



S-ORBIT

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BIOLOGICAL CLASSIFICATION

MOST IMPORTANT QUESTION

S-ORBIT

GOLE MARKET MAHANAGAR

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1. Which of the following are likely to be present in deep seawater?

- (a) Eubacteria
- (b) Blue-green algae
- (c) Saprophytic fungi
- (d) Archaeobacteria

2. Which one of the following is true for fungi?

- (a) They are phagotrophic
- (b) They lack a rigid cell wall
- (c) They are heterotrophs
- (d) They lack a nuclear membrane

3. Specialized cells for fixing atmospheric nitrogen in Nostoc are

- (a) Akinetes
- (b) Heterocysts
- (c) Hormogonia
- (d) Nodule

4. Satellite RNAs are present in some

- (a) Plant viruses
- (b) Viroids
- (c) Prions
- (d) Bacteriophages

5. Five kingdom system of classification suggested by R.H. Whittaker is NOT based on:

- (a) Presence or absence of a well-defined nucleus
- (b) Mode of reproduction
- (c) Mode of nutrition
- (d) Complexity of body organization

6. Which one of the following fungi contains hallucinogens?

- (a) Morchella esculenta
- (b) Amanita muscaria
- (c) Neurospora sp.
- (d) Ustilago sp.

7. Archaeobacteria differ from eubacteria in:

- (a) Cell membrane
- (b) Mode of nutrition
- (c) Cell shape
- (d) Mode of reproduction

8. Which of the following shows coiled RNA strand and capsomeres?

- (a) Poliovirus
- (b) Tobacco mosaic virus
- (c) Measles virus
- (d) Retrovirus

9. Viruses have:

- (a) DNA enclosed in a protein coat
- (b) Prokaryotic nucleus
- (c) Single chromosome
- (d) Both DNA and RNA

10. The motile bacteria can move by:

- (a) Fimbriae
- (b) Flagella
- (c) Cilia
- (d) Pili

11. Which one of the following matches is correct?

- (a) Alternaria Sexual Deuteromycetes reproduction absent

- (b) Mucor Reproduction Ascomycetes by Conjugation
- (c) Agaricus Parasitic fungus Basidiomycetes
- (d) Phytophthora Aseptate Basidiomycetes mycelium

12. True nucleus is absent in:

- (a) Mucor
- (b) Vaucheria
- (c) Volvox
- (d) Anabaena

13. Which of the following structures is not found in a prokaryotic cell?

- (a) Ribosome
- (b) Mesosome
- (c) Plasma membrane
- (d) Nuclear envelope

14. The imperfect fungi which are decomposers of litter and help in mineral cycling belong to:

- (a) Basidiomycetes
- (b) Phycomycetes
- (c) Ascomycetes
- (d) Deuteromycetes

15. The structures that help some bacteria to attach to rocks and /or host tissues are:

- (a) Fimbriae
- (b) Mesosomes
- (c) Holdfast
- (d) Rhizoids

16. Pick the wrong statement

- (a) Protista have photosynthetic and heterotrophic modes of nutrition
- (b) Some fungi are edible
- (c) Nuclear membrane is present Monera
- (d) Cell wall is absent in Animalia

17. In which group of organisms the cell walls form two thin overlapping shells which fit together?

- (a) Euglenoids
- (b) Dinoflagellates
- (c) Slime moulds
- (d) Chrysophytes

18. Choose the wrong statement:

- (a) Neurospora is used in the study of biochemical genetics
- (b) Morels and truffles are poisonous mushrooms
- (c) Yeast is unicellular and useful in fermentation
- (d) Penicillium is multicellular and produces antibiotics

19. Which of the following are the most suitable indicators of SO₂ pollution in the environment?

- (a) Conifers
- (b) Algae
- (c) Fungi
- (d) Lichens

20. Which of the following statements is wrong for viroids?

- (a) They lack a protein coat
- (b) They are smaller than viruses
- (c) They cause infections
- (d) Their RNA is of high molecular weight

21. One of the major components of the cell wall of most fungi is

- (a) Chitin
- (b) Peptidoglycan
- (c) Cellulose
- (d) Hemicellulose

22. Which one of the following statements is wrong?

- (a) Cyanobacteria are also called blue-green algae
- (b) Golden algae are also called desmids

- (c) Eubacteria are also called false bacteria
- (d) Phycomycetes are also called algal fungi

23. Chrysophytes, Euglenoids, Dinoflagellates, and Slime moulds are included in the kingdom

- (a) Monera
- (b) Protista
- (c) Fungi
- (d) Animalia

24. Which of the following are found in extreme saline conditions?

- (a) Eubacteria
- (b) Cyanobacteria
- (c) Mycobacteria
- (d) Archaeobacteria

25. Which of the following components provides a sticky character to the bacterial cell?

- (a) Nuclear membrane
- (b) Plasma membrane
- (c) Glycocalyx
- (d) Cell wall

26. Viroids differ from viruses in having;

- (a) DNA molecules without a protein coat
- (b) RNA molecules with a protein coat
- (c) RNA molecules without a protein coat
- (d) DNA molecules with a protein coat

27. Which among the following are the smallest living cells, known without a definite cell wall, pathogenic to plants as well as animals and can survive without oxygen?

- (a) Pseudomonas
- (b) Mycoplasma

- (c) Nostoc
- (d) Bacillus

28. All eukaryotic unicellular organisms belong to

- (a) Monera
- (b) Protista
- (c) Fungi
- (d) Bacteria

29. The five-kingdom classification was proposed by

- (a) R.H. Whittaker
- (b) C. Linnaeus
- (c) A. Rozebrg
- (d) Virchow

30. Organisms living in salty areas are called as

- (a) methanogens
- (b) halophiles
- (c) heliophytes
- (d) thermoacidophiles

31. Naked cytoplasm, multinucleated and saprophytic are the characteristics of

- (a) Monera
- (b) Protista
- (c) Fungi
- (d) Slime molds

32. An association between roots of higher plants and fungi is called

- (a) lichen
- (b) fern
- (c) Slime molds
- (d) BGA

33. A dikaryon is formed when

- (a) meiosis is arrested
- (b) the two haploid cells do not fuse immediately
- (c) cytoplasm does not fuse
- (d) None of the above

34. Contagium vivum fluidum was proposed by

- (a) D.J. Ivanowsky
- (b) M.W. Beijerinck
- (c) Stanley
- (d) Robert Hook

35. Association between mycobiont and phycobiont are found in

- (a) mycorrhiza
- (b) root
- (c) lichens
- (d) BGA

36. The difference between virus and viroid is

- (a) absence of protein coat in viroid, but present in the virus.
- (b) presence of low molecular weight RNA in virus, but absent in viroid
- (c) Both (a) and (b)
- (d) None of the above

37. With respect to the fungal sexual cycle, choose the correct sequence of events.

- (a) Karyogamy, Plasmogamy, and Meiosis
- (b) Meiosis, Plasmogamy, and Karyogamy
- (c) Plasmogamy, Karyogamy, and Meiosis
- (d) Meiosis, Karyogamy, and Plasmogamy

38. Viruses are non-cellular organisms, but replicate themselves once they infect the host cell. To which of the following kingdom do viruses belong?

- (a) Monera
- (b) Protista
- (c) Fungi
- (d) None of these

39. Members of Phycomycetes are found in

(i) Aquatic habitats

(ii) On decaying wood

(iii) Moist and damp places

(iv) As obligate parasites on plants

Choose from the following options:

- (a) (i) and (iv)
- (b) (ii) and (iii)
- (c) None of these
- (d) All of these

40. Two kingdom classification was given by

- (a) Whittaker
- (b) Aristotle
- (c) Linnaeus
- (d) Darwin

41. Cyanobacteria belong to the kingdom

- (a) Protista
- (b) fungi
- (c) Plantae
- (d) monera

42. The bacteria that can survive in extreme salty areas are called

- (a) archaeobacteria
- (b) methanogens
- (c) eubacteria
- (d) halophiles

43. Heterocyst is found in

- (a) Nostoc
- (b) chrysophytes
- (c) slime moulds
- (d) dinoflagellates

44. 'Diatoms' the chief producers in the oceans belong to the group

- (a) chrysophytes
- (b) dinoflagellates
- (c) euglenoids
- (d) slime moulds

45. Bacteria have been put in the kingdom Monera because they are

- (a) unicellular
- (b) prokaryotes
- (c) microscopic
- (d) decomposers

46. Archaeobacteria are considered to be ancient bacteria because they are

- (a) autotrophs
- (b) heterotrophs
- (c) able to survive in extreme conditions
- (d) unicellular

47. The five-kingdom classification was given by

- (a) Linnaeus
- (b) Whittaker
- (c) Leeuwenhoek
- (d) John Ray

48 Euglena belongs to the kingdom

- (a) monera
- (b) Protista
- (c) Plantae
- (d) Animalia

49. Ferns are

- (a) unicellular prokaryotes
- (b) unicellular eukaryotes
- (c) multicellular prokaryotes
- (d) multicellular eukaryotes

50. The mode of nutrition in Kingdom Fungi is mainly

- (a) autotrophic
- (b) heterotrophic
- (c) saprophytic
- (d) parasitic

51. Viruses have

- (a) DNA enclosed in a protein coat
- (b) prokaryotic nucleus
- (c) DNA enclosed in a nuclear membrane
- (d) membrane attached DNA

52. The smallest living organism is/are

- (a) Amoeba
- (b) yeast
- (c) blue-green algae
- (d) red or brown algae

53. The holozoic kind of nutrition is found in

- (a) protozoans
- (b) phytoplanktons
- (c) cyanobacteria
- (d) fungi

54. The multicellular decomposers belong to the kingdom

- (a) monera
- (b) Protista
- (c) fungi
- (d) Plantae

55. Lichens are produced by

- (a) soredia
- (b) conidia
- (c) zoospores
- (d) zygosporangia

56. Statement 1: Linnaeus classified plants into trees, shrubs, and herbs, on the basis of morphological characters.

Statement 2: Aristotle divided animals into 2 groups – Anaima and Enaima.

- (a) Only statement 1 is correct
- (b) Only statement 2 is correct
- (c) Both statement 1 and statement 2 are correct
- (d) Both statement 1 and statement 2 are incorrect

57. Which of the following characteristic(s) is/are used by Whittaker for the classification of organisms?

- (a) Mode of nutrition
- (b) Thallus organisation
- (c) Phylogenetic relationships
- (d) All of the above

58. Select correct match w.r.t. Whittaker's system of classification

- (a) Monera: Unicellular, osmotrophs, producers and decomposers, true cellulosic cell wall
- (b) Protista: Unicellular, eukaryotic, photoautotrophs, and chemoautotrophs
- (c) Fungi: Multicellular/loose tissue, eukaryotic, osmotrophs, chitinous wall
- (d) Animalia: Multicellular, eukaryotic, organ or organ system, holozoic, no saprobic

59. Organisms of which of the following kingdom do not have nuclear membrane?

- (a) Protista
- (b) Fungi

- (c) Monera
- (d) Plantae

60. Protists are

- (a) single-celled eukaryotes
- (b) multicellular eukaryotes
- (c) single-celled prokaryotes
- (d) single-celled akaryote

61. Bacteria are considered primitive organisms because they

- (a) Possess incipient nucleus
- (b) Are small, microscopic plants, which are not seen by the naked eyes
- (c) Cause serious diseases to the human being, domesticated animals, and crop plants
- (d) Produce endospores that are very resistant to adverse conditions

62. Which of the following pigments is present in cyanobacteria?

- (a) Chlorophyll 'a'
- (b) Chlorophyll 'b'
- (c) Chlorophyll 'c'
- (d) Chlorophyll 'd'

63. 70S ribosomes, chromatophores, and circular DNA are found in

- (a) All eukaryotes
- (b) All prokaryotes
- (c) Some prokaryotes
- (d) Some eukaryotes and some prokaryotes

64. Which of the following is the smallest living cell and can live without oxygen?

- (a) Mycoplasma
- (b) Mycorrhiza
- (c) Euglena
- (d) Trypanosoma

65. There is no alternation of generation in Escherichia coli because of the absence of

- (a) Syngamy
- (b) Reduction division
- (c) Conjugation
- (d) Both (1) & (2)

66. Which of the following processes are involved in the reproduction of protists?

- (a) Binary fission and budding
- (b) Cell fusion and zygote formation
- (c) Spore formation and cyst formation
- (d) All of the above

67. Branched-chain lipids occur in the cell membranes of

- (a) Methanobacterium
- (b) Mycoplasma
- (c) Actinomycetes
- (d) Streptomyces

68. Which of the following pairs come under the group chrysophytes?

- (a) Diatoms and Euglena
- (b) Euglena and Trypanosoma
- (c) Diatoms and Desmids
- (d) Gonyaulax and Desmids

69. Cyanobacteria do not possess

- (a) Gene recombinations
- (b) Flagella
- (c) Plasmids
- (d) Pigments

70. Which of the following is an example of amoeboid protozoans?

- (a) Trypanosoma
- (b) Paramecium

- (c) Gonyaulax
- (d) Entamoeba

71. The bacterial cell divides every one minute. It takes 15 minutes for a cup to be one-fourth full. How much time will it take to fill the cup?

- (a) 30 minutes
- (b) 45 minutes
- (c) 60 minutes
- (d) 17 minutes

72. Which of the following are parasitic fungi on the mustard plant?

- (a) Albugo
- (b) Puccinia
- (c) Yeast
- (d) Ustilago

73. The highly resistant nature of endospore is due to the presence of

- (a) Dipicolinic acid and peptidoglycan in spore coat
- (b) Peptidoglycan in exosporium
- (c) Dipicolinic acid and Ca in cortex
- (d) Dipicolinic acid and Ca in cell membrane

74. Which of the following is used extensively in biochemical and genetic work?

- (a) Agaricus
- (b) Alternaria
- (c) Neurospora
- (d) Mucor

75. Endospores formed by certain bacteria are actually the means for

- (a) Reproduction
- (b) Perennation
- (c) Bioluminescence
- (d) Red snow formation

76. Which of the following is/are example(s) of Deuteromycetes?

- (a) Alternaria
- (b) Colletotrichum
- (c) Trichoderma
- (d) All of these

77. Which group of fungi is commonly known as imperfect fungi?

- (a) Phycomycetes
- (b) Ascomycetes
- (c) Basidiomycetes
- (d) Deuteromycetes

78. Seawater glows during the night mainly due to the occurrence of

- (a) Gonyaulax
- (b) Noctiluca
- (c) Euglena
- (d) Cyclotella

79. Bladderwort and Venus flytrap are examples of

- (a) insectivorous plants
- (b) parasitic plants
- (c) N₂ – rich plants
- (d) aquatic plants

80. Rejuvenescent spore of diatom is

- (a) Haploid and exospore
- (b) Diploid and statospore
- (c) Haploid and statospore
- (d) Diploid and auxospore

81. The subunit of the capsid is called

- (a) core
- (b) nucleotide
- (c) amino acid
- (d) capsomere

82. Leucosin (Chrysolaminarin) is a carbohydrate that is stored as reserve food in case of

- (a) Diatom
- (b) Euglena
- (c) Dinoflagellates
- (d) Paramoecium

83. Which of the following is not a viral disease?

- (a) AIDS and mumps
- (b) Smallpox and herpes
- (c) Influenza
- (d) Cholera

84. Flagellation in Euglena is

- (a) Uniflagellation and stichonematic
- (b) Isokont and whiplash type
- (c) Heterokont and whiplash type
- (d) Heterokont and stichonematic

85. The symbiotic association between fungi and algae is called

- (a) lichen
- (b) mycorrhiza
- (c) rhizome
- (d) endomycorrhiza

86. The special type of red pigment present in the eye-spot of Euglena and Crustacea is called

- (a) Phycoerythrin
- (b) Astaxanthin
- (c) Carotene
- (d) Xanthophyll

87. The genetic material of the virus includes

- (a) only RNA.

- (b) only DNA.
- (c) RNA and DNA both
- (d) RNA or DNA, i.e., one nucleic acid in a virus.

88. Paraflagellar body of Euglena helps in

- (a) Locomotion
- (b) Photoreception
- (c) Reproduction
- (d) Osmoregulation

89. Dikaryon formation is the characteristic feature of

- (a) ascomycetes and basidiomycetes.
- (b) phycomycetes and basidiomycetes.
- (c) ascomycetes and Phycomycetes.
- (d) phycomycetes and zygomycetes.

90. The structure formed in the life cycle of cellular slime mould due to chemotactic movement is

- (a) Pseudoplasmodium
- (b) Swarm cells
- (c) Macrocyt
- (d) Capillitia

91. The clamp connection is found in

- (a) basidiomycetes
- (b) ascomycetes
- (c) saccharomycetes
- (d) haplomyces

92. Myxamoeba are formed in the life cycle of

- (a) Physarum
- (b) Amoeba
- (c) Entamoeba
- (d) Diatoms

93. Plasmogamy is the fusion of

- (a) two haploid cells including their nuclei.
- (b) two haploid cells without nuclear fusion.
- (c) sperm and egg.
- (d) sperm and two polar nuclei.

94. The difference between a red sea and red tide is

- (a) Red tide takes place in the red sea
- (b) Associated with cyanobacteria and protist respectively
- (c) One is by virus and the other by bacteria
- (d) Associated with Rhodophyceae and diatoms respectively

95. Which scientist classified plants into trees, shrubs, and herbs and animals into two groups based on the absence or presence of red blood cells?

- (a) Aristotle
- (b) R. H. Whittaker
- (c) D. J. Ivanowsky
- (d) W. M. Stanley

96. Consider the following statements and select the correct set of features with respect to the life cycle of acellular slime moulds

1. Haploid vegetative stage as myxamoebae
 2. Diploid vegetative stage as plasmodium
 3. Capillitium
 4. Photosynthetic protists
 5. Sporic meiosis
 6. Isogamous sexual reproduction
 7. Anisogamous sexual reproduction with zygotic meiosis
- (a) a, c, g
 - (b) b, c, g

- (c) b, d, e, f
- (d) b, c, e, f

97. Fungi are filamentous with the exception of "X" which is unicellular. Identify X.

- (a) Yeast
- (b) Albugo
- (c) Mucor
- (d) Lichen

**98. Find the correct match
Column I Column II**

- 1. Gill fungi (i) Salmon disease
 - 2. Cup fungi (ii) Trama
 - 3. Black mould (iii) Penicillin
 - 4. Blue/green (iv) Zygomycetes
- (v) Apothecium
 - (a) a(ii), b(iii), c(i), d(v)
 - (b) a(ii), b(v), c(iv), d(i)
 - (c) a(ii), b(v), c(iv), d(iii)
 - (d) a(ii), b(iii), c(i), d(iv)
- SHOW ANSWER AND EXPLANATION
-

99. The bacteria which oxidize various inorganic substances and use the released energy for the synthesis of food are called

- (a) Archaeobacteria
- (b) Heterotrophic bacteria
- (c) Photosynthetic autotrophic bacteria
- (d) Chemosynthetic autotrophic bacteria

100. Select incorrectly matched pair

- (a) *Mucor mucedo* – Coprophilous
- (b) *Albugo candida* – Facultative parasite
- (c) *Agaricus bisporus* – Edible basidiocarp
- (d) *Puccinia graminis* – Black rust fungi

ANSWER KEY

1-d	2-c	3-b	4-a	5-a
6-b	7-c	8-b	9-a	10-b
11-a	12-d	13-d	14-d	15-a
16-c	17-d	18-b	19-d	20-d
21-a	22-c	23-b	24-d	25-c
26-c	27-b	28-b	29-a	30-b

31-d	32-c	33-b	34-b	35-c
36-a	37-c	38-d	39-d	40-c
41-d	42-d	43-a	44-a	45-b
46-c	47-b	48-b	49-d	50-c
51-a	52-c	53-a	54-c	55-a
56-b	57-d	58-c	59-c	60-a

61-a	62-a	63-c	64-a	65-d
66-d	67-a	68-c	69-b	70-d
71-d	72-a	73-c	74-c	75-b
76-d	77-d	78-b	79-a	80-d



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81-d	82-a	83-d	84-d	85-a
86-b	87-d	88-b	89-a	90-a
91-a	92-a	93-b	94-b	95-a
96-d	97-a	98-c	99-d	100-b