

Exercise - I (Conceptual Questions)

Build Up Your Understanding

HISTORY OF TAXONOMY

1. According to Whittaker, BGA are included in:
 (1) Mycota (2) Protista
 (3) Plantae (4) Monera

BBC001

2. Kingdom Monera comprises the :-
 (1) Plants of economic importance
 (2) All the plants studied in botany
 (3) Prokaryotic organisms
 (4) Plants of Thallophyta group

BBC002

3. Whittaker is famous for :-
 (1) Two kingdom classification
 (2) Four kingdom classification
 (3) Five kingdom classification
 (4) Distinguishing in Bacteria & blue green Algae

BBC003

4. System of classification proposed by Linnaeus was:-
 (1) Artificial (2) Natural
 (3) Sexual (4) Both (1) and (3)

BBC004

5. The group "Plantae" proposed by Whittaker includes:-
 (1) Pteridophytes (2) Gymnosperms
 (3) Angiosperms (4) All the above

BBC005

6. In Whittaker's five kingdom classification, eukaryotes were assigned to :-
 (1) All the five kingdom
 (2) Only four of the five kingdoms
 (3) Only three kingdom
 (4) Only one kingdom

BBC006

7. Carolus Linnaeus classified plant kingdom on the basis of :-
 (1) Floral morphology
 (2) Overall morphology of plants
 (3) Type of sexual reproduction
 (4) Anatomical character

BBC007

8. First plant classification was given by :-
 (1) Linnaeus (2) John-Ray
 (3) Aristotle (4) Darwin

BBC008

9. "Systema Naturae" book was written by :-
 (1) Angler and Prantle (2) Darwin
 (3) Linnaeus (4) Oswald - Tippo

BBC009

10. According to Whittaker kingdom Protista includes :-
 (1) Prokaryotes
 (2) Unicellular eukaryotes
 (3) Slime molds & protozoa
 (4) Multicellular & eukaryotes

BBC010

KINGDOM – MONERA

11. Infoldings of plasma membrane in bacteria are called as :-
 (1) Episomes (2) Plasmid
 (3) Pili (4) Mesosomes

BBC011

12. The organisms participating most actively in nitrogen cycle in nature are :-
 (1) Bacteria (2) Legumes
 (3) Parasitic algae (4) Fungi

BBC012

- | | |
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| <p>13. Heterocyst is a structure which is associated with :-
 (1) Reproduction
 (2) Respiration
 (3) Nitrogen fixation
 (4) Locomotion
 BBC013</p> <p>14. <i>Trichodesmium erythraeum</i> which imparts red colour to sea water of red sea is a :-
 (1) Cyanobacterium (2) Red Algae
 (3) Diatom (4) Red Coral
 BBC014</p> <p>15. Archaeobacterial cell lacks :-
 (1) Peptidoglycan
 (2) DNA
 (3) Ribosomes
 (4) Branched Chain Lipids
 BBC015</p> <p>16. Most common method of reproduction in prokaryotes :-
 (1) Budding (2) Binary fission
 (3) Transduction (4) Conjugation
 BBC016</p> <p>17. Harmful activity of Blue green algae is:-
 (1) Denitrification
 (2) Water - bloom
 (3) Increase alkalinity of soil
 (4) Decrease fertility of soil
 BBC017</p> <p>18. The function of mesosome in prokaryotes is:-
 (1) Aerobic respiration
 (2) Cell wall formation
 (3) Both (1) and (2)
 (4) N₂ - fixation
 BBC018</p> | <p>19. During rainy season ground surface become slippery due to :-
 (1) Fungi (2) Blue green algae
 (3) Bryophytes (4) Gymnosperm
 BBC019</p> <p>20. Photosynthesis of Blue green algae is:-
 (1) Oxygenic
 (2) Non oxygenic
 (3) Both oxygenic and non-oxygenic
 (4) None
 BBC020</p> <p>21. Which of the following is the only group of organisms capable of using inorganic compounds as source of energy ?
 (1) Fungi
 (2) Chemo autotrophs
 (3) Both the above
 (4) None of the above
 BBC021</p> <p>22. Link between prokaryotes and multicellular eukaryotes :-
 (1) Cyanobacteria (2) Protista
 (3) Fungi (4) Plants
 BBC022</p> <p>23. Which structure of prokaryotes is analogous to lysosome ?
 (1) Mesosome
 (2) Genophore
 (3) Periplasmic space
 (4) Perinuclear space
 BBC023</p> <p>24. Which of the following performs respiration with the help of plasma membrane ?
 (1) Bacteria (2) Algae
 (3) Fungi (4) All the above
 BBC024</p> |
|--|--|

- 25.** Richest source of bacteria is : -
(1) Air (2) Soil (3) Water (4) Milk

BBC025

- 26.** The most primitive monerans are :-

- (1) Archaeobacteria
(2) Eubacteria
(3) Filamentous bacteria
(4) Cyanobacteria

BBC026

- 27.** Organisms which obtain energy by the oxidation of reduced inorganic compounds are called

- (1) Photo autotrophs (2) Chemo autotrophs
(3) Saprozoic (4) Heterotrophs

BBC027

- 28.** Which bacteria are utilized in Gobar gas plant?

- (1) Methanogens
(2) Nitrifying bacteria
(3) Ammonifying bacteria
(4) Denitrifying bacteria

BBC028

- 29.** Plasmid are :-

- (1) Virus
(2) New types of micro organism
(3) Extra chromosomal genetic material of bacteria
(4) Essential bacterial genetic materials

BBC029

- 30.** A free living aerobic bacteria capable of fixing nitrogen is :-

- (1) *Azotobacter*
(2) *Rhizobium*
(3) *Clostridium botulinum*
(4) *Streptomyces*

BBC030

- 31.** Which one of the following fixes CO₂ in to carbohydrates ?

- (1) *Rhizobium*
(2) *E.coli*
(3) *Bacillus*
(4) *Rhodospirillum*

BBC032

- 32.** Antibiotics are mostly obtained from :-

- (1) Bacteria (2) Viruses
(3) Fungi (4) Angiosperm

BBC033

- 33.** The main difference between gram +ve and gram -ve resides in the composition of :-

- (1) Cilia (2) Cell-wall
(3) Cell-membrane (4) Cytoplasm

BBC034

- 34.** Free living nitrogen-fixing bacteria are found in-

- (1) Air (2) Soil
(3) Root nodules (4) None of above

BBC035

- 35.** Cell membrane of bacteria is made up of -

- (1) Cellulose and lipid
(2) Chitin
(3) Lipid + Protein
(4) Protein and Cellulose

BBC036

- 36.** Which organism is most useful for soil fertility ?

- (1) Bryophyta (2) Fungi
(3) Bacteria (4) Bacteriophage

BBC037

- 37.** Bacterial flagella are made of-

- (1) Carbohydrate (2) Lipid
(3) Protein (4) Amide

BBC038

38. The mode of the nutrition of bacteria is usually
 (1) Photo autotrophic
 (2) Chemo autotrophic
 (3) Heterotrophic and autotrophic
 (4) None

BBC039

39. Fertility of soil is increased by-
 (1) Nitrogen - fixing bacteria
 (2) Denitrifying bacteria
 (3) Plasmalemma
 (4) Cell membrane

BBC040

40. Plant pathogenic bacteria are :-
 (1) Gram +ve (2) Gram -ve
 (3) Both (1) & (2) (4) None

BBC041

41. Souring of milk is due to -
 (1) Aerobic bacteria (2) Anaerobic bacteria
 (3) Both (1) & (2) (4) None

BBC042

42. At which place bacteria are not found :
 (1) Soil (2) Ice
 (3) Sea (4) Distilled water

BBC043

43. Halophile are _____.
 (1) Those can live at low pH
 (2) Those can live at high salt concentration
 (3) Those can live at high pressure
 (4) Those can live at high light intensity

BBC044

44. The cyanobacteria are also referred to as?
 (1) Slime moulds
 (2) Blue green algae
 (3) Decomposer protist
 (4) Cell wall less prokaryote

BBC045

45. Besides paddy fields, cyanobacteria are also found inside vegetative part of:

- (1) *Psilotum* (2) *Pinus*
 (3) *Cycas* (4) *Equisetum*

BBC046

46. Cyanobacteria are _____.
 (1) Chemosynthetic
 (2) Oxygenic photosynthetic
 (3) Anaerobic
 (4) Facultative anaerobic

BBC047

KINGDOM-PROTISTA

47. "Golden Algae" is the common name of Algae belonging to :-

- (1) Chrysophyta (2) Pyrrophyta
 (3) Euglenophyta (4) Cyanophyta

BBC048

48. Armoured cell wall and biflagellated cells are characteristic of :-

- (1) Chrysophyta (2) Pyrrophyta
 (3) Euglenophyta (4) Cyanophyta

BBC049

49. Oils and Leucosine are characteristic stored food in :

- (1) Dinoflagellates (2) Euglenoids
 (3) Diatoms (4) None

BBC050

50. Armoured algae are :

- (1) Dinoflagellates (2) Euglenoids
 (3) Red algae (4) Cyanobacteria

BBC051

51. The diatoms do not easily decay like most of the other Algae because:

- (1) They have water proof cells
 (2) Their walls are mucilagenous
 (3) They have highly siliceous wall
 (4) They are non-living

BBC052

- 52.** 'Keiselgurh' a heat resistant material is obtained from :-
 (1) Red Algae (2) Brown Algae
 (3) Diatoms (4) Fungi
BBC053
- 53.** The diatomaceous earth is used to insulate boilers and steam pipes because:-
 (1) The wall of diatoms is deposited with calcium.
 (2) The diatomaceous earth is cheap.
 (3) It is a good conductor of heat.
 (4) The wall of diatoms is made of silica.
BBC054
- 54.** Shell of diatoms is made up of :-
 (1) Silica (2) Calcium carbonate
 (3) Keratin (4) Calcium oxalate
BBC055
- 55.** "Diatomite" (Keiselgurh) is obtained from:-
 (1) Myxophyceae (2) Chrysophyta
 (3) Phaeophyceae (4) Rhodophyceae
BBC056
- 56.** Most characteristic feature of diatoms is :-
 (1) Pigments
 (2) Stored food
 (3) Cell wall
 (4) Non oxygenic photosynthesis
BBC057
- 57.** Taxonomically the most controversial group is-
 (1) Dinoflagellates (2) Diatoms
 (3) Euglenoids (4) Prokryote
BBC058
- 58.** Decomposer protists are :-
 (1) Diatoms (2) Dinoflagellates
 (3) Slime moulds (4) Euglenoid
BBC059
- 59.** The dead remains of diatoms are known as:-
 (1) Coenobium (2) Sporangia
 (3) Keiselgurh (4) Sporocarp
BBC060
- 60.** Taxonomists feel difficulty in classification of :-
 (1) Procaryotes
 (2) Unicellular eucaryotes
 (3) Plants
 (4) Animals
BBC061
- 61.** Which of the following unicellular algae reproduce by auxospores, have silicified cell wall and store food in the form of fats, leucosine and chrysolaminarin ?
 (1) Diatoms (2) Red algae
 (3) Dinoflagellates (4) Euglenoids
BBC062
- 62.** Paramylum is stored food of :-
 (1) Dinoflagellate (2) Euglenoid
 (3) Diatom (4) Slime mould
BBC063
- 63.** The most efficient locomotion in protists is through :-
 (1) Pseudopodia (2) Flagella
 (3) Cilia (4) Tentacles
BBC064
- 64.** Organism of which kingdom feed like animals and perform photosynthesis like plants :-
 (1) Monera (2) Protista
 (3) Mycota (4) Animalia
BBC065
- 65.** "Fire algae" belongs to group :-
 (1) Pyrrophyta (2) Chrysophyta
 (3) Euglenophyta (4) Rhodophyta
BBC066

66. Slime mould is known as naked fungi.
(1) Cell membrane absent
(2) Cell wall absent
(3) Cell wall and cell membrane absent
(4) Never naked
BBC067
67. Dinoflagellates are called fire algae due to which character :-
(1) They appear like fire due to pigments
(2) They produce fire due to friction
(3) They occur on burnt places
(4) They show bioluminescence
BBC068
68. Toxins (Saxitoxins) secreted by some dinoflagellates enter the body of human beings through food chain and result in :-
(1) Madness (2) Paralysis
(3) Syphilis (4) Plague
BBC069
69. Stored food of Diatoms :-
(1) Leucosin (2) Starch
(3) Floridian starch (4) Glycogen
BBC070
70. Dead remains of diatoms at sea bed are called :-
(1) Keiselgurh (2) Peat
(3) Coral reefs (4) Sporopollenin
BBC071
71. Protists include :-
(1) Unicellular Eukaryotes
(2) Prokaryotes
(3) Multicellular eukaryotes
(4) Multicellular prokaryotes
BBC072
72. Which of the following eukaryotes are devoid of histone proteins ?
(1) Golden algae (2) Euglenoids
(3) Fire algae (4) Slime Mould
BBC073
73. Diatoms perform which type of movement in water :-
(1) Swimming (2) Amoeboid
(3) Floating (4) Ciliary
BBC074
74. Protist used for the construction of sound proof rooms, is :-
(1) Dinoflagellate (2) Diatoms
(3) Euglenoids (4) Zooflagellates
BBC075
75. Auxospores are formed by :-
(1) Diatoms (2) Euglenoids
(3) Dinoflagellates (4) bacteria
BBC076
76. Protists which are diploid reproduce sexually by the process of :-
(1) Zygotic meiosis (2) Cyst formation
(3) Binary fission (4) Gametic meiosis
BBC077
77. 'Red tides' are produced by :-
(1) Red algae (2) Dinoflagellates
(3) Diatoms (4) Brown algae
BBC078
78. In which of the following nuclear dimorphism is seen?
(1) *Entamoeba* (2) *Leishmania*
(3) *Trypanosoma* (4) *Paramoecium*
BBC461
79. Slipper animalcule is -
(1) *Entamoeba* (2) *Paramoecium*
(3) *Giardia* (4) *Euglena*
BBC462
80. Which group of organisms belongs to class sporozoa?
(1) *Plasmodium* & *Monocystis*
(2) *Entamoeba* & *Paramoecium*
(3) *Euglena* & *Trypanosoma*
(4) *Plasmodium* & *Vorticella*
BBC463

81. What is common about *Trypanosoma*, *Noctiluca*, *Monocystis* and *Giardia* ?
 (1) These are all parasites.
 (2) These are all unicellular protists.
 (3) They have flagella.
 (4) They produce spores.

BBC464

82. Which of the following unicellular organism has a macronucleus for trophic function and one or more micronuclei for reproduction?
 (1) *Trypanosoma* (2) *Paramoecium*
 (3) *Euglena* (4) *Amoeba*

BBC465

KINGDOM – FUNGI

83. Fungal hyphae penetrate hard cell walls of their hosts with the help of:-
 (1) Enzymes (2) Hormones
 (3) Sharp tips (4) Sugar Exudates

BBC079

84. A fungus completing its life cycle on a single host is known as:-
 (1) Dikaryotic (2) Autoecious
 (3) Heterocious (4) Heterothallic

BBC080

85. Which of the following secretes toxins during storage conditions of crop plants ?
 (1) *Aspergillus* (2) *Penicillium*
 (3) *Fusarium* (4) *Colletotrichum*

BBC081

86. Which of the following characters indicate similarity between fungi and animals ?
 (1) Heterotrophic nutrition
 (2) Type of stored food
 (3) Presence of chitin
 (4) All the above

BBC082

87. The sac fungi belongs to :-

- (1) Ascomycetes (2) Basidiomycetes
 (3) Phycomycetes (4) Deuteromycetes

BBC083

88. *Neurospora*, which is popularly known as *Drosophilla* of plant kingdom, belongs to :-

- (1) Phycomycetes (2) Ascomycetes
 (3) Basidiomycetes (4) Deuteromycetes

BBC084

89. The basidiomycetes includes :-

- (1) Rusts (2) Smuts
 (3) Mushrooms (4) All the above

BBC085

90. Which of the following causes wheat rust disease?

- (1) A red alga (2) A green alga
 (3) A fungus (4) Mycoplasma

BBC086

91. Sexual cycle is absent in :-

- (1) Phycomycetes (2) Deuteromycetes
 (3) Ascomycetes (4) Basidiomycetes

BBC087

92. *Penicillium* fungi belong to class :-

- (1) Zygomycetes (2) Oomycetes
 (3) Deuteromycetes (4) Ascomycetes

BBC088

93. The fungi are :-

- (1) Autotrophic (2) Holotrophic
 (3) Chemotrophic (4) Heterotrophic

BBC089

94. All fungi are :-

- (1) With chlorophyll
 (2) Without chlorophyll
 (3) With carotene
 (4) Wall less

BBC090

95. In class phycomycetes the mycelium is :-

- (1) Coenocytic and aseptate.
- (2) Coenocytic and septate.
- (3) Uninucleate and aseptate.
- (4) Multinucleate and septate.

BBC091

96. Coenocytic mycelium is found in :-

- (1) *Rhizopus* (2) *Mucor*
- (3) *Penicillium* (4) Both (1) and (2)

BBC092

97. Stored food material of fungi :-

- (1) Cellulose
- (2) Starch
- (3) Glycogen and starch
- (4) Glycogen and oil

BBC093

98. The cell wall of Fungi is composed of:-

- (1) Chitin (2) Cellulose
- (3) Mucopolysaccharide (4) Pseudomurein

BBC094

99. The chief characteristic of class ascomycetes is:

- (1) Formation of spores
- (2) Hyphae
- (3) Formation of ascospores
- (4) Formation of zoospores

BBC095

100. Which is commonly called 'Drosophilla of plant kingdom' ?

- (1) *Morchella* (2) *Neurospora*
- (3) *Rhizopus* (4) *Claviceps*

BBC096

101. Normally how many ascospores are formed in an ascus :-

- (1) 4 - ascospores (2) 8 - ascospores
- (3) 16 ascospores (4) 24 ascospores

BBC097

102. Edible part in mushrooms is :-

- (1) Basidiospores
- (2) Mycelium
- (3) Pseudomycelium
- (4) Complete basidiocarp

BBC098

103. Penicillin is obtained from:-

- (1) *Chara* (2) *Penicillium*
- (3) *Aspergillus* (4) *Albugo*

BBC100

104. Cell wall of Chitin is found in :-

- (1) Fungi (2) Bryophyta
- (3) Bacteria (4) Angiosperms

BBC101

105. The fungus without mycelium is :-

- (1) *Phytophthora* (2) *Rhizopus*
- (3) *Saccharomyces* (4) *Microsporum*

BBC102

106. Pseudomycelium occurs in :-

- (1) Mushroom (2) *Mucor*
- (3) Bread mould (4) Yeast

BBC104

107. Occurrence of dikaryotic mycelium mainly is the characteristic of :-

- (1) Myxomycetes
- (2) Phycomycetes
- (3) Deuteromycetes
- (4) Basidiomycetes

BBC105

108. Deuteromycetes are called 'Imperfect fungi' as:

- (1) They have no cell wall
- (2) No mycelium
- (3) No sexual reproduction
- (4) No asexual reproduction

BBC106

109. Absorptive mode of nutrition is found in :-

- (1) Algae (2) Fungi
(3) Bryophytes (4) Euglenoids

BBC109

110. Which of the following is called 'toad stools'?

- (1) All mushrooms
(2) Edible mushrooms
(3) Poisonous mushrooms
(4) None

BBC110

111. Yeast grows more quickly in :-

- (1) Salt water
(2) Sugar solution
(3) Double distilled water
(4) Marine water

BBC111

112. Which of the following is a form class ?

- (1) Deuteromycetes (2) Basidiomycetes
(3) Rhodophyceae (4) Euglenophyceae

BBC112

113. Ergot fungi belongs to :-

- (1) Ascomycetes (2) Basidiomycetes
(3) Phycomycetes (4) Deuteromycetes

BBC113

114. Fungi are ecologically important because :-

- (1) They yield antibiotics
(2) They are used in genetic studies
(3) They function as decomposers
(4) All the above

BBC115

115. Citric acid is obtained from :-

- (1) *Streptomyces* (2) *Aspergillus*
(3) *Penicillium* (4) *Albugo*

BBC116

116. In fungi lump of hyphae is referred to as :-

- (1) Thallus (2) Haustorium
(3) Mycelium (4) Archegonia

BBC117

117. Plant group which shows Heterotrophic mode of nutrition is :-

- (1) Algae (2) Fungi
(3) Bryophytes (4) Pteridophytes

BBC118

118. Sexual reproduction is absent in :-

- (1) Phycomycetes (2) Deuteromycetes
(3) Zygomycetes (4) Basidiomycetes

BBC119

119. Non-septate mycelium occurs in :-

- (1) Phycomycetes (2) Ascomycetes
(3) Basidiomycetes (4) Deuteromycetes

BBC120

120. Basidiocarp is present in:-

- (1) Basidiomycetes (2) Ascomycetes
(3) Deuteromycetes (4) Phycomycetes

BBC121

121. All fungi are:-

- (1) Symbionts (2) Parasites
(3) Saprophytes (4) Heterotrophs

BBC122

122. Aspergillosis is caused by :-

- (1) Virus (2) Bacteria
(3) Fungi (4) Mycoplasma

BBC123

VIRUS, VIROIDS, LICHEN, MYCORRHIZA

123. Find the incorrect statements from the followings :-

- (1) Growth, reproduction and consciousness are unique features of living organisms.
(2) Growth and reproduction are defining characteristics of living organisms.
(3) Metabolism, cellular organisation and consciousness are defining characters of livings.
(4) Living organisms are self replicating, evolving and self regulating.

BBC124

- 124.** Which is a group of organisms in which reproduction is synonymous with growth :-
 (1) *Amoeba*, bacteria and unicellular algae
 (2) Algae, fungi and lichen
 (3) Lower organisms
 (4) Higher multicellular organisms

BBC125

- 125.** Why viruses did not find a place in classification?
 (1) They are obligate parasites, cannot survive without host.
 (2) Viruses are unicellular organisms so can not be included in livings.
 (3) They are not truly living because they don't have cell structure.
 (4) They can pass through the bacteria proof filter

BBC126

- 126.** Which of the followings is/are symbiotic associations between autotrophic and heterotrophic organisms only
 (A) Mycorrhiza between fungi and roots of higher plants
 (B) Lichen between phycobiont and mycobiont.
 (C) Coralloid roots of *Cycas* having cyanobacteria.
 (D) Obligate association between *Pinus* roots and fungi making mycorrhizae.
 (1) A & B (2) B & C
 (3) A, B & C (4) A, B & D

BBC127

- 127.** Bacteriophages are made of both proteins and genetic material. Their genetic material is generally-
 (1) ss DNA (2) ds DNA
 (3) ss RNA (4) ds RNA

BBC128

- 128.** Find the correct from the followings.
 (1) T.O. Diener discovered a new infectious agent, smaller than virus and named them as prions.
 (2) Viroids lack the protein coat and made of only free RNA.
 (3) The RNA of viroids is of high molecular weight.
 (4) Lichens are very good pollution indicators as they grow only in polluted areas.

BBC129

- 129.** Match the column A with column B and find out the correct as shown ?

Column-A	Column-B
a. Pollution indicator	p. Fungal
b. Mycobiont component	q. Viroid
c. Potato spindle tuber disease	r. Lichen
d. Obligate parasite	s. Virus
(1) a - r, b - p, c - s, d - q	
(2) a - r, b - s, c - p, d - q	
(3) a - s, b - r, c - p, d - q	
(4) a - r, b - p, c - q, d - s	

BBC136

- 130.** In lichen fungal component is responsible to provide?
 (1) Shelter to phycobiont
 (2) Mineral absorption
 (3) Water absorption
 (4) All of the above

BBC137

- 131.** The protein coat of viruses is called :-
 (1) Capsomeres (2) Capsid
 (3) Sheath (4) Envelope

BBC141

132. Lichens are :-

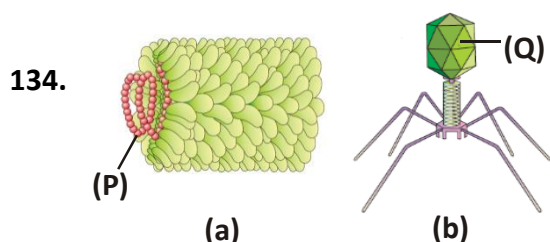
- (1) Symbiotic association between algae and fungi
- (2) Pollution indicators
- (3) Not placed in any kingdom by R.H. Whittaker
- (4) All of these are correct

BBC142

133. Phycobiont is a :

- (1) algal, autotrophic component of mycorrhiza
- (2) fungal, heterotrophic component of lichen
- (3) fungal component of mycorrhiza
- (4) algal, autotrophic component of lichen

BBC143



Identify the (a) & (b) figure and their (P) and (Q) part.

- | | |
|------------------------------|----------|
| (1) a - Tobacco Mosaic virus | P → RNA |
| b - Bacteriophage | Q → Head |
| (2) a - Bacteriophage | P → RNA |
| b - Tobacco Mosaic virus | Q → Head |
| (3) a - Potato Mosaic virus | P → Head |
| b - Cyanophage | Q → RNA |
| (4) a - Smallpox virus | P → RNA |
| b - Influenza virus | Q → Head |

BBC144

135. Choose the **incorrect** pair :-

- (1) Virus – Nucleocapsid
- (2) Viroids – Only RNA
- (3) Lichen – Algae and fungi
- (4) Mycorrhiza – BGA and higher plants

BBC145

136. Which of the given organism(s) belong to kingdom protista according to five kingdom system?

- | | |
|-------------|--------------------|
| (A) Virus | (B) <i>Euglena</i> |
| (C) Viroids | (D) Lichen |
| (1) A and B | (2) C and D |
| (3) Only B | (4) A and C |

BBC146

137. The transfer of genetic material from one bacterium to other bacterium from virus, is called:-

- | | |
|--------------------|-------------------|
| (1) Conjugation | (2) Transduction |
| (3) Transformation | (4) Crossing over |

BBC147

138. Read the following statements :

- (i) Mycorrhiza is the symbiotic association between roots of higher plants and fungus.
 - (ii) Lichens are biological indicator for water pollution.
 - (iii) Viroids contain only low molecular weight DNA and protein.
 - (iv) W.M. Stanley crystallised TMV
- Which of the above statements are correct:
- (1) (i), (ii) and (iv)
 - (2) (i) and (iv)
 - (3) (ii) and (iii)
 - (4) (i) and (ii)

BBC148

139. Which of the following benefit is not provided by fungi to symbiotic plant ?

- (1) Protection from pathogen
- (2) Availability of water
- (3) Availability of phosphate
- (4) Ability to fix nitrogen

BBC149

EXERCISE-I (Conceptual Questions)

ANSWER KEY

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Answer	4	3	3	4	4	2	1	3	3	2	4	1	3	1	1
Question	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Answer	2	2	3	2	1	2	2	3	1	2	1	2	1	3	1
Question	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Answer	4	1	2	2	3	3	3	3	1	3	2	4	2	2	3
Question	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Answer	2	1	2	3	1	3	3	4	1	2	3	3	3	3	2
Question	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Answer	1	2	3	2	1	2	4	2	1	1	1	3	3	2	1
Question	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
Answer	4	2	4	2	1	2	2	1	2	1	4	1	2	4	3
Question	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
Answer	2	4	4	2	1	4	4	1	3	2	2	4	2	1	3
Question	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
Answer	4	4	3	2	3	2	1	1	3	2	3	2	2	1	1
Question	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
Answer	4	3	2	1	3	4	2	2	4	4	2	4	4	1	4
Question	136	137	138	139											
Answer	3	2	2	4											

Exercise - II (Previous Year Questions)

AIPMT/NEET

AIPMT 2014

- Five kingdom system of classification suggested by R.H. Whittaker is **not** based on
 - (1) Presence or absence of a well defined nucleus.
 - (2) Mode of reproduction.
 - (3) Mode of nutrition.
 - (4) Complexity of body organisation.

BBC202

- Archaeobacteria differ from eubacteria in :
 - (1) Cell membrane
 - (2) Mode of nutrition
 - (3) Cell shape
 - (4) Mode of reproduction

BBC204

- Anoxygenic photosynthesis is characteristic of :
 - (1) *Rhodospirillum*
 - (2) *Spirogyra*
 - (3) *Chlamydomonas*
 - (4) *Ulva*

BBC205

- Which of the following shows coiled RNA strand and capsomeres?
 - (1) Polio virus
 - (2) Tobacco mosaic virus
 - (3) Measles virus
 - (4) Retrovirus

BBC206

- Transformation was discovered by :-
 - (1) Meselson and Stahl
 - (2) Hershey and Chase
 - (3) Griffith
 - (4) Watson and Crick

BBC207

- Viruses have :-
 - (1) DNA enclosed in a protein coat
 - (2) Prokaryotic nucleus
 - (3) Single chromosome
 - (4) Both DNA and RNA

BBC208

- Which one of the following living organisms completely *lacks* a cell wall?
 - (1) Cyanobacteria
 - (2) Sea-fan (*Gorgonia*)
 - (3) *Saccharomyces*
 - (4) Blue-green algae

BBC209

AIPMT 2015

- Which one of the following matches is **correct** ?

(1)	<i>Alternaria</i>	Sexual reproduction absent	Deuteromycetes
(2)	<i>Mucor</i>	Reproduction by Conjugation	Ascomycetes
(3)	<i>Agaricus</i>	Parasitic fungus	Basidiomycetes
(4)	<i>Phytophthora</i>	Aseptate mycelium	Basidiomycetes

BBC210

- True nucleus is absent in :-
 - (1) *Mucor*
 - (2) *Vaucheria*
 - (3) *Volvox*
 - (4) *Anabaena*

BBC211

- Which one of the following is **not** an inclusion body found in prokaryotes ?
 - (1) Cyanophycean granule
 - (2) Glycogen granule
 - (3) Polysome
 - (4) Phosphate granule

BBC212

11. The guts of cow and buffalo possess:

- (1) *Chlorella* spp. (2) Methanogens
(3) Cyanobacteria (4) *Fucus* spp.

BBC213

Re-AIPMT 2015

12. Which of the following structures is **not** found in prokaryotic cells?

- (1) Plasma membrane (2) Nuclear envelope
(3) Ribosome (4) Mesosome

BBC214

13. Choose the **wrong** statement :

- (1) Yeast is unicellular and useful in fermentation.
(2) *Penicillium* is multicellular and produces antibiotics.
(3) *Neurospora* is used in the study of biochemical genetics.
(4) Morels and truffles are poisonous mushrooms.

BBC215

14. Which of the following are **not** membrane-bound?

- (1) Mesosomes (2) Vacuoles
(3) Ribosomes (4) Lysosomes

BBC216

15. Cell wall is absent in :

- (1) *Nostoc* (2) *Aspergillus*
(3) *Funaria* (4) Mycoplasma

BBC217

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

- (1) Slime moulds (2) Chrysophytes
(3) Euglenoids (4) Dinoflagellates

BBC218

17. Chromatophores take part in :

- (1) Respiration (2) Photosynthesis
(3) Growth (4) Movement

BBC220

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

- (1) Holdfast (2) Rhizoids
(3) Fimbriae (4) Mesosomes

BBC221

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

- (1) Ascomycetes (2) Deuteromycetes
(3) Basidiomycetes (4) Phycomycetes

BBC222

20. Pick up the **wrong** statement :

- (1) Nuclear membrane is present in Monera
(2) Cell wall is absent in Animalia.
(3) Protista have photosynthetic and heterotrophic modes of nutrition.
(4) Some fungi are edible.

BBC223

NEET-I 2016

21. Which one of the following statements is wrong ?

- (1) Cyanobacteria are also called blue-green algae.
(2) Golden algae are also called desmids.
(3) Eubacteria are also called false bacteria.
(4) Phycomycetes are also called algal fungi

BBC224

22. Chrysophytes, Euglenoids, Dinoflagellates and Slime moulds are included in the kingdom:-

- (1) Monera (2) Protista
(3) Fungi (4) Animalia

BBC225

23. The primitive prokaryotes responsible for the production of biogas from the dung of ruminant animals, include the :-
 (1) Halophiles (2) Thermoacidophiles
 (3) Methanogens (4) Eubacteria

BBC227

NEET-II 2016

24. Methanogens belong to :
 (1) Dinoflagellates
 (2) Slime moulds
 (3) Eubacteria
 (4) Archaeobacteria

BBC228

25. Select the **wrong** statement :-
 (1) Diatoms are chief producers in the oceans.
 (2) Diatoms are microscopic and float passively in water.
 (3) The walls of diatoms are easily destructible.
 (4) 'Diatomaceous earth' is formed by the cell walls of diatoms.

BBC229

26. Select the **mismatch** :-
 (1) Protists-Eukaryotes
 (2) Methanogens-Prokaryotes
 (3) Gas vacuoles-Green bacteria
 (4) Large central vacuoles - Animal cells

BBC230

27. Select the **wrong** statement :-
 (1) Cyanobacteria lack flagellated cells.
 (2) *Mycoplasma* is a wall-less microorganism
 (3) Bacterial cell wall is made up of peptidoglycan.
 (4) Pilli and fimbriae are mainly involved in motility of bacterial cells

BBC231

28. Which of the following sets of diseases is caused by bacteria?
 (1) Tetanus and mumps
 (2) Herpes and influenza
 (3) Cholera and tetanus
 (4) Typhoid and smallpox

BBC233

NEET (UG) 2017

29. Which of the following are found in extreme saline conditions ?
 (1) Eubacteria (2) Cyanobacteria
 (3) Mycobacteria (4) Archaeobacteria

BBC234

30. Select the mismatch :-
 (1) *Rhodospirillum* — Mycorrhiza
 (2) *Anabaena* — Nitrogen fixer
 (3) *Rhizobium* — Alfalfa
 (4) *Frankia* — *Alnus*

BBC235

31. Which of the following components provides sticky character to the bacterial cell ?
 (1) Nuclear membrane
 (2) Plasma membrane
 (3) Glycocalyx
 (4) Cell wall

BBC236

32. Viroids differ from viruses in having :-
 (1) DNA molecules without protein coat
 (2) RNA molecules with protein coat
 (3) RNA molecules without protein coat
 (4) DNA molecules with protein coat

BBC237

33. Which of the following is correctly matched for the product produced by them ?
 (1) *Methanobacterium* : Lactic acid
 (2) *Penicillium notatum* : Acetic acid
 (3) *Saccharomyces cerevisiae* : Ethanol
 (4) *Acetobacter aceti* : Antibiotics

BBC238

34. 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 ?

(1) *Pseudomonas* (2) *Mycoplasma*
(3) *Nostoc* (4) *Bacillus*

BBC239

NEET (UG) 2018

35. Which among the following is **not** a prokaryote?

(1) *Saccharomyces*
(2) *Mycobacterium*
(3) *Nostoc*
(4) *Oscillatoria*

BBC240

36. Select the **wrong** statement :-

(1) Cell wall is present in members of fungi and plantae
(2) Mushrooms belong to basidiomycetes
(3) Pseudopodia are locomotory and feeding structures in sporozoans
(4) Mitochondria are the powerhouse of the cell in all kingdoms except Monera

BBC241

37. After karyogamy followed by meiosis, spores are produced exogenously in

(1) *Neurospora* (2) *Alternaria*
(3) *Agaricus* (4) *Saccharomyces*

BBC242

38. Oxygen is **not** produced during photosynthesis by :-

(1) Green sulphur bacteria
(2) *Nostoc*
(3) *Cycas*
(4) *Chara*

BBC243

39. Which of the following organisms are known as chief producers in the oceans ?

(1) Dinoflagellates
(2) Diatoms
(3) Cyanobacteria
(4) Euglenoids

BBC244

NEET (UG) 2019

40. Which of the following statements is **incorrect**?

(1) Morels and truffles are edible delicacies.
(2) *Claviceps* is a source of many alkaloids and LSD.
(3) Conidia are produced exogenously and ascospores endogenously.
(4) Yeasts have filamentous bodies with long thread-like hyphae.

BBC245

41. Which of the following statements is **incorrect** ?

(1) Viroids lack a protein coat.
(2) Viruses are obligate parasites.
(3) Infective constituent in viruses is the protein coat.
(4) Prions consist of abnormally folded proteins.

BBC246

42. *Thiobacillus* is a group of bacteria helpful in carrying out :

(1) Nitrogen fixation
(2) Chemoautotrophic fixation
(3) Nitrification
(4) Denitrification

BBC247

43. Match Column-I with Column-II.

Column-I	Column-II
(a) Saprophyte	(i) Symbiotic association of fungi with plant roots
(b) Parasite	(ii) Decomposition of dead organic materials
(c) Lichens	(iii) Living on living plants or animals
(d) Mycorrhiza	(iv) Symbiotic association of algae and fungi

Choose the **correct** answer from the options given below :-

	(a)	(b)	(c)	(d)
(1)	(i)	(ii)	(iii)	(iv)
(2)	(iii)	(ii)	(i)	(iv)
(3)	(ii)	(i)	(iii)	(iv)
(4)	(ii)	(iii)	(iv)	(i)

BBC248

NEET (UG) 2019 (ODISHA)

44. Match the organisms in column-I with habitats in column-II.

Column-I	Column-II
(a) Halophiles	(i) Hot springs
(b) Thermoacidophiles	(ii) Aquatic environment
(c) Methanogens	(iii) Guts of ruminants
(d) Cyanobacteria	(iv) Salty area

Select the **correct** answer from the options given below :-

- (1) (a)-(iv), (b)-(i), (c)-(iii), (d)-(ii)
- (2) (a)-(i), (b)-(ii), (c)-(iii), (d)-(iv)
- (3) (a)-(iii), (b)-(iv), (c)-(ii), (d)-(i)
- (4) (a)-(ii), (b)-(iv), (c)-(iii), (d)-(i)

BBC249

45. Mad cow disease in cattle is caused by an organism which has :-

- (1) inert crystalline structure
- (2) abnormally folded protein
- (3) free RNA without protein coat
- (4) free DNA without protein coat

BBC250

46. Which of the following statements is correct ?

- (1) Lichens do not grow in polluted areas.
- (2) Algal component of lichens is called mycobiont.
- (3) Fungal component of lichens is called phycobiont
- (4) Lichens are not good pollution indicators.

BBC251

47. Which of the following bacteria reduce nitrate in soil into nitrogen ?

- (1) *Nitrobacter*
- (2) *Nitrococcus*
- (3) *Thiobacillus*
- (4) *Nitrosomonas*

BBC252

48. Among the following pairs of microbes, which pair has both the microbes that can be used as biofertilizers?

- (1) *Aspergillus* and *Rhizopus*
- (2) *Rhizobium* and *Rhizopus*
- (3) *Cyanobacteria* and *Rhizobium*
- (4) *Aspergillus* and *Cyanobacteria*

BBC253

49. Which of the following statements about methanogens is not correct?

- (1) They can be used to produce biogas.
- (2) They are found in the rumen of cattle and their excreta.
- (3) They grow aerobically and breakdown cellulose-rich food.
- (4) They produce methane gas.

BBC254

NEET (UG) 2020

50. Which of the following is correct about viroids?
- (1) They have free DNA without protein coat.
 - (2) They have RNA with protein coat.
 - (3) They have free RNA without protein coat.
 - (4) They have DNA with protein coat.

BBC256

51. Which of the following statements about inclusion bodies is **incorrect** ?
- (1) These represent reserve material in cytoplasm.
 - (2) They are not bound by any membrane.
 - (3) These are involved in ingestion of food particles.
 - (4) They lie free in the cytoplasm.

BBC257

NEET (UG) 2020 (COVID-19)

52. Inclusion bodies of blue- green, purple and green photosynthetic bacteria are :-
- (1) Contractile vacuoles
 - (2) Gas vacuoles
 - (3) Centrioles
 - (4) Microtubules

BBC258

53. Which of the following is **incorrect** about Cyanobacteria ?
- (1) They are photoautotrophs.
 - (2) They lack heterocyst.
 - (3) They often form blooms in polluted water bodies.
 - (4) They have chlorophyll A similar to green plants.

BBC259

NEET (UG) 2021

54. Which of the following statements is correct?
- (1) Fusion of two cells is called Karyogamy.
 - (2) Fusion of protoplasm between two motile on non-motile gametes is called plasmogamy.
 - (3) Organisms that depend on living plants are called saprophytes.
 - (4) Some of the organisms can fix atmospheric nitrogen in specialized cells called sheath cells.

BBC262

NEET (UG) 2022

55. **Statement-I:** Mycoplasma can pass through less than 1 micron filter size.
Statement-II : Mycoplasma are bacteria with cell wall.
 In the light of the above statements, choose the **most appropriate** answer from the options given below:
- (1) Both Statement-I and II are incorrect.
 - (2) Statement-I is correct but Statement-II is incorrect.
 - (3) Statement-I is incorrect but Statement-II is correct.
 - (4) Both Statement-I and II are correct.

BBC264

56. Which of the following is a **correct** statement?
- (1) Bacteria are exclusively heterotrophic organisms.
 - (2) Slime moulds are saprophytic organisms classified under Kingdom Monera.
 - (3) Mycoplasma have DNA, Ribosome and cell wall.
 - (4) Cyanobacteria are a group of autotrophic organisms classified under Kingdom Monera.

BBC265

Re-NEET (UG) 2022

57. Mad cow disease in cattle and Cr Jacob disease in humans are due to infection by_____.

- (1) Bacterium (2) Virus
(3) Viroid (4) Prion

BBC266

NEET (UG) 2023

58. Match List-I with List-II.

	List-I		List-II
A.	Ringworm	I.	<i>Haemophilus influenzae</i>
B.	Filariasis	II.	<i>Trichophyton</i>
C.	Malaria	III.	<i>Wuchereria bancrofti</i>
D.	Pneumonia	IV.	<i>Plasmodium vivax</i>

Choose the **correct** answer from the options given below :-

- (1) A-II, B-III, C-I, D-IV
(2) A-III, B-II, C-I, D-IV
(3) A-III, B-II, C-IV, D-I
(4) A-II, B-III, C-IV, D-I

BBC390

59. **Statement-I** : RNA mutates at a faster rate.
Statement-II : Viruses having RNA genome and shorter life span mutate and evolve faster.

In the light of the above statements, choose the **correct** answer from the options given below :-

- (1) Both Statement-I and Statement-II are false.
(2) Statement I is true but Statement II is false.
(3) Statement I false but Statement II is true.
(4) Both Statement I and Statement II are true.

BBC391

NEET (UG) 2024

60. Which one of the following is not a criterion for classification of fungi?

- (1) Morphology of mycelium
(2) Mode of nutrition
(3) Mode of spore formation
(4) Fruiting body

BBC398

61. Match List-I with List-II.

	List-I		List-II
A.	<i>Rhizopus</i>	I.	Mushroom
B.	<i>Ustilago</i>	II.	Smut fungus
C.	<i>Puccinia</i>	III.	Bread mould
D.	<i>Agaricus</i>	IV.	Rust fungus

Choose the **correct** answer from the options given below :-

- (1) A-III, B-II, C-IV, D-I
(2) A-I, B-III, C-II, D-IV
(3) A-III, B-II, C-I, D-IV
(4) A-IV, B-III, C-II, D-I

BBC399

RE-NEET (UG) 2024

62. Match List-I with List-II.

	List-I (Organisms)		List-II (Mode of Nutrition)
A.	Euglenoid	I.	Parasitic
B.	Dinoflagellate	II.	Saprophytic
C.	Slime mould	III.	Photosynthetic
D.	<i>Plasmodium</i>	IV.	Switching between photosynthetic and heterotrophic mode

Choose the **correct** answer from the options given below :-

- (1) A-III, B-IV, C-II, D-I
(2) A-IV, B-II, C-I, D-III
(3) A-IV, B-III, C-II, D-I
(4) A-IV, B-II, C-III, D-I

BBC400

EXERCISE-II (Previous Year Questions)														ANSWER KEY	
Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Answer	2	1	1	2	3	1	2	1	4	3	2	2	4	3	4
Question	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Answer	2	2	3	2	1	3	2	3	4	3	4	4	3	4	1
Question	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Answer	3	3	3	2	1	3	3	1	2	4	3	4	4	1	2
Question	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Answer	1	3	3	3	3	3	2	2	2	2	4	4	4	4	2
Question	61	62													
Answer	1	3													

Exercise - III

Master Your Understanding

(A) NCERT BASED QUESTIONS

- Archaeobacteria differ from other bacteria in having a:-
 (1) Different cell wall and cell membrane structure
 (2) Different cellular organization
 (3) Parasitic nature
 (4) Both (2) and (3)

BBC267

- Nitrogen fixing cyanobacteria are :-
 (1) *Rhizobium*, *Nostoc*
 (2) *Rhizobium*, *Anabaena*
 (3) *Nostoc*, *Anabaena*
 (4) *Anabaena*, *Azolla*

BBC268

- The vast majority of bacteria are :-
 (1) Symbiotic (2) Autotrophic
 (3) Heterotrophic (4) Nitrogen fixing

BBC269

- Which character indicates that Cyanobacteria are similar to higher green plants ?
 (1) Type of cell wall
 (2) Nitrogen fixation ability
 (3) Presence of chlorophyll 'a'
 (4) Presence of gelatinous sheath

BBC270

- Typhoid and tetanus are caused by :-
 (1) Bacteria (2) Virus
 (3) Viroids (4) Fungi

BBC271

- Which one of the following prokaryotes lack cell wall?
 (1) Virus (2) Cyanobacteria
 (3) Mycoplasma (4) Protozoa

BBC272

- According to five kingdom classification Protista includes :-

- (1) Chrysophytes, Dinoflagellates, Protozoans
- (2) Diatoms, Euglenoids, Virus
- (3) Dinoflagellates, Protozoans, Red algae
- (4) Chrysophytes, Bryophytes, Protozoans, Slime mould

BBC273

- Which organisms have silica in their cell wall?

- (1) Dinoflagellates (2) Slime mould
- (3) Diatoms (4) Euglenoids

BBC274

- Which organism is responsible for red surface of sea?

- (1) *Euglena* (2) *Gonyaulax*
- (3) *Amoeba* (4) *Paramoecium*

BBC275

- Which unicellular, photosynthetic eukaryote lacks cell wall ?

- (1) Mycoplasma (2) *Amoeba*
- (3) *Euglena* (4) Slime mould

BBC276

- Select incorrect statement about fungi ?

- (1) The cell walls are composed of chitin and polysaccharides
- (2) These are heterotrophic organisms
- (3) They are autotrophic organism
- (4) They are absorptive in nature

BBC278

- In fungi, vegetative reproduction takes place by:-

- (1) Fragmentation (2) Conidia
- (3) Zygospore (4) Oospore

BBC279

- 13.** In ascomycetes and basidiomycetes, the dikaryotic cell is :-
 (1) Haploid (2) Diploid
 (3) Triploid (4) Polyploid
BBC280
- 14.** Which of the following is not a member of class phycomycetes ?
 (1) *Albugo* (2) *Mucor*
 (3) *Rhizopus* (4) *Neurospora*
BBC281
- 15.** The mycelium is aseptate and coenocytic in:-
 (1) Phycomycetes (2) Basidiomycetes
 (3) Deuteromycetes (4) Ascomycetes
BBC282
- 16.** Septate and branched mycelium is found in:-
 (1) Basidiomycetes (2) Deuteromycetes
 (3) Ascomycetes (4) All the above
BBC283
- 17.** Select correct matched pair / pairs :-
 (1) *Claviceps* – Ascomycetes
 (2) Morels – Ascomycetes
 (3) *Agaricus* – Basidiomycetes
 (4) All the above
BBC284
- 18.** Asexual reproduction takes place by conidia formation in :-
 (1) *Aspergillus* (2) *Penicillium*
 (3) *Colletotrichum* (4) All the above
BBC285
- 19.** Which of the following are examples of unicellular algae ?
 (1) *Chlamydomonas* (2) *Riccia*
 (3) *Chlorella* (4) Both (1) & (3)
BBC286
- 20.** Which of the following are not considered in five kingdom system of classification ?
 (1) Lichen (2) Virus
 (3) Viroid (4) All the above
BBC287
- 21.** The name virus that means venom or poisonous fluid was given by :-
 (1) Pasteur (2) Ivanowsky
 (3) Stanley (4) Both (2) & (3)
BBC288
- 22.** Viroid was discovered by :-
 (1) Haeckel (2) Pasteur
 (3) T.O. Diener (4) Theophrastus
BBC289
- 23.** Bacteriophages are generally :-
 (1) ss DNA virus (2) ds DNA virus
 (3) ss RNA virus (4) ds RNA virus
BBC290
- 24.** Select true statement :-
 (1) Viruses are obligate parasites
 (2) In Lichens, algal component is called phycobiont
 (3) In Lichens, Fungal component is called mycobiont
 (4) All the above
BBC291
- 25.** Which group shows the most extensive metabolic diversity ?
 (1) Plantae (2) Animalia
 (3) Monera (4) Fungi
BBC292
- 26.** Archaeobacteria differ from other bacteria in:-
 (1) Nucleoid
 (2) Composition of cell wall
 (3) Composition of cytoplasm
 (4) Composition of genetic material
BBC293

27. Which group of organisms is responsible for the production of biogas from the dung of cows and buffaloes ?
 (1) *Methanomonas* (2) Methanogens
 (3) Cyanobacteria (4) *Mycoplasma*
BBC294
28. Choose the correct statement :-
 (1) Most of the bacteria are autotrophs
 (2) All bacteria are heterotrophs
 (3) Some bacteria are heterotrophs
 (4) Most of the bacteria are heterotrophs
BBC295
29. Which of the following character is common in both cyanobacteria and green plants ?
 (1) Cell wall composition
 (2) Presence of chlorophyll 'a'
 (3) Presence of heterocyst
 (4) Presence of 80s ribosome
BBC296
30. *Nostoc* can fix atmospheric nitrogen in specialised cell, called :-
 (1) Chromatophore (2) Zoospore
 (3) Heterocyst (4) Oospore
BBC297
31. Which process is not performed by bacterial activity?
 (1) Production of antibiotics
 (2) Fixing nitrogen in legumes
 (3) Making curd from milk
 (4) Production of pseudo mycelium
BBC298
32. Choose the incorrect statement regarding *Mycoplasma* :-
 (1) They lack cell wall
 (2) They are smallest living cell
 (3) They can survive without oxygen
 (4) They have mesosome for respiration
BBC299
33. Which are chief producers of oceans ?
 (1) Diatoms (2) Dinoflagellates
 (3) Euglenoid (4) Green algae
BBC300
34. Which organism is responsible for making the sea appear red by rapid multiplication?
 (1) *Euglena* (2) *Paramoecium*
 (3) *Gonyaulax* (4) *Trypanosoma*
BBC301
35. Euglenoids have a protein rich layer instead of a cell wall. This layer is called as :-
 (1) Epidermis (2) Skin
 (3) Pellicle (4) Middle layer
BBC302
36. Choose the incorrect statement from following:
 (1) Dinoflagellates have stiff cellulosic plates on the outer surface.
 (2) Euglenoids have two flagella, one lies longitudinally and the other transversely.
 (3) Slime mould spores are dispersed by air currents.
 (4) In diatoms, the cell walls form two thin overlapping shells, which fit together as in a soap box.
BBC303
37. Which group of organisms is used to make bread and beer?
 (1) *Rhizopus* (2) Yeast
 (3) *Albugo* (4) *Neurospora*
BBC304
38. Fungus prefers to grow in :-
 (1) Warm and humid places
 (2) Cold and humid places
 (3) Warm and cold both
 (4) Warm, cold and humid places
BBC305

- 39.** In fungi when the hyphae are continuous and branched tubes and filled with multi-nucleated cytoplasm, these are called:-
 (1) Unicellular hyphae
 (2) Coenocytic hyphae
 (3) Multicellular hyphae
 (4) Both (1) and (3)
BBC306
- 40.** In fungi sexual reproduction is by :-
 (1) Fragmentation, Ascospores and Basidiospores
 (2) Budding, Conidia, and Basidiospores
 (3) Oospores, Ascospores and Basidiospores
 (4) Fission, Zoospores, Oospores
BBC307
- 41.** Mycelium of members of phycomycetes is:-
 (1) Septate and coenocytic
 (2) Aseptate and coenocytic
 (3) Septate and multicellular
 (4) Septate and unicellular
BBC308
- 42.** Choose the incorrect statement about phycomycetes :-
 (1) Members are found in aquatic habitats
 (2) Spores are endogenously produced in sporangium
 (3) Zygosporangium is formed by reduction division
 (4) Its members reproduce sexually may be isogamous, anisogamous or oogamous.
BBC309
- 43.** Which fungus is used extensively in biochemical and genetic work ?
 (1) *Agaricus*
 (2) *Aspergillus*
 (3) *Claviceps*
 (4) *Neurospora*
BBC310
- 44.** Choose the incorrect statement about ascomycetes :-
 (1) Mycelium is branched and septate.
 (2) Sexual spores are produced endogenously .
 (3) They have sac like structure in which karyogamy takes place.
 (4) Reduction division occurs in fruiting bodies and form conidia.
BBC311
- 45.** Which group of organism is related with basidiomycetes ?
 (1) Mushroom, *Ustilago*, *Aspergillus*
 (2) Puffballs, *Agaricus*, *Aspergillus*
 (3) Mushroom, *Ustilago*, *Agaricus*
 (4) *Ustilago*, *Aspergillus*, *Agaricus*
BBC312
- 46.** Which set of diseases is caused by members of basidiomycetes ?
 (1) Rust and smut
 (2) Ergot and smut
 (3) Ergot and rust
 (4) Citrus canker and rust
BBC313
- 47.** Fungi imperfecti are called :
 (1) members of phycomycetes
 (2) members of ascomycetes
 (3) members of basidiomycetes
 (4) members of deuteromycetes
BBC314
- 48.** Which is not found in members of deuteromycetes ?
 (1) Asexual reproduction
 (2) Mode of nutrition
 (3) Structure of mycelium
 (4) Sexual reproduction
BBC315

49. Which of the following are noncellular organisms that are characterized by having an inert crystalline structure outside the living cell:-

- (1) Bacteria (2) *Mycoplasma*
(3) Virus (4) Lichen

BBC316

50. Select false statement :-

- (1) Lichens are symbiotic association between algae & fungi
(2) Viruses are smaller than bacteria
(3) Virus name are obligate parasites
(4) Viruses are facultative parasite

BBC317

51. Select incorrect statement about viroid :-

- (1) Free infectious RNA
(2) It was discovered by T.O. Diener
(3) It causes potato spindle tuber disease
(4) It contains high molecular weight RNA

BBC318

52. Which is incorrect statement ?

- (1) The *Mycoplasma* are organisms that completely lack a cell wall.
(2) *Mycoplasma* can survive without oxygen.
(3) *Mycoplasma* are the smallest living cells.
(4) *Mycoplasma* can cause disease only in plants.

BBC319

53. Generally plant viruses are :-

- (1) Double stranded DNA viruses
(2) Single stranded RNA viruses
(3) Single stranded DNA viruses
(4) Double stranded RNA viruses

BBC320

(B) ANALYTICAL QUESTIONS

54. Modern farmer's can increase the yield of Paddy upto 50% by the use of :-

- (1) Cyanobacteria
(2) *Rhizobium*
(3) Cyanobacteria in *Azolla pinnata*
(4) Farm yard manure

BBC322

55. Plant pathogenic bacteria are mostly :-

- (1) Gram + Non spore forming
(2) Gram - Negative non spore forming
(3) Gram + spore forming
(4) Gram (-) spore forming

BBC323

56. Nitrogen fixing bacteria convert :-

- (1) $N_2 \rightarrow NH_3$ (2) $NH_4^+ \rightarrow$ Nitrates
(3) $NO_2 \rightarrow NO_3$ (4) $NO_3 \rightarrow N_2$

BBC324

57. Main reason of water bloom in rivers, lakes, sea etc. is:-

- (1) Brown algae and green algae
(2) Cyanobacteria and dinoflagellates
(3) *Eichornia*
(4) Fishes

BBC325

58. Genetic material of prokaryotic cell:-

- (1) Non histonic double stranded DNA
(2) Histonic double stranded DNA
(3) Histone & DNA both are absent
(4) Histone without DNA

BBC326

59. Diatomaceous earth is used as heat insulator in boilers and steam pipes because the cell wall of diatom -

- (1) Composed of Iron
(2) Composed of Silicon dioxide
(3) Is conductor of heat
(4) Is bad conductor of electricity

BBC327

60. Enzymes are not found in-
 (1) Fungi (2) Algae
 (3) Virus (4) Cyanobacteria
BBC328
61. Plant Decomposers belong to :-
 (1) Monera and fungi
 (2) Fungi and plants
 (3) Protista and Animalia
 (4) Animalia and Monera
BBC329
62. Sexual reproduction in fungus occurs in the following sequential event. Arrange them properly.
 (A) Fusion of two nuclei called karyogamy.
 (B) Fusion of protoplasm between two motile or non-motile gametes.
 (C) Meiosis in zygote resulting in haploid spores.
 (1) $A \rightarrow B \rightarrow C$ (2) $B \rightarrow A \rightarrow C$
 (3) $C \rightarrow B \rightarrow A$ (4) $C \rightarrow A \rightarrow B$
BBC401
63. Which bacteria is utilized in Gobar gas plant?
 (1) Methanogens
 (2) Nitrifying bacteria
 (3) Ammonifying bacteria
 (4) Denitrifying bacteria
BBC331
64. In bacteria, plasmid is :-
 (1) Extra chromosomal material
 (2) Main DNA
 (3) Non functional DNA
 (4) Repetitive gene
BBC332
65. Sequence of which of the following is used to know the phylogeny :-
 (1) m-RNA (2) r-RNA
 (3) t-RNA (4) DNA
BBC333
66. In five kingdom system, the main basis of classification :-
 (1) Structure of nucleus
 (2) Nutrition
 (3) Structure of cell wall
 (4) Asexual reproduction
BBC334
67. Organisms which obtain energy by the oxidation of reduced inorganic compounds are called
 (1) Photo autotrophs
 (2) Chemo autotrophs
 (3) Saprophytic
 (4) Coproheterotrophs
BBC335
68. Which one of the following bacteria has found extensive use in genetic engineering work in plants:-
 (1) *Clostridium septicum*
 (2) *Xanthomonas citri*
 (3) *Bacillus coagulans*
 (4) *Agrobacterium tumefaciens*
BBC336
69. In which kingdom would you classify the archaea and nitrogen-fixing organisms, if the five-kingdom system of classification is used:-
 (1) Plantae (2) Fungi
 (3) Protista (4) Monera
BBC337
70. In oogamy, fertilization involves :-
 (1) A large motile female gamete and a small non-motile male gamete
 (2) A small non-motile female gamete and a large motile male gamete
 (3) A large non-motile female gamete and a small motile male gamete
 (4) A large non-motile female gamete and a large non-motile male gamete
BBC340

71. Flagella of prokaryotic and eukaryotic cells differ in :-
 (1) Microtubular organization and function
 (2) Type of movement and placement in cell
 (3) Location in cell and mode of functioning
 (4) Microtubular organization and type of movement

BBC341

72. If by radiation all nitrogenase enzyme are inactivated, then there will be no :-
 (1) Conversion from ammonium to nitrate in soil
 (2) Fixation of nitrogen in legumes
 (3) Fixation of atmospheric nitrogen
 (4) Conversion from nitrate to nitrite in legumes

BBC342

73. A free living nitrogen-fixing cyanobacterium which can also form symbiotic association with the water fern *Azolla* is :-
 (1) *Anabaena* (2) *Tolypothrix*
 (3) *Chlorella* (4) *Nostoc*

BBC344

74. Carbohydrates, the most abundant biomolecules on earth, are produced by :
 (1) some bacteria, algae and green plant cells
 (2) all bacteria, fungi and algae
 (3) fungi, algae and green plant cells
 (4) viruses, fungi and bacteria

BBC345

75. Barophilic prokaryotes :
 (1) occur in water containing high concentrations of barium hydroxide.
 (2) readily grow and divide in sea water enriched in any soluble salt of barium
 (3) grow and multiply in very deep marine sediments
 (4) grow slowly in highly alkaline frozen lakes at high altitudes

BBC346

76. Auxospores and hormocysts are formed, respectively, by :

- (1) Several diatoms and a few cyanobacteria
 (2) Some diatoms and several cyanobacteria
 (3) Several cyanobacteria and several diatoms
 (4) Some cyanobacteria and many diatoms

BBC347

77. Which of the following is non-cellular organism?

- (1) Bacteria
 (2) Fungi
 (3) Algae
 (4) Virus

BBC348

78. Find the **incorrect** match :-

Column-I		Column-II
(1)	<i>Ustilago</i>	belongs to class basidiomycetes
(2)	<i>Agaricus</i>	belongs to class basidiomycetes
(3)	<i>Trichoderma</i>	sexual cycle is found
(4)	<i>Alternaria</i>	sexual cycle is not found

BBC349

79. Find the **incorrect** statement about fungi :-

- (1) They show a great diversity in morphology and habitats
 (2) Fungi are cosmopolitan and occur in air, water, soil and as parasites also
 (3) They prefer to grow in cold and dry places
 (4) With the exception of yeasts, fungi are filamentous

BBC350

- 80.** Find the **correct** statements about fungi :-
 (A) Most of the fungi are saprophytes
 (B) Fungi can also survive as symbionts
 (C) Sexual reproduction in fungi involves three steps
 (D) Reduction division in fungi occurs in fruiting bodies which forms haploid spores
 (1) A, B are correct
 (2) C, D are correct
 (3) A, B & C are correct
 (4) A, B, C & D are correct
BBC351
- 81.** Choose the **incorrect** statement regarding decomposer :-
 (1) They may be prokaryotes or eukaryotes.
 (2) They may be unicellular or multicellular
 (3) They convert inorganic into organic compounds
 (4) They play a great role in ecology
BBC352
- 82.** With respect to fungal sexual cycle, what is the correct sequence ?
 (1) Karyogamy, plasmogamy & meiosis
 (2) Meiosis, plasmogamy & karyogamy
 (3) Plasmogamy, karyogamy & meiosis
 (4) Meiosis, karyogamy & plasmogamy
BBC353
- 83.** In prokaryotes, chromatophores are –
 (1) Specialized granules responsible for colouration of cells
 (2) Structures responsible for organizing the shape of the organism
 (3) Inclusion bodies lying free inside the cells for carrying out various metabolic activities
 (4) Internal membrane systems that may become extensive and complex in photosynthetic bacteria
BBC354
- 84.** All eukaryotic unicellular organisms belong to-
 (1) Monera (2) Protista
 (3) Fungi (4) Bacteria
BBC355
- 85.** The five kingdom classification was proposed by-
 (1) R.H. Whittaker (2) C.Linnaeus
 (3) A. Roxberg (4) Virchow
BBC356
- 86.** Organisms living in salty areas are called as
 (1) Methanogens
 (2) Halophiles
 (3) Heliophytes
 (4) Thermoacidophiles
BBC357
- 87.** Naked cytoplasm, multinucleated and saprophytic are the characteristics of :
 (1) Monera (2) Protista
 (3) Fungi (4) Slime molds
BBC358
- 88.** An association between roots of higher plants and fungi is called-
 (1) Lichen (2) Fern
 (3) Mycorrhiza (4) BGA
BBC359
- 89.** A dikaryon is formed when
 (1) Meiosis is arrested
 (2) The two haploid nuclei do not fuse immediately
 (3) Cytoplasm does not fuse
 (4) None of the above
BBC360
- 90.** *Contagium vivum fluidum* was proposed by
 (1) D.J. Ivanowsky (2) M.W. Beijerinck
 (3) Stanley (4) Robert Hook
BBC361

- 91.** Mycobiont and Phycobiont are found in
 (1) Mycorrhiza (2) Root
 (3) Lichens (4) BGA

BBC362

- 92.** Difference between Virus and Viroid is
 (1) Absence of protein coat in viroid but present in virus
 (2) Presence of low molecular weight RNA in virus but absent in viroid
 (3) Both (1) and (2)
 (4) None of the above

BBC363

- 93.** The following features belong to class
 (A) Asexual reproduction by zoospores or aplanospores.
 (B) Fusion of gametes may be isogamous, anisogamous or oogamous.
 (C) Mycelium is aseptate and coenocytic.
 (D) Spores are endogenously produced in sporangium.
 (1) Ascomycetes (2) Deuteromycetes
 (3) Phycomycetes (4) Basidiomycetes

BBC402

- 94.** Viruses are non-cellular organisms but replicate themselves once they infect the host cell. To which of the following kingdom do viruses belong to?
 (1) Monera (2) Protista
 (3) Fungi (4) None of the above

BBC365

- 95.** 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
 (1) None of the above (2) i and iv
 (3) ii and iii (4) All of the above

BBC366

- 96.** Cyanobacteria are classified under
 (1) Protista (2) Plantae
 (3) Monera (4) Algae

BBC367

- 97.** Fusion of two gametes which are dissimilar in size is termed as
 (1) Oogamy (2) Isogamy
 (3) Anisogamy (4) Zoogamy

BBC368

- 98.** Which of the following criterion was not used for classification of fungi?
 (1) Structure of mycelium
 (2) Structure of fruiting body
 (3) Complexity of cell wall
 (4) Mode of spore formation

BBC369

- 99.** In which kingdom would you classify the archaebacteria and nitrogen-fixing organisms. If the five-kingdom system of classification is used ?
 (1) Monera (2) Plantae
 (3) Fungi (4) Protista

BBC370

- 100.** How many kingdoms include prokaryotic organisms only, in three domain classification?
 (1) One (2) Three
 (3) Two (4) Four

BBC371

- 101.** A bacterium is able of withstand extreme heat, dryness, and toxic chemical this indicates that it is probably able to form :
 (1) Endospore
 (2) Thick peptidoglycan wall
 (3) Capsule
 (4) Toxins

BBC372

102. Heterocysts as specialized cells to fix atmospheric nitrogen are produced by:

- (1) *Rhodospirillum* and *Nostoc*
- (2) *Anabaena* and *Azolla*
- (3) *Nostoc* and *Anabaena*
- (4) *Rhodopseudomonas* and *Oscillatoria*

BBC373

103. Which of the following are the characters of dinoflagellates?

- (i) They are planktonic golden yellow algae with soap box like structure.
- (ii) They are marine red biflagellated Protista.
- (iii) They appear yellow, green, brown, blue and red in colour.
- (iv) They are biflagellated organisms with pellicle.
- (v) They are saprophytic (or) parasitic unicellular forms.

- (1) (ii) and (iii) (2) (ii) and (v)
- (3) (i), (ii) and (iii) (4) (ii), (iv) and (v)

BBC374

104. Which statement is incorrect regarding fungi :

- (1) Stored food is glycogen and oil
- (2) Fungi are haploid in nature
- (3) Higher Fungi are more advanced than lower fungi in complexity of sex organs.
- (4) Haplontic life cycle and zygotic meiosis occurs in most of the fungi

BBC376

105. Match column I with column II and choose the right option :

Column-I	Column-II
(A) Ascomycetes	(i) <i>Rhizopus</i>
(B) Basidiomycetes	(ii) <i>Penicillium</i>
(C) Deuteromycetes	(iii) <i>Ustilago</i>
(D) Phycomycetes	(iv) <i>Alternaria</i>

- (1) A-(iv), B-(iii), C-(i), D-(ii)
- (2) A-(ii), B-(iii), C-(iv), D-(i)
- (3) A-(iv), B-(i), C-(ii), D-(iii)
- (4) A-(iii), B-(iv), C-(ii), D-(i)

BBC377

106. Which of the following is not a sexual spore

- (a) Sporangiospore
- (b) Ascospore
- (c) Basidiospore
- (d) Oospore
- (e) Zygosporangium

- (1) (a), (b) and (c)
- (2) only (a)
- (3) (b), (c) and (d)
- (4) (d) and (e)

BBC378

107. Which of the following group of kingdom Protista is being described in the statements given below ?

- (i) This group includes diatoms and golden algae.
- (ii) They are microscopic and float passively in water currents (plankton).
- (iii) Most of them are photosynthetic.
- (iv) They have deposits in their habitat; this accumulation over billion of years is referred to as 'diatomaceous earth'.

- (1) Dinoflagellates
- (2) Chrysophytes
- (3) Euglenoids
- (4) Slime moulds

BBC379

108. The given statements are some characters of a particular group of Kingdom Protista.

- (i) Most of them are fresh water organisms found in standing water.

- (ii) They have a protein rich layer (called pellicle) which makes their body flexible.
- (iii) They have two flagella, a short and a long one.
- (iv) Though they are photosynthetic in the presence of sunlight, but in the absence of sunlight they behave like heterotrophs by predating on other smaller organisms.

Identify the correct group on the basis of these characters.

- (1) Protozoans
- (2) Chrysophytes
- (3) Slime moulds
- (4) Euglenoids

BBC380

109. Which of the following statement(s) is/are correct about ascomycetes ?

- (i) *Neurospora*, which is used in biochemical and genetic work is a member of this class.
- (ii) They are mostly multicellular, e.g., Yeast, or rarely unicellular, e.g., *Penicillium*.
- (iii) They are saprophytic, decomposers, parasitic or coprophilous.
- (iv) Some examples are *Aspergillus*, *Claviceps* and *Neurospora*.

- (1) Both (i) and (ii)
- (2) Only (ii)
- (3) (i), (iii) and (iv)
- (4) All of these

BBC381

110. Which of the following statement(s) is/are correct about class basidiomycetes ?

- (i) They are commonly known as imperfect fungi because only the asexual or vegetative phases of these fungi are known.
- (ii) They grow in soil, on logs and tree stumps and in living plant bodies as parasites, e.g., rusts and smuts.
- (iii) The mycelium is branched and septate.
- (iv) Some common members are *Agaricus*, *Ustilago* and *Puccinia*.

- (1) Only (i)
- (2) Both (ii) and (iii)
- (3) (ii), (iii) and (iv)
- (4) All of these

BBC382

111. Assertion : *Euglena* can be placed in the plant kingdom due to the presence of chlorophyll.

Reason : *Euglena* cannot be classified on the basis of two kingdom system of classification.

- (1) If both Assertion and Reason are true and the Reason is the correct explanation of the Assertion.
- (2) If both Assertion and Reason are true but the Reason is not the correct explanation of the Assertion.
- (3) If Assertion is true but Reason is false.
- (4) If both Assertion and Reason are false.

BBC383

112. Assertion : Outside a living cell, viruses have must crystalline statements.

Reason : Viroids have a protein coat.

- (1) If both Assertion and Reason are true and the Reason is the correct explanation of the Assertion.
- (2) If both Assertion and Reason are true but the Reason is not the correct explanation of the Assertion.
- (3) If Assertion is true but Reason is false.
- (4) If both Assertion and Reason are false.

BBC384

113. Assertion : TMV is a virus which causes Tobacco mosaic disease.

Reason : TMV has RNA as genetic material.

- (1) If both Assertion and Reason are true and the Reason is the correct explanation of the Assertion.
- (2) If both Assertion and Reason are true but the Reason is not the correct explanation of the Assertion.
- (3) If Assertion is true but Reason is false.
- (4) If both Assertion and Reason are false.

BBC385

114. Assertion : Yeasts such as *Saccharomyces cerevisiae* are used in baking industry.

Reason : Carbon dioxide produced during fermentation causes bread dough to rise by thermal expansion.

- (1) If both Assertion and Reason are true and the Reason is the correct explanation of the Assertion.
- (2) If both Assertion and Reason are true but the Reason is not the correct explanation of the Assertion.
- (3) If Assertion is true but Reason is false.
- (4) If both Assertion and Reason are false.

BBC386

115. Match the terms given in column-I with their examples given in column-II and choose the correct option :

	Column-I (Terms)		Column-II (Examples)
A.	Ascus	I.	<i>Spirulina</i>
B.	Basidium	II.	<i>Penicillium</i>
C.	Protista	III.	<i>Agaricus</i>
D.	Cyanobacteria	IV.	<i>Euglena</i>
E.	Animalia	V.	Sponges

(1) A – II, B – III, C – IV, D – V, E – I

(2) A – I, B – II, C – III, D – V, E – IV

(3) A – II, B – V, C – III, D – I, E – IV

(4) A – II, B – III, C – IV, D – I, E – V

BBC387

116. Given below are two statements:

Statement-I: Fungi and members of the Monera and Protista having cell walls have now been excluded from Plantae, although according to earlier classifications they were placed in the same kingdom.

Statement-II: The earliest systems of classification used only gross superficial morphological characters such as habit, colour, number and shape of leaves etc.

In the light of the above statements, choose the most appropriate answer from the options given below:

- (1) Both Statement-I and Statement-II are correct.
- (2) Both Statement-I and statement-II are incorrect.
- (3) Statement-I is correct but Statement-II is incorrect.
- (4) Statement-I is incorrect but Statement-II is correct.

BBC388

117. Given below are two statements: one is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A) : Cyanobacteria that are referred to as blue green algae are not "algae" anymore.

Reason (R) : All unicellular prokaryotes are placed in kingdom Monera and algae are placed in kingdom Plantae

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both (A) & (R) are correct but (R) is not the correct explanation of (A).
- (2) (A) is correct but (R) is not correct.
- (3) (A) is not correct but (R) is correct.
- (4) Both (A) & (R) are correct and (R) is the correct explanation of (A).

BBC389

118. The thalloid body of a slime mould (Myxomycetes) is known as: (kingdom Protista)

- (1) Fruiting body
- (2) Mycelium
- (3) Protonema
- (4) Plasmodium

BBC151

119. The bacterium (*Clostridium botulinum*) that causes botulism is :

- (1) a facultative aerobe
- (2) an obligate aerobe
- (3) a facultative anaerobe
- (4) an obligate anaerobe

BBC153

120. *Thermococcus*, *Methanococcus* and *Methanobacterium* exemplify :-

- (1) Bacteria whose DNA is relaxed or positively supercoiled but which have a cytoskeleton as well as mitochondria
- (2) Bacteria that contain a cytoskeleton and ribosomes
- (3) Archaeobacteria that contain protein homologous to eukaryotic core histones
- (4) Archaeobacteria that lack any histones resembling those found in eukaryotes but whose DNA is negatively supercoiled.

BBC161

121. Nitrogen fixation in root nodules of *Alnus* is brought about by :-

- (1) *Frankia*
- (2) *Azorhizobium*
- (3) *Bradyrhizobium*
- (4) *Clostridium*

BBC165

122. Single-celled eukaryotes are included in :-

- (1) Monera
- (2) Protista
- (3) Fungi
- (4) Archaea

BBC170

123. The common nitrogen-fixer in paddy fields is:

- (1) *Frankia*
- (2) *Rhizobium*
- (3) *Azospirillum*
- (4) *Oscillatoria*

BBC174

124. Select the correct combination of the statement (a-d) regarding the characteristics of certain organisms :

- (a) Methanogens are Archaeobacteria which produce methane in marshy areas
- (b) *Nostoc* is filamentous blue-green alga which fixes atmospheric nitrogen

- (c) Chemosynthetic autotrophic bacteria synthesize cellulose from glucose
(d) Mycoplasma lack a cell wall and can survive without oxygen

The correct statements are :

- (1) (a), (b), (c)
(2) (b), (c), (d)
(3) (a), (b), (d)
(4) (b), (c)

BBC176

- 125.** Pigment-containing membranous extensions in some cyanobacteria are :

- (1) Chromatophores
(2) Heterocysts
(3) Basal bodies
(4) Pneumatophores

BBC201

- 126.** Match the type of protozoans given in column-I with their examples given in column-II and choose the correct option.

	Column – I (Type of protozoans)		Column – II (Examples)
A.	Amoeboid protozoans	I.	<i>Paramoecium</i>
B.	Ciliated protozoans	II.	<i>Plasmodium</i>
C.	Flagellated protozoans	III.	<i>Amoeba</i>
D.	Sporozoans	IV.	<i>Trypanosoma</i>

- (1) A – I, B – III, C – IV, D – II
(2) A – III, B – I, C – II, D – IV
(3) A – III, B – I, C – IV, D – II
(4) A – III, B – IV, C – I, D – II

BBC392

- 127.** Which of the following organisms is/are correctly assigned its/their taxonomic group?

- (1) *Paramoecium* and *Plasmodium* belong to the same kingdom as that of *Penicillium*.
(2) Lichen is a composite organism formed from the symbiotic association of an alga and a protozoan.
(3) Yeast used in making bread and beer is a fungus.
(4) *Nostoc* and *Anabaena* are examples of protista.

BBC393

- 128.** Protozoans are not included in kingdom animalia because they are

- (1) mostly asymmetrical.
(2) unicellular eukaryotes.
(3) heterotrophic in nature.
(4) multicellular prokaryotes.

BBC394

- 129. Assertion :** Longitudinal binary fission in found in *Trypanosoma*.

Reason : Binary fission is a method of sexual reproduction.

- (1) Both Assertion and Reason are true and Reason is the correct explanation of Assertion.
(2) Both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
(3) Assertion is true but Reason is false.
(4) Both Assertion and Reason are false.

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130. Statement-1 :

Amoeba has one and *Paramoecium* has two contractile vacuoles.

Statement-2 :

Fresh water protozoans get rid of excess water through contractile vacuole.

- (1) Both Statements true
- (2) Both Statements false
- (3) Only statement-1 true
- (4) Only statement-2 true

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131. Match the column-A and Column-B and select the correct option ?

Column-A		Column-B	
I.	<i>Trichomonas vaginalis</i>	a.	Kala-azar
II.	<i>Trypanosoma gambiense</i>	b.	Amoebic dysentery
III.	<i>Leishmania donovani</i>	c.	Leucorrhoea
IV.	<i>Entamoeba histolytica</i>	d.	Sleeping sickness disease

- (1) I - c, II - b, III - a, IV - d
- (2) I - a, II - b, III - c, IV - d
- (3) I - c, II - d, III - a, IV - b
- (4) I - a, II - c, III - d, IV - b

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EXERCISE-III

ANSWER KEY

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Answer	1	3	3	3	1	3	1	3	2	3	3	1	1	4	1
Question	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Answer	4	4	4	4	4	1	3	2	4	3	2	2	4	2	3
Question	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Answer	4	4	1	3	3	2	2	1	2	3	2	3	4	4	3
Question	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Answer	1	4	4	3	4	4	4	2	3	2	1	2	1	2	3
Question	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Answer	1	2	1	1	2	2	2	4	4	3	4	2	1	1	3
Question	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
Answer	1	4	3	3	4	3	3	4	2	1	2	4	3	2	2
Question	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
Answer	3	1	3	4	4	3	3	3	1	3	1	3	1	3	2
Question	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
Answer	2	2	4	3	3	2	3	2	3	4	1	4	4	4	3
Question	121	122	123	124	125	126	127	128	129	130	131				
Answer	1	2	4	3	1	3	3	2	3	1	3				

[illegible]