam
- B. Tamil Nadu
- C. Uttaranchal
- D. Karnataka

Answer: C



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36. Botanical gardens provide

- A. reservoir for tropical plants
- B. beautiful area for recreation
- C. natural habitat for wildlife
- D. ex- situ conservation of germplasm

Answer: D



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37. National Botanical Institute is located in

A. Chennai

B. Kolkata

C. Lucknow

D. Mumbai

Answer: C



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38. The Wildlife Protection Act 1972 was first amended in

A. 1991

B. 1995

C. 1998

D. 2007

Answer: A



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39. Largest herbarium in India is located at

A. Lloyd Botanical Garden, Darjeeling

B. Indian Botanical Garden, Shibpur

C. National Botanical Garden, Lucknow

D. Forest Research Institute, Dehradun

Answer: B



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40. Which one is exclusive characteristics of living beings?

A. Increase in mass both from outside and inside

B. Increase in mass from inside

C. Isolated metabolic reactions in-vitro

D. Perception of events happening in environment and their memory

Answer: D





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41. Taxon is the unit of

A. Taxonomy

B. Order

C. Genus

D. Species

Answer: A



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42. Which suffix is used in the name of family

A. inae

B. oidae

C. aceae

D. inae

Answer: C



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43. The common character between Tomato and Potato will be maximum at the level of

A. Division

B. Family

C. Order

D. Genus

Answer: D



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44. Which one of the following is not used for ex - situ plant conservation ?

A. Botanical gardens

B. Field gene banks

C. Seed banks

D. Shifting cultivation

Answer: D



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45. An example of ex-situ conservation is

- A. Sacred grove
- B. National park
- C. Seed bank
- D. Wildlife sanctuary

Answer: C



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46. Which one of the following is related to Ex-situ conservation of threatened animals and plants?

A. Biodiversity hotspots

B. Amazon rain forest

C. Himalayan region

D. Wildlife safari parks

Answer: D



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B Choose More Than One Options

1. Major botanical gardens of India are

A. Padua botanical garden

B. India botanical garden

C. Royal botanical garden

D. National botanical garden

Answer: B::D



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2. Systematics is a branch of biology concerned with the

A. Gene structure and functions

B. Classification

C. Nomenclature

D. Identification

Answer: B::C::D



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3. Phylogenetic system of classification is used by

A. Bentham and Hooker

B. John Hutchinson

C. Engler and Prantl

D. A. W. Eichler

Answer: B::C::D



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4. The correct statement about taxon is

A. The term taxon was introduced for the first time by ICBN

B. Linnaeus is the founder of taxon

C. Taxon is the taxonomic group of any rank

D. Taxon term was used in Systema Naturae

Answer: A::C



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5. Which of the following are correct?

A. Term taxonomy was given by Linnaeus

B. JCBN is for the nomenclature of viruses

C. Chemotaxonomy is based on the presence of absence of chemicals in the cells or tissues

D. Karyotaxonomy is based on the nuclear and chromosomal studies

Answer: C::D



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6. In a museum

A. Wild animals are kept in the protect environments

B. Plant specimens are preserved as dry specimens

C. Insects are preserved in insect boxes

D. A collection of living plants maintained
for both pure and applied sciences

Answer: B::C



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7. A herbarium is a collection of plants which

A. are mounted

B. have been dired

C. have been pressed

D. have been cultivated

Answer: A::B::C



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8. Which of the following is correct?

A. Tiger - *Panthera tigris*

B. Lion - *Panthera pardus*

C. Leopard - *Panthera leo*

D. Potato - *Solanum tuberosum*

Answer: A::D



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9. Binomial name of a plant represents its genus and species. Which of the following are correct about the binomical system of nomenclature?

A. Names are in English only

B. Binomial system was published in

'Species Plantarum'

C. Names are written in capital letters

D. Binomial system of nomenclature was proposed by Linnaeus.

Answer: B::D



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10. An Order

A. is higher in systematic hierarchy than

Family

B. is higher in systematic hierarchy than

Class

C. is higher in systematic hierarchy than

Genus

D. is higher in systematic hierarchy than

Species

Answer: A::C::D



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11. Four Kingdom classification given by Copeland includes

A. Monera

B. Archaea

C. Prokarya

D. Protista

Answer: A::D



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12. Who among the following practised artificial system of classification?

A. Bentham and Hooker

B. Theophrastus

C. A. L. de Jussien

D. C. Linnaeus

Answer: B::D



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13. Which of the following are found in India?

A. FRI

B. Agricultural college and Research
Institute

C. Museum of Natural History

D. Royal Botanical Garden

Answer: A::B



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14. Biological species concept comprises

A. Morphologically indistinct groups of individuals

B. Reproductively isolated groups of individuals

C. Sexually interbreeding population

D. Groups wherein, cross fertilization occurs

Answer: B::C





15. Which of these are included in Binomial system to nomenclature?

A. Both the generic name and the specific epithet should be italicized

B. Generic name should start with small letter

C. Specific epithet should start with small letter

D. The taxonomist's name who first described the species must be written before the generic name

Answer: A::C



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C Fill In The Blanks

1. The place of keeping and studying dry plants is _____.



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2. _____ is different in different groups.



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3. Chemotaxonomy is connected with the study of _____.



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4. Common names are always _____.



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5. _____ is a father of taxonomy.



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6. In 1964, _____ was adopted.



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7. The term taxon was given by _____.



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8. Karyotaxonomy is a component of _____.



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9. _____ are traditional protected areas.



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10. Biodiversity increases from the _____ to the equator.



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11. As the september 2002, India had _____ protected areas.



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12. The nature of the Margosa tree is _____.



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13. The family of Red pumpkin is _____.



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14. Scientific name of sunflower is _____.



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15. Padua Botanic Garden is the major
_____.



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16. Morphine is obtained from _____.



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D True Or False Statement Questions

1. Theophrastus is known as Father of Zoology.



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2. The science of classification of organisms is called taxonomy.



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3. Linnaeus is regarded as father of taxonomy.



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4. Karyotaxonomy is a component of experimental taxonomy.



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5. The number of species classified in 'Species Plantarum' is 5900.



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6. Species is specific unit of evolution.



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7. The suffix - oideae is used for sub family.



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8. First act in taxonomy is identification.



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9. Kanha National Park is famous for tigers.



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10. Community diversity is known as gamma diversity.



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11. State bird of Himachal Pradesh is peacock.



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12. Silent valley having rare plants and animals is situated in West Bengal.



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13. Kanpur Zoological Park is an important Zoological Park.



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14. Prince of Wales Museum is situated at Delhi.



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15. Standard museums have collections of plants and animals of Various areas.



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16. The name of important botanical garden is New York Botanical garden.



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Very Short Answer Type Questions

1. Write the name of two important books published by Linnaeus.



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2. Write the full name of ICBN.



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3. What are polytypic genera?



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4. Who developed the binomial system of nomenclature?



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5. What is Taxonomy?



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6. What is phylogeny?



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7. What is the basis of Linnaeus Systems of classification?





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8. Which one has a real existence?

A. Phylum

B. Class

C. Genus

D. Species

Answer:



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9. What is subspecies?



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10. Define category?



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11. Why are scientific names of organisms derived from latin?



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12. Why are scientific names written in Italics?



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13. Who made the earliest attempt to classify the living organisms?



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14. Name the National Parks famous for rhinoceros and lion respectively.



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15. Give one importance of herbarium.



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16. What is the family of Sunflower?



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17. How many specimens are found in Paris Museum?



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18. Write the name of one major Botanical Garden.



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19. Write one aim of Zoological Parks.



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20. Write one important Zoological Parks of India?



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21. What is art museums?



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Short Answer Type Questions

1. State the difference between species and taxon.



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2. What is monograph?



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3. What are taxonomic aids?



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4. Define taxonomic hierarchy.



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5. What do you mean by taxonomic key?



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6. Define identification.



[Watch Video Solution](#)

7. What is classification?



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8. What is systematics?



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9. Write two roles of Botanical Gardens.



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10. How are the zoo animals taken care of?



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11. Write two roles of Zoological parks.



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12. Write two names of Zoological parks.



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13. Briefly describe the different stages of taxonomy .



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14. Write a brief notes on Species Concept.



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15. State different advantages of binomial nomenclature.



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16. Write a brief notes about the rules of nomenclature.



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17. Botanical gardens are living herbarium?

Comment.



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18. Describe the establishment of a zoological park.



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19. How would you maintain a zoological park.



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20. Define museums? Describe the role of museums.



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21. How many kinds of museums are found?



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1. Mention the difference between taxonomy and systematics. Describe about the components of taxonomy.



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2. Describe about the importance of taxonomy.



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3. Mention the brief notes about subspecies, cline, deme, sibling species.



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4. What is trinomial nomenclature? Define synonym, tautonym, homonym.



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5. What do you understand by herbarium?

Explain the various steps involved in preparing a herbarium specimen.



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6. What is the role of Zoological parks in wild life conservation.



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1. Why are living organisms classified?



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



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



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



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5. Given below is the scientific name of Mango. Identify the correctly written name. *Mangifera Indica*, *Mangifera indica*.



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



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7. Can you identify the correct sequence of taxonomical categories?

(a)

Species → Order → Phylum → Kingdom

(b) Genus → Species → Order → kingdom

(c) Species → Genus → Order → Phylum



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8. Try to collect all the currently accepted meanings for the word 'species'. Discuss with

your teacher the meaning species in case of higher plants and animals on one hand and bacteria on the other hand.



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9. Define and understand the following terms :

(a) Phylum, (ii) Class, (iii) Family, (iv) Order, (v) Genus.



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



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