



BIOLOGY

BOOKS - MBD

Biological Classification

Example

1. What are the two main objects of biological classification?



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2. What are advantages of biological classification?



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3. Who devised artificial system of classification?



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4. What is the basis of natural system of classification?



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5. Who gave the most important classification of angiosperms?



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6. What is phenetic classification? Define cladistics.



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7. Name the criteria used by R.H. Whittaker for five-kingdom classification.



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8. Name the books written by Carl Linnæus.



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9. Write one example each of five kingdoms.



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10. What types of organisms are included in the kingdom monera?



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11. What kinds of organisms are grouped under Protista ?



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12. Name the group of the most primitive procaryotes which are regarded as the oldest of the living fossils.



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13. Name the three major groups of protists.



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14. Which group of the protistan algae constitutes a major part of phytoplankton of the oceans?



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15. Name the protists which share the characters of both animals and plant.



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16. Which substance forms cell wall in fungi?



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17. Give the names of three morphological types of lichens.



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18. Define viruses.



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19. What are viroids?



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20. Who coined the term virus?



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21. Write one important character of viruses.



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22. What type of genetic material is present in Tobacco Mosaic Virus?



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23. Expand TMV.



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24. What is the causal agent of AIDS (or Acquired Immune Deficiency Syndrome)?



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25. Write short notes on capsomere.



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26. What are prions?



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27. On what basis taxonomists try to classify organisms?



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28. Who introduced the 5-kingdom classification?



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29. What are protists?



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30. Mention the main reserve food of animals and plants.



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31. In which kingdom are the viruses placed?



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32. Name the kingdom in which Amoeba and Chlamydomonas are placed.



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33. Fill in the blanks

.....are special since they live in some of most harsh habitats such as extreme salty areas..... .



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34. Fill in the blanks

Kingdom protista has brought together ,
.....with paramecium and amoeba.



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35. Fill in the blanks

Gonyaulax belongs to groupof protista.



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36. Fill in the blanks

.....includes diatoms and golden algae.



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37. Fill in the blanks

Mycoplasma of prokaryotes lack.....



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38. Fill in the blanks

Fusion of protoplasm between two motile on non-motile gametes is called.....



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39. True or False

R.H. Whittaker proposed five kingdom classification.



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40. True or False

Prokaryotes are organisms without a nucleus.



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41. True or False

Leeuwenhoek was the first to observe bacteria.



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42. True or False

Actinomycetes belong to Monera.



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43. True or False

All monerans are autotrophs.



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44. True or False

In geological history complex organisms come after the simple ones.



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45. True or False

Kingdom plantae include all chlorophyll containing organisms.



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46. One word answer

Fusion of two nucleus.



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47. One word answer

Remains of an organism of a former geological age.



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48. One word answer

Science of classification of organisms.



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49. One word answer

Evolutionary history of a group of organisms.



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50. One word answer

Organisms which synthesize their own food using chemical energy.



Watch Video Solution

51. One word answer

In ascomycetes stage having $(n+n)$ n two nuclei per cell.



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52. Define numerical taxonomy.



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53. Discuss how classification systems have undergone several changes over period of time.



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54. State two economically important uses of:
heterotrophic bacteria



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55. State two economically important uses of: archaeobacteria.



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56. What is the nature of cell-walls in diatoms?



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57. Find out what do the terms 'algal bloom' and 'red-tides' signify.



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58. How are viroids different from viruses?



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59. Describe briefly the four major groups of Protozoa.



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60. Plants are autotrophic. Can you think of some plants that are partially heterotrophic?



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61. What do the terms phycobiont and mycobiont signify?



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62. Give a comparative account of the classes of Kingdom Fungi under the following: mode of nutrition



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63. Give a comparative account of the classes of Kingdom Fungi under the following: mode of reproduction



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64. What are the characteristic features of Euglenoids?



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65. Give a brief account of viruses with respect to their structure and nature of genetic material. Also name four common viral diseases.



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66. Organise a discussion in your class on the topic - Are viruses living or non-living?



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67. What is the principle underlying the use of cyanobacteria in agricultural fields for crop improvement?



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68. Suppose you accidentally find an old preserved permanent slide without a label. In your effort to identify it. You place the slide under microscope and observe the following features:

Unicellular

Well defined nucleus

Biflagellate -one flagellum lying longitudinally and the other transversely.

What would you identify it as ? Can you name the kingdom it belongs to ?



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69. How is the five-kingdom classification advantageous over the two kingdom classification?



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70. Polluted water bodies have usually very high abundance of plants like Nostoc and Oscillatoria. Give reasons.



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71. Are chemosynthetic bacteria autotrophic or heterotrophic ?



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72. The common name of pea is simpler than its botanical (scientific) name *Pisum sativum*, Why then is the simpler common name not used instead of the complex scientific / botanical name in biology?



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73. A virus is considered as a living organism and an obligate parasite when inside a host cell. But virus is not classified along with bacteria or fungi. What are the characters of virus that are similar to non-living objects.



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74. In the five kingdom system of Whittaker, How many kingdoms are eukaryotes?



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75. Diatoms are called pearls of ocean? Why?

What is diatomaceous earth?



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76. There is a myth that immediately after heavy rains in forests, mushrooms appear in large number and make a very large ring or circle, which may be several metres in diameter.

These are called as 'Fairy rings'. Can you explain this myth of fairy rings in biological terms?



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77. *Neurospora* ascomyces fungus has been used as a biological tool to understand the mechanism of plant genetics much in the same way as *Drosophila* has been used to study animal genetics. What makes *Neurospora* so important as a genetic tool?



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78. Cyanobacteria and hetero-trophic bacteria have been clubbed together in Eubacteria of kingdom Monera as per the "Five Kingdom Classification" even though the two are vastly different from each other. Is this grouping of the two types of taxa in the same kingdom justified? If so, why?



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79. What observable features in Trypanosoma would make you classify it under kingdom Protista?



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80. fungi are cosmopolitan. Write the role of fungi in your daily life.



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81. Algae are known to reproduce asexually by variety of spores under different environmental conditions. Name these spores and the conditions under which they are produced.



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82. Apart from chlorophyll, algae have several other pigments in their chloroplast. What pigments are found in blue-green, red and

brown algae that are responsible for their characteristic colours?



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83. Make a list of algae and fungi that have commercial value as source of food, chemicals, medicines and fodder.



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84. Peat' is an important source of domestic fuel in several countries. How is 'peat' formed in nature?



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85. Biological classification is a dynamic and ever evolving phenomenon which keeps changing with our understanding of life forms. Justify the statement taking any two examples.



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86. Who first made an attempt to classify living organisms on scientific basis?



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87. Name the two kingdoms proposed by Linnaeus.



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88. Give example of monera.



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89. Name the kind of bacteria present in gut of ruminants animals.



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90. One word answer

Remains of an organism of a former geological

age.



Watch Video Solution

91. One word answer

Science of classification of organisms.



Watch Video Solution

92. One word answer

Evolutionary history of a group of organisms.



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93. One word answer

Organisms which synthesize their own food using chemical energy.



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94. What are prokaryotes?



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95. What are eukaryotes?



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96. Name the following:

The man who first made earliest serious efforts to classify.



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97. Name the following:

Father of Ayurveda



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98. Name the following:

Book written by Charaka on Indian Medicines.



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99. What are phytoplanktons?



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100. Who are considered to be the founder of taxanomy?



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101. Name two organisms associated to form lichens.



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102. What are protists?



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103. In which kingdom are the viruses placed?



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104. Name the kingdom in which Amoeba and Chlamydomonas are placed.



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105. Define species.



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106. What are the basis of modern classification?



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107. Differentiate Artificial and Natural Classification.



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108. Write a note on phylogenetic system of classification.



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109. Differentiate natural and phylogenetic system of classification.



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110. Describe the hierarchial system of classification currently followed.



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111. Write briefly on evolutionary explanation for the origin and diversity of species.



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112. Give a flow chart of system of classification.



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113. Give general characters of kingdom Monera.



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114. What are the advantages of five kingdom system of classification ?



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115. List the disadvantages of five kingdom system of classification.



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116. Which regions of the earth would show rich biological activity?



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117. What are viroids and lichens?



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118. Write characters of phycomycetes and ascomyceptes.



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119. Write salient features of viruses.



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120. List a features of viruses which indicates they are living organism.



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121. In which virus two single stranded RNA rands are present?



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122. Compare the salient features of five kingdoms.



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123. Draw well labelled diagram of :

Bacterial cell



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124. Draw well labelled diagram of

TMV



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125. How is the five-kingdom classification advantageous over the two kingdom classification?



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126. Make an outline of five kingdom classification.



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127. Discuss reproduction in fungi .



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128. Draw well labelled diagram of
Bacteriophage



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129. Draw well labelled diagram of

Nostoc



[Watch Video Solution](#)

130. Draw well labelled diagram of

TMV



[Watch Video Solution](#)

131. Natural system of classification not only brings out natural relationships but also studies the evolutionary tendencies and phylogeny with the help of all the available data including fossils. List any three reasons why natural system is better.



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132. Who demonstrated that extract of infected plants of tobacco could cause as Contagium vivum fluidum.



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Exercise

1. Into how many kingdoms was the living world divided according to the traditional classification.



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2. Name two types of organisms which have prokaryotic cells.



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3. Name the group of the most primitive procaryotes which are regarded as the oldest of the living fossils.



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4. Name photosynthetic autotrophic prokaryotes.



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5. Give one example each of
Flagellated protozoan



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6. Give one example each of

Ciliated protozoan



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7. Give one example each of

Sporozoan



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8. What are the main criteria of the five kingdom system of classification?



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9. What are the two main objects of biological classification?



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10. Give examples

An obligate parasite fungi



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11. Give examples

A saprophytic fungi



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12. Give examples

An fungi used to obtain ethyl alcohol



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13. Give examples

A fungi used to obtain antibiotic



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14. Give the technical terms for the following:

Gelatinous substance secreted by the protoplast and deposited over the cell wall of a bacterial cell



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15. Give the technical terms for the following:

A photosynthetic eubacterium that contains chlorophyll and evolve oxygen.



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16. Give the technical terms for the following:

Many flagella attached to one end of a rod shaped bacterium.



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17. What are advantages of biological classification?



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18. Write the short comings of two kingdom system of classification.



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19. Justify the five -kingdom system of classification.



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20. Expand the following and write what you know about them

PPLO



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21. Expand the following and write what you know about them

TMV



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22. Expand the following and write what you know about them

LSD



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23. Give the salient features of Whittaker's five kingdom system of classification.



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