

Written in accordance with the latest MHT-CET Paper Pattern which includes topics based on Std. XII Sc. and relevant chapters of Std. XI Sc. (Maharashtra State Board)

MHT-CET TRIUMPH BIOLOGY

MULTIPLE CHOICE QUESTIONS

Based on Std. XI & XII Syllabus of MHT-CET

Salient Features

- Includes chapters of Std. XII and relevant chapters of Std. XI as per latest MHT-CET Paper Pattern.
- Exhaustive subtopic wise coverage of MCQs.
- Quick review provided for each chapter.
- Various competitive exam questions updated till the latest year.
- Includes solved MCQs upto MHT-CET 2018.
- Includes solved MCQs from NEET 2016, 2017 and 2018.
- Evaluation test provided at the end of each chapter.

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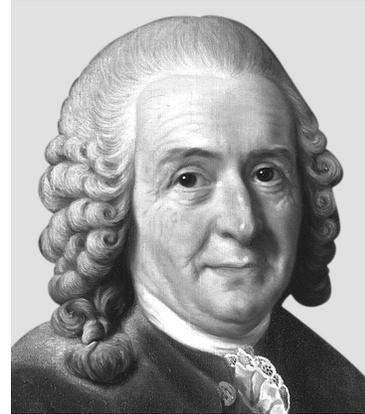
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- 1.0 Introduction
- 1.1 Diversity in Living Organisms
- 1.2 Systematics: Taxonomy, Taxonomic Hierarchy and Binomial Nomenclature
- 1.3 Five Kingdom System of Classification
- 1.4 Lichens
- 1.5 Viruses and Viroids

Carolus Linnaeus (1707-1778)



Carolus Linnaeus proposed the Binomial nomenclature system in 1758 which is a significant contribution to plant taxonomy and is widely accepted throughout the world.

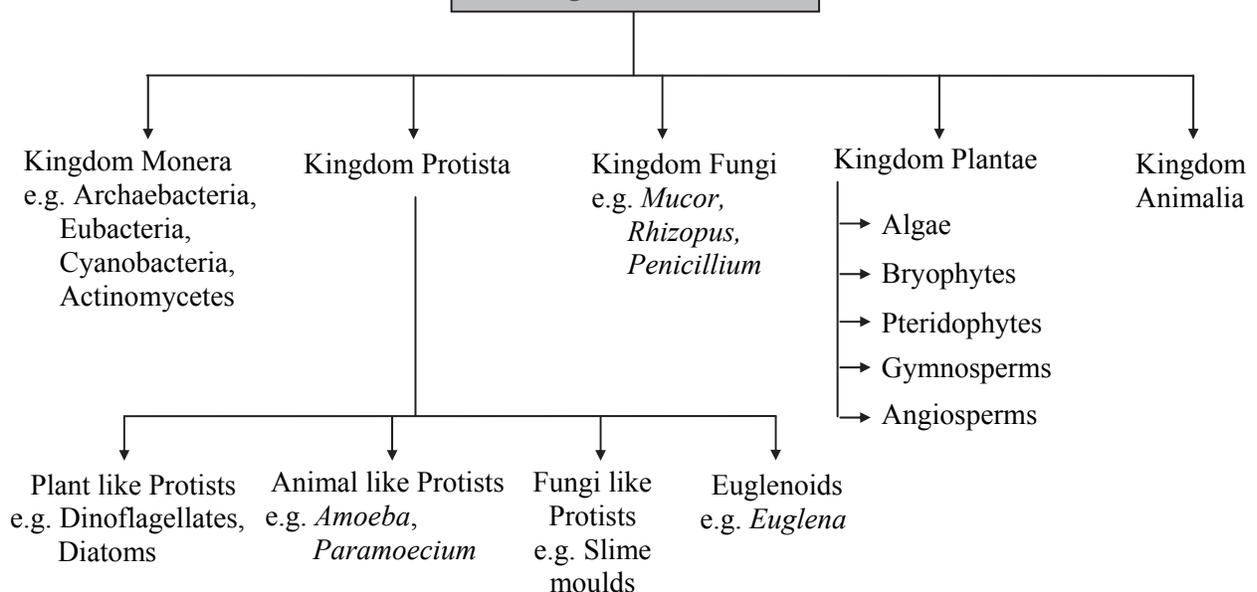


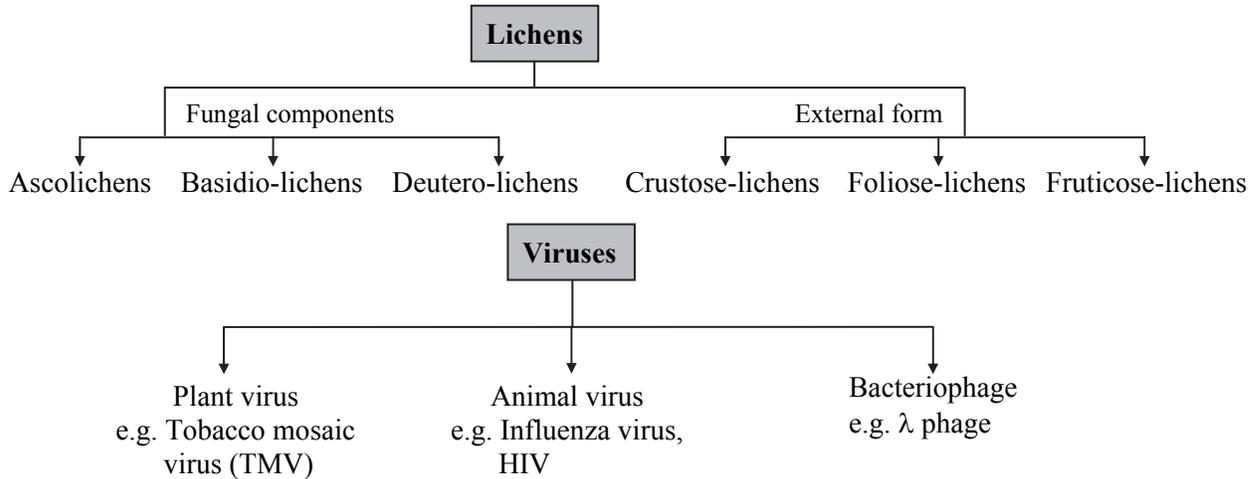
Quick Review

Taxonomic hierarchy

Kingdom → Division / Phylum → Class → Sub-class → Series → Order → Family → Genus → Species

Five kingdom classification





Classical Thinking



1.0 Introduction

- Sum total of all the reactions occurring in the body of an organism is called
(A) bioreaction (B) metabolism
(C) expansion (D) regeneration
- _____ is the defining property of living organisms.
(A) Reproduction (B) Growth
(C) Consciousness (D) Increase in weight
- Living organisms are
(A) self replicating
(B) capable of responding to external stimuli
(C) self regulating interactive systems
(D) all of above



1.1 Diversity in Living Organisms

- What is the approximate number of plants and animal species present on earth?
(A) 2 – 10 million (B) 3 – 20 million
(C) 4 – 30 million (D) 5 – 30 million



1.2 Systematics: Taxonomy, Taxonomic Hierarchy and Binomial Nomenclature

- The study of diversity of organism is called as
(A) taxonomy (B) systematics
(C) classification (D) nomenclature
- Who among the following is associated with systematics?
(A) Watson (B) Robert Hooke
(C) Linnaeus (D) Dixon

- The term classification was coined by
(A) Linnaeus (B) A. P. de Candolle
(C) Darwin (D) R.H. Whittaker
- Branch of biology dealing with identification, nomenclature, description and classification is
(A) biogeography (B) eugenics
(C) ecology (D) taxonomy
- Three domain system was introduced by
(A) Carl Woese (B) Hackel
(C) Whittaker (D) H.J. Lam
- Three domain system includes
(A) Plantae, Animalia, Prokaryotes
(B) Monera, Protista, Eukaryotes
(C) Archaea, Bacteria and Eukarya
(D) Bacteria, Plantae and Animalia
- Kingdom animalia is included under domain
(A) Archaeobacteria (B) Bacteria
(C) Eukarya (D) None of these
- The taxonomic hierarchy was established by
(A) John Ray (B) Lamarck
(C) Aristotle (D) Carolus Linnaeus
- Descending arrangement of categories is known as
(A) classification (B) taxonomy
(C) systematics (D) hierarchy
- The term 'taxon' was coined by
(A) Lamarck (B) H. J. Lam
(C) Linnaeus (D) John Ray
- A group of organisms used to represent a concrete unit of classification is
(A) rank (B) order
(C) taxon (D) genus



16. Which is the CORRECT sequence in taxonomic hierarchy?
(A) Class→species→order→family→division
(B) Division→order→class→family→genus species
(C) Division→class→order→family→genus species
(D) Species→class→order→division→family
17. In biological terminology, a group of similar organisms which are capable of inter-breeding and forming fertile offspring is called
(A) species (B) tribe
(C) genus (D) family
18. The basic unit upon which the system of classification is constructed is the
(A) species (B) order
(C) family (D) class
19. The species refers to a group of
(A) individuals with some similarity
(B) similar individuals with common ancestry
(C) interbreeding members
(D) both (B) and (C)
20. Concept of species was remodified as closely resembling interbreeding population by
(A) Theophrastus (B) Darwin
(C) Linnaeus (D) Ernst Mayr
21. Mayr's biological concept of species is mainly based on
(A) morphological traits
(B) reproductive isolation
(C) modes of reproduction
(D) morphology and reproduction
22. Morphological concept of species was given by
(A) H.J. Lam
(B) Charles Darwin
(C) Carolus Linnaeus
(D) A. P. de Candolle
23. A group of organisms that can interbreed under natural conditions is called
(A) morphospecies (B) biospecies
(C) polyspecies (D) indica
24. Which of the following is NOT a taxon but category?
(A) Division (B) Dicotyledons
(C) Angiosperms (D) Polypetalae
25. Basic unit of classification is
(A) genus (B) class
(C) species (D) order
26. In classification, the category present below family is
(A) genus (B) species
(C) order (D) class
27. Which one of the following covers a greater number of organisms?
(A) Species (B) Family
(C) Class (D) Kingdom
28. Dicotyledonae is a
(A) category (B) class
(C) order (D) kingdom
29. Taxonomic category 'order' comes in between
(A) genus and species
(B) genus and family
(C) family and series
(D) division and class
30. The smallest taxon is
(A) class (B) order
(C) species (D) genus
31. A group of closely related families which resemble in major characters are included under one
(A) class (B) genus
(C) order (D) division
32. A group of plants or animals with similar characters of any rank is
(A) species (B) genus
(C) order (D) taxon
33. Taxon '*Mangifera*' denotes
(A) genus (B) species
(C) division (D) class
34. Angiospermae and Gymnospermae are
(A) kingdom (B) order
(C) division (D) family
35. In '*Solanum tuberosum*', *tuberosum* denotes
(A) genus (B) species
(C) family (D) tuber
36. Binomial nomenclature is published in
(A) Philosophia Botanica
(B) Species Plantarum
(C) Systema Naturae
(D) Historia Naturalis



37. Binomial nomenclature systems follows rules such as the
 (A) specific name should begin with a capital letter.
 (B) scientific names must be printed in italics.
 (C) name of the author cannot be written in abbreviated form.
 (D) name of the species cannot be repeated even if the genera are different.
38. Mention of author's name after the species name is called
 (A) citation (B) translation
 (C) recognition (D) publication
39. Which name is written correctly?
 (A) *Apis indica*
 (B) *hibiscus esculentus*
 (C) *Mangifera indica*
 (D) *benghalensis Ficus*
40. Botanical name of potato is
 (A) *Ipomea batatas*
 (B) *Solanum tuberosum*
 (C) *Mangifera indica*
 (D) *Azadirachta indica*
41. The scientific name of sunflower is
 (A) *Hibiscus rosa-sinensis*
 (B) *Mangifera indica*
 (C) *Helianthus annuus*
 (D) *Sida acuta*
42. When a single species is described under different names by different authors, then these names are called as
 (A) antonyms (B) synonyms
 (C) holotype (D) variety
43. Which of the following is a wrong statement?
 (A) Vernacular names may be misleading.
 (B) Vernacular names are not universal.
 (C) Vernacular names are short and easy to follow.
 (D) Vernacular names indicate phylogeny, i.e. evolutionary history of organisms.
44. Which of the following is a heterogeneous group?
 (A) Family, Genus, Order
 (B) Division, Class, Species
 (C) *Hibiscus*, Genus, Species
 (D) *Hibiscus*, *Sorghum*, *Cycas*
45. International code of binomial nomenclature applies to
 (A) viruses (B) plants
 (C) animals (D) both (B) and (C)

46. Prior to the proposal of binomial, the plant names were
 (A) Polynomials (B) Monomials
 (C) Trinomial (D) Tetranomials



1.3 Five Kingdom System of Classification

47. Haeckel classified the organisms into _____ kingdoms.
 (A) two (B) three
 (C) four (D) five
48. Two kingdom classification system was given by
 (A) Carl Linnaeus (B) Huxley
 (C) Whittaker (D) John Ray
49. Whittaker proposed the _____ system of classification.
 (A) two kingdom (B) three kingdom
 (C) four kingdom (D) five kingdom
50. Whittaker could not give place to one of the following in five kingdom classification.
 (A) Cyanobacteria (B) Slime moulds
 (C) Virus (D) *Amoeba*
51. In the five kingdom classification, the members in Kingdom Animalia are eukaryotic, heterotrophic and
 (A) unicellular (B) multicellular
 (C) photobiont (D) non motile
52. Out of the following, which system shows the phylogenetic relationship between organisms?
 (A) Two kingdom classification
 (B) Five kingdom classification
 (C) Three kingdom classification
 (D) All of these
53. The five kingdom classification is based on
 (A) complexity in cell structure
 (B) mode of nutrition
 (C) complexity of organism's body
 (D) all of these
54. Primitive nucleus, DNA without histone proteins, absence of membrane bound cell organelles are the characters of Kingdom
 (A) Protista (B) Monera
 (C) Fungi (D) Plantae
55. Blue green algae belong to kingdom
 (A) Plantae (B) Protista
 (C) Fungi (D) Monera
56. *Thiobacillus* is a
 (A) Photoautotroph (B) Chemoautotroph
 (C) Protist (D) Heterotroph



57. Organisms of kingdom Monera shows
(A) Chloroplasts (B) Mitochondria
(C) Rigid cell wall (D) All of these
58. In five kingdom classification, protista comprises of
(A) both uni and multicellular microscopic eukaryotes
(B) unicellular eukaryotes
(C) all prokaryotes
(D) multicellular eukaryotes
59. In kingdom Protista, the locomotory organs are
(A) cilia (B) flagella
(C) pseudopodia (D) all of these
60. Protists obtain their food as
(A) photosynthesizers only
(B) chemosynthesizers
(C) heterotrophs only
(D) both (A) and (C)
61. Which one of the following is a member of protista?
(A) *Nostoc* (B) Frog
(C) Slime moulds (D) Mushroom
62. Desmids are also called as
(A) Red algae (B) Golden algae
(C) Ascocarps (D) Euglenoids
63. Chrysophytes include
(A) diatoms (B) desmids
(C) dinoflagellates (D) all of these
64. *Amoeba* and *Paramecium* are included in kingdom
(A) Animalia (B) Protista
(C) Monera (D) Fungi
65. The Kingdom which is a link between prokaryotes and multicellular eukaryotes is
(A) Protista (B) Monera
(C) Plantae (D) Animalia
66. Which of the following is CORRECT regarding protists?
(A) They reproduce by asexual or sexual method.
(B) *Amoeba* and *Paramecium* are autotrophic.
(C) They are multicellular, prokaryotic and mostly aquatic.
(D) *Trichophyton*, slime moulds, *Euglena* are some protists.
67. Some fungi have no cross walls in their hyphae. These hyphae are called
(A) septate (B) non-septate
(C) septum (D) all of these
68. Which cell organelle is absent in Kingdom fungi?
(A) Chloroplast (B) Ribosome
(C) Nucleus (D) Golgi body
69. Multicellular eukaryotic decomposers belong to kingdom
(A) Animalia (B) Fungi
(C) Plantae (D) Monera
70. _____ are also called as Sac fungi.
(A) Ascomycetes (B) Basidiomycetes
(C) Phycomycetes (D) Deuteromycetes
71. Deuteromycetes are also called as _____.
(A) bracket fungi (B) algal fungi
(C) ascocarps (D) imperfect fungi
72. Multicellular eukaryotic consumers belong to Kingdom
(A) Fungi (B) Protista
(C) Plantae (D) Animalia
73. The kingdom of true multicellular producers is
(A) Animalia (B) Plantae
(C) Monera (D) Protista
74. Plants are
(A) unicellular, eukaryotic, photosynthetic organisms
(B) multicellular, eukaryotic, heterotrophic organisms
(C) multicellular, eukaryotic, photosynthetic organisms
(D) unicellular prokaryotic organisms
75. Vascular tissues are absent in
(A) algae and bryophyta
(B) bryophyta and pteridophyta
(C) algae and gymnosperm
(D) bryophyta and gymnosperm
76. Which is NOT a correct match?
(A) Fungi – *Penicillium*
(B) Monera – bacteria
(C) Protista – yeast
(D) Plantae – moss



1.4 Lichens

77. _____ was first to use the word 'lichen'.
(A) Theodor Diener
(B) Theodor Schwann
(C) Linnaeus
(D) Theophrastus