



## BIOLOGY

# BOOKS - CHETANA BIOLOGY (MARATHI ENGLISH)

## Systematic of living organism

### Example

1. Define Living organism



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2. What are the unique features of life?



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3. Define Metabolism



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4. What is five kingdom system of classification?



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**5. Why are living organism classified?**



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**6. Why are living organism classified?**



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7. Which characters of organisms are visible characters?



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8. What is evolution?



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9. What is evolution?



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**10.** Who coined the term "Taxonomy" and "Systematics"?



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**11.** What are the objectives of Systematics Taxonomy?



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**12.** Give the significance/importance of taxonomy.



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**13.** Define Systematics.



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**14.** Define taxonomy?



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**15.** Name the recent approaches in taxonomy.



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**16.** Give the significance/importance of taxonomy.



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**17.** What is classification?



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**18.** State the aim of classification.



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**19.** State the aim of classification.



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**20.** Why there is a need for classification?





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21. Why was Linnaeus system of classification considered as an artificial system of classification.



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22. Why was Linnaeus system of classification considered as an artificial system of classification.





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**23.** State the aim of classification.



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**24.** Who proposed three domains of life? Why?

What are the three domains of life?



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**25.** What is Domain?



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**26.** Explain the three domain system of classification.



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**27.** What is chemotaxonomy? Explain it with suitable examples.



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28. Who proposed numerical taxonomy?



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29. What is numerical taxonomy?



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30. What is numerical taxonomy?



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**31.** Explain cladogram with suitable example.



**Watch Video Solution**

**32.** Explain cladogram with suitable example.



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**33.** What is phylogeny? What is the major source of phylogeny?



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**34.** Give two examples of phylogenetic relationships of organisms.



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**35.** What is DNA barcoding?



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**36.** What are the aims of DNA barcoding?



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**37.** Give two basic steps involved in the process of DNA barcoding.



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**38.** Write the applications of DNA barcoding.



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**39.** What is the Taxonomic Categories.



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**40.** What are compulsory and facultative categories?



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**41. Define Taxon.**



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**42. Define Taxonomic Hierarchy.**



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**43. Give the hierarchial classification of China rose and Cobra.**



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**44.** Complete the table based on taxonomic position of Man, Housefly, Mango and Wheat.



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**45.** Why horse and ass are considered to be two different species or animals?



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**46.** Describe the hierarchy of Taxonomic categories.



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**47.** Define species citing a suitable example.



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**48.** Define Genus.



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**49. Define Family.**



**Watch Video Solution**

**50. Define Order.**



**Watch Video Solution**

**51. Define Class.**



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**52.** Define Division/Phylum.



**Watch Video Solution**

**53.** Define Sub kingdom.



**Watch Video Solution**

**54.** Define Kingdom.



**Watch Video Solution**

**55.** Enlists the units of classification.



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**56.** Mention the units of classification in descending order.



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**57.** Make a flow chart showing taxonomic hierarchy.



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**58.** What is nomenclature and why is it important?



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**59.** What is meant by Vernacular names?



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**60.** List the advantages and disadvantages of vernacular names.



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**61.** Vernacular names create confusion. Give reason.



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**62.** Why are scientific names used for Nomenclature?



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**63.** Who proposed Binomial system of nomenclature?



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**64.** What is binomial nomenclature?





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**65.** Enlist the rules of Binomial Nomenclature system.



[Watch Video Solution](#)

**66.** What is nomenclature and why is it important?



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**67.** Give the significance of binomial nomenclature.



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**68.** Write the advantages of binomial nomenclature.



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**69.** Who introduced the two kingdom classification? On what parameters were the

organism classified?



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**70.** Who suggested the third Kingdom Protista?



**Watch Video Solution**

**71.** Who proposed the five-kingdom system of classification?



**Watch Video Solution**

**72.** List the kingdom in "Five Kingdom Classification". State the criteria used for the system.



**Watch Video Solution**

**73.** Write short note on - Five Kingdom system.



**Watch Video Solution**

**74.** What is two kingdom system of classification? List its drawbacks.



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**75.** Unicellular prokaryotic organisms are included in which kingdom?



**Watch Video Solution**

**76.** Give the characteristics of Kingdom Monera with examples.



**Watch Video Solution**

**77.** What are salient features of Monera?



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**78.** Write short note on Archebacteria.



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**79.** Describe the unique features of Archebacteria.



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**80.** Define Halophiles.



**Watch Video Solution**

**81.** Define Thermophiles.





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**82.** What is mycoplasma? State its characteristics.



**Watch Video Solution**

**83.** What are salient features of Eubacteria?



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**84.** What will be the shape of bacillus and coccus type of bacteria?



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**85.** Write a note on useful and harmful bacteria.



**Watch Video Solution**

**86.** Which kingdom forms a link between prokaryotes and complex eukaryotes?



**Watch Video Solution**

**87.** List characteristics of Kingdom Protista with examples.



**Watch Video Solution**

**88.** Discuss the different types of protists.



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**89.** Enumerate economic importance of chrysophytes/Diatoms.



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**90.** Draw neat labelled diagram of various forms of bacteria and write about them.



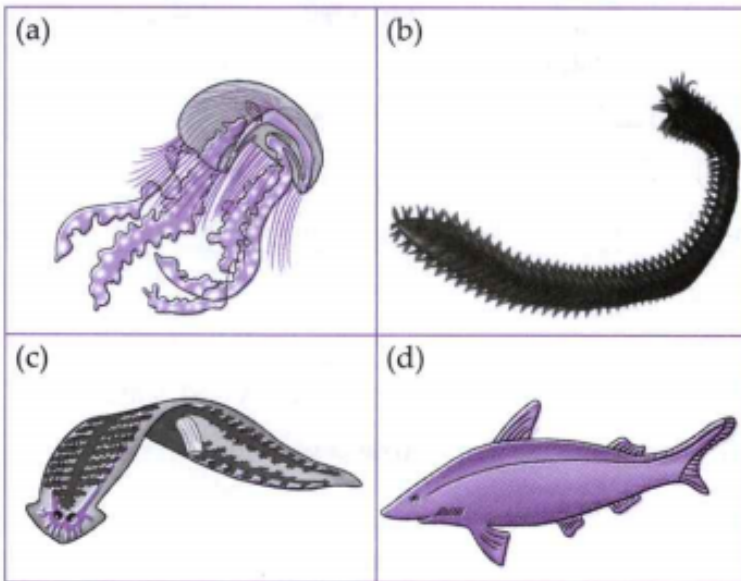
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91. Draw neat labelled diagram Nostoc.



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92. Label the following diagrams:



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**93.** Draw neat labelled diagram of plastids



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**94.** List characteristics of Kingdom: Fungi with examples.



**Watch Video Solution**

**95.** What are coenocytic hyphae?





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**96.** Write a note on economic importance of fungi.



[Watch Video Solution](#)

**97.** Write short note on: Useful Fungi.



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**98.** Why are fungi considered as heterotrophic organisms?



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**99.** Classify kingdom Fungi into their types.



**Watch Video Solution**

**100.** Draw neat labelled diagram of:  
mitochondria





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**101.** Differentiate between Ascomycetes and Basidiomycetes.



**Watch Video Solution**

**102.** List characteristics of kingdom: Plantae with examples.



**Watch Video Solution**

**103.** List characteristics of kingdom: Animalia with examples.



**Watch Video Solution**

**104.** Differentiate between Plantae and animalia.



**Watch Video Solution**

**105.** How are fungi different from plants?





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**106.** Have you seen any diseased plant in your farm?



[Watch Video Solution](#)

**107.** What are viruses? Write a short note on discovery of viruses.



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**108.** List general characteristics of viruses.



**Watch Video Solution**

**109.** List general characteristics of viruses.



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**110.** Who obtained virus in crystalline form for the first time?



**Watch Video Solution**

**111.** On what basis the viruses are classified in different groups? List and give a brief description of each group of viruses.



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**112.** Describe genetic material in plant and animal viruses as well as in bacteriophage.



**Watch Video Solution**

**113.** Draw neat labelled diagrams of the following. endoplasmic reticulum



**Watch Video Solution**

**114.** Why are viruses called infectious nucleoproteins?



**Watch Video Solution**

**115.** Give the economic importance of viruses.



[Watch Video Solution](#)

**116.** Enlist the plant and Animal disease caused by viruses.



[Watch Video Solution](#)

**117.** What are the common viral disease seen in animals?



[Watch Video Solution](#)

**118.** Who discovered viroids?



**Watch Video Solution**

**119.** What are viroids? Explain using example.



**Watch Video Solution**

**120.** Write a note on viroids.



**Watch Video Solution**



**121.** Which viroid was first discovered?



**Watch Video Solution**

**122.** Name the diseases caused by viroids?



**Watch Video Solution**

**123.** Differentiate between Viruses and Viroids.



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**124.** Who was the first to use the word lichen?



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**125.** What are lichens? What are different components of Lichens?



**Watch Video Solution**

**126.** What are the functions of different components of lichen?





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**127.** Give the ecological importance of lichens.



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**128.** What is Pedogenesis? How are lichens involved in it?



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**129.** What do the term Phycobiont and Mycobiont signify?



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**130.** Explain the terms: Phycobiont



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**131.** Explain the terms: Mycobiont



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**132.** The scientific name of Sunflower



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**133.** Mark the statements True (T) or False (F).

Linnaeus considered 'Species' as mutable entities.



**Watch Video Solution**

**134.** Mark the statements True (T) or False (F).

All organisms included in a genus are similar.



**Watch Video Solution**

**135.** Mark the statements True (T) or False (F).

The number of organisms in a genus is more than that of a species.



**Watch Video Solution**

**136.** Mark the statements True (T) or False (F).

An order is a group of related species.



**Watch Video Solution**

**137.** Mark the statements True (T) or False (F).

Bacteria is a species.



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**138.** Mark the odd one in the series. Family, class, Taxon, Division



**Watch Video Solution**

**139.** Mark the odd one in the series. indica, Ficus, Solanum, Mangifera.



**Watch Video Solution**



**140.** Mark the odd one in the series. Felidae,  
Carnivora, Mammalia, Class



**Watch Video Solution**

**141.** Mark the odd one in the series. Plantae,  
chordata, Taracheophyta, Eucalyptus.



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**Exercise**

1. Which of the following shows single stranded RNA and lacks protein coat?

A. Bacteriophage

B. Plant virus

C. Viroid

D. Animal Virus

**Answer:**



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2. Causative agent of red tide is \_\_\_\_\_.

A. Dinoflagellate

B. Euglenoid

C. Chrysophyte

D. Lichen

**Answer:**



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3. Select odd one out for Heterotrophic bacteria.

A. Nitrogen fixing bacteria

B. Lactobacilli

C. Methanogens

D. Antibiotic production

**Answer:**



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#### 4. Paramecium: Ciliated Protist

Plasmodium:..... .

A. Amoeboid protozoan

B. Ciliophora

C. Flagellate protozoan

D. Sporozoan

**Answer:**



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5. The term 'Taxonomy' was coined by.

A. Theophrastus

B. Aristotle

C. A.P. de Candolle

D. Linnaeus

**Answer:**



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6. A taxonomic group of closely related genera is known as..... .

A. species

B. order

C. family

D. class

**Answer:**



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7. According to the five-kingdom system of classification, all unicellular eukaryotic organisms are included under..... .

A. Kingdom Protista

B. Kingdom Monera

C. Kingdom Fungi

D. Kingdom Plantae

**Answer:**



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8. Which one of the following does not find place in five-kingdom system of classification?

A. bacteria

B. lichens

C. cyanobacteria

D. viruses

**Answer:**



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9. The body of a fungus is known as..... .

A. Hypha

B. Mycelium

C. Rhizoid

D. Fruiting body

**Answer:**



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10. How are fungi different from plants?

- A. autotrophic
- B. diazotrophic
- C. absorptive
- D. ingestive

**Answer:**



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11. The cell wall of a plant cell is composed of..... .

A. true cellulose

B. lipoproteins

C. chitin

D. lipids only

**Answer:**



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12. Who obtained virus in crystalline form for the first time?

A. Beijerinck

B. Stanley

C. Usnea

D. Parmelia

**Answer:**



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13. In perfumery, the lichen species used are of..... .

A. Cladonia

B. Evernia

C. Mayr

D. Ivanowski

**Answer:**



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14. The fungal component of a lichen is called..... .

A. phycobiont

B. photobiont

C. mycobiont

D. symbiont

**Answer:**



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15. The correct sequence of taxonomic categories is..... .

A. species-order-genus-kingdom

B. genus-species-order-kingdom

C. species-genus-order-phylum

D. order-genus-species-kingdom

**Answer:**



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16. Mention the units of classification in descending order.

A. species-order-phylum-kingdom

B. kingdom-phylum-order-species

C. Phylum-kingdom-order-species

D. Division-order-subclass-species

**Answer:**



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17. The family is a closely related group of.....

.

A. order

B. genera

C. species

D. kingdom

**Answer:**



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18. The full form of ICBN is..... .

A. International Code of Botanical  
Nomenclature

B. Indian Congress of Botanical  
Nomenclature

C. Indian Category of Botanical  
Nomenclature

D. International Congress of Botanical  
Nomenclature

**Answer:**



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**19.** The first word in a biological name represents..... .

A. species

B. genus

C. cohort

D. phylum

**Answer:**



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**20.** The full form of TMV is.....

- A. Tobacco Mild Virus
- B. Tomato Mosaic Virus
- C. Tobacco Mosaic Virus
- D. Tobacco Measles Virus

**Answer:**



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21. Systematics based on structural differences in r-RNA is..... .

- A. Two kingdom system
- B. Domain system
- C. Five-Kingdom system
- D. Classical system

**Answer:**



22. .... Fungi bear conidia.

- A. Phycomycetes
- B. Ascomycetes
- C. Basidiomycetes
- D. Deuteromycetes

**Answer:**



23. The arrangement of taxa is called..... .

A. Key

B. Hierarchy

C. natural classification

D. taxonomy

**Answer:**



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24. ....is correct about viruses.

A. Capsid is the nucleic acid

B. Own metabolic system is present

C. DNA and RNA both are present

D. Obligate parasite

**Answer:**



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25. The term 'Lichen' was coined by..... .

A. Linnaeus

B. d' Herelle

C. Twort

D. Theophrastus

**Answer:**



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26. The scientific name of cobra is correctly written as..... .

A. Naja Naja

B. naja naja

C. Naja naja

D. naja Naja

**Answer:**



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27. The first step in taxonomy is..... .

A. Naming

B. Identification

C. Description

D. Classification

**Answer:**



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28. Basic unit of lowest taxonomic category is..... .

A. Species

B. Family

C. Variety

D. Kingdom

**Answer:**



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29. Which one of the following statements about viruses is correct?

A. Viruses contain either DNA or RNA

B. Viruses possess their own metabolic system.

C. Viruses are facultative parasites

D. Viruses are readily killed by antibiotics

**Answer:**



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30. Commonly known as imperfect fungi..... .

- A. Phycomycetes
- B. Ascomycetes
- C. Basidiomycetes
- D. Deuteromycetes

**Answer:**



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31. .... lichens is also called leafy lichens.

A. Fruticose

B. Foliose

C. Crustose

D. Lisnea

**Answer:**



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**32.** A unicellular organism often considered as connecting link between plants and animals is..... .

A. Paramecium

B. Entamoeba

C. Monocystic

D. Euglena

**Answer:**



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33. Which of the following fungus has medicinal importance?

A. Cercospora

B. Penicillium

C. Agaricus

D. Saccharomyces

**Answer:**



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34. Lichens exhibit..... .

A. symbiosis

B. commensalism

C. helotism

D. parasitism

**Answer:**



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35. Lichens are described as indicators of..... .

A. Water pollution

B. Air pollution

C. Soil pollution

D. Agricultural productivity

**Answer:**



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**36. Obligate parasite means..... .**

A. It can survive with or without host

B. It can reproduce inside host only

C. It can grow even outside host

D. None of above

**Answer:**



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**37.** The main purpose of classification of organismis is to..... .

A. study geography

B. locate animals

C. establish relationships

D. study keys to plant's evolution

**Answer:**



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**38.** Virus envelope is known as..... .

A. Core

B. Capsid

C. Virion

D. Nucleoprotein

**Answer:**



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**39.** In biological taxonomy..... Is the highest taxonomic rank of organisms.

A. Kingdom

B. Class

C. Domain

D. Taxon

**Answer:**



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**40.** Two plants can be conclusively said to belong to the same species, if they..... .

A. Reproduce freely with each other and form seed.



B. Have more than 90 percent similar genes.

C. Have same number of chromosomes.

D. Look similar and possess identical secondary metabolites.

**Answer:**



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

- A. Will decrease
- B. Will increase
- C. Remains same
- D. May increase or decrease.

**Answer:**



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42. Difference between Virus and Viroid is.....

.

A. Absence of protein coat in viroid but present in virus.

B. Presence of low molecular weight RNA, in virus but absent in viroid.

C. Viroid is dikaryon, but the virus is not.

D. Virus can multiply, but viroid cannot.

**Answer:**





43. Lichen represents..... .

A. symbiotic association of an alga and a  
fungus

B. parastic association of an alga and a  
fungus

C. mycorrhizal association

D. commensalism

**Answer:**



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**44.** ..... is capable fo fixing atmospheric nitrogen.

A. Streptococcus

B. Clostridium

C. Penicillium

D. Nostoc

**Answer:**



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**45. A taxon..... .**

A. class

B. species

C. order

D. all of them

**Answer:**



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46. .... is not locomotary organ of protozoa.

A. Cillia

B. Flagella

C. Parapodia

D. Pseudopodia

**Answer:**



47. Virus multiplies in..... .

A. soil

B. culture medium

C. living tissue

D. dead tissue

**Answer:**





**48.** Diatoms are..... .

A. dikaryon

B. eukaryotes

C. prokaryotes

D. multicellular

**Answer:**



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**49.** Taxon includes..... .

A. genus and species

B. kingdom and division

C. all ranks of hierarchy

D. highest rank in classification

**Answer:**



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50. Which of the following fungus has medicinal importance?

A. Cercospora

B. Penicillium

C. Agaricus

D. Spirogyra

**Answer:**



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51. The arrangement of taxa is called..... .

A. Key

B. Hierarchy

C. Natural classification

D. taxonomy

**Answer:**



**Watch Video Solution**

52. Lichens are described as indicators of..... .

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**53.** Diatoms are..... .

A. dikaryon

B. eukaryotes

C. prokaryotes

D. multicellular

**Answer:**



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**54. Define Phycobionts.**



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55. What are coenocytic hyphae?



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56. Which kingdom forms a link between prokaryotes and complex eukaryotes?



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57. Who referred virus as "contagium vivum fluidum"?



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**58.** What is five kingdom system of classification?



**Watch Video Solution**

**59.** Write a note on Dinoflagellates.



**Watch Video Solution**

**60.** Give the ecological importance of lichens.





**Watch Video Solution**

**61.** What is phylogeny? What is the major source of phylogeny?



**Watch Video Solution**

**62.** Describe deuteromycetes with example.



**Watch Video Solution**

**63.** What is binomial nomenclature?



**Watch Video Solution**

**64.** Give the economic importance of viruses.



**Watch Video Solution**

**65.** List characteristics of kingdom: Plantae with examples.



**Watch Video Solution**

**66.** Describe the hierarchy of Taxonomic categories.



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