Ravi Maths Tuition Centre

Time : 1 Mins **BIOLOGICAL CLASSIFICATION 1** **Marks : 1180**

1. **Assertion:** Two kingdom classification was insufficient
   Reason: Majority of organisms did not fall into either of the categories in two kingdom classification.
   a) If both assertion and reason are true and reason is the correct explanation of assertion.
   b)
   If both assertion and reason are true but reason is not the correct explanation of assertion.
   c) If assertion is true but reason is false. d) If both assertion and reason are false.
2. Mark the incorrect match
   a) Amoeboid protozoan -Gonyaulax b) Flagellated protozoan -Trypanosoma
   c) Ciliated protozoan -Paramoecium d) Sporozoan -plamodium
3. Ciliates differ from all other protozoans in :
   a) Using pseudopodia for capturing prey
   b) Having a contractile vacuole for removing excess water. c) Using flagella for locomotion
   d) Having two types of nuclei
4. Which fungal disease spreads by seed and flowers?
   a) Loose smut of wheat b) Corn stunt c) Covered smut of barley d) Soft rot of potato
5. There exists a close association between the alga and the fungus within a lichen. The fungus _____ .
   a) Provides protection, anchorage and absorption for the alga b) Provides food for the alga
   c) Fixes the atmospheric nitrogen for the alga d) Releases oxygen for the alga
6. Kingdom Plantae includes
   a) algae and bryophytes b) pteridophytes and gymnosperms c) angiosperms
   d) all of these.
7. Flaggellation in Euglena is
   a) Uniflagellation b) Isokont and whiplash type c) Heterokont and whiplash type
   d) Heterokont and stichonematic
8. Some hyperthermophilic organisms that grow in highly acidic (pH = 2) habitats belong to the two groups.
   a) Liverworts and yeasts b) Eubacteria and Archaea c) Cyanobacteria and diatoms
   d) Protists and mosses
9. Read the following statements regarding methanogens and select the correct option.
   (i) They are included in the group Archaebacteria.
   (ii) They are responsible for the production of biogas in gobar gas plants.

(iii) They live in hot sulphur springs.
(iv) They are strictly anaerobic.
a) Statements (i) and (ii) are correct b) Statements (i), (ii) and (iv) are correct
c) Statements (ii), (iii) and (iv) are correct d) All statements are correct.

10. Which of the following organisms possesses characteristics of both a plant and an animal?
a) Bacteria b) Mycoplasma c) Euglena d) Paramecium

11. Which pair of the following belongs to Basidiomycetes?
a) Puffballs and Claviceps b) Peziza and stink borns c) Morchella and mushrooms
d) Birds nest fungi and puffballs.

12. Entamoeba coli causes _____ .
a) Pyorrhoea b) Diarrhoea c) Dysentery d) None of these

13. Match column I with column II and select the correct option from the given codes.

Column I	Column II
A. Chief producers in oceans	(i) Euglenoids
B. Red tides	(ii) Diatoms
C. Mixotrophic nutrition	(iii) Slime moulds
D. Plasmodium	(iv) Dinoflagellates

a) A-(ii), B-(iv), C-(i), D-(iii) b) A-(ii), B-(iv), C-(iii), D-(i) c) A-(ii), 8-(iii), C-(i), D-(iv)
d) A-(i), 8-(iv), C-(iii), D-(ii)

14. Cauliflower mosaic virus contains _____ .
a) ss RNA b) ds RNA c) ds DNA d) ss DNA

15. White rust disease is caused by _____ .
a) Claviceps b) Alternaria c) Phytophthora d) Albugo Candida

16. The structures that help some bacteria to attach to rocks and / or host tissues are:
a) Fimbriae b) Mesosomes c) Holdfast d) Rhizoids

17. Yeast (Sacchciromyces cerevisiae) is used in the industrial production of _____ .
a) Citric acid b) Tetracycline c) Ethanol d) Butanol

18. Archaebacteria differs from eubacteria in :
a) Cell Membrane structure b) Mode of nutrition c) Cell shape d) Mode of reproduction

19. Ustilago caused plant diseases are called smuts because _____ .
a) They parasitise cereals b) Mycelium is black c) They develop sooty masses of spores
d) Affected parts become completely black

20. Which one of the following does not differ in E.coli and Chlamydomonas?
a) Cell wall b) Cella membrane c) Ribosomes d) Chromosomal organization

21. In lichen, the fungus provides:
a) Protection, anchorage and absorption for alga b) Food for alga c) Oxygen for alga
d) Fixes nitrogen for alga

22. **Assertion:** Cell wall of Chrysophytes are indestructible.
Reason: Cell walls of Chrysophytes have layer of magnesium pectate embedded in it.
a) If both assertion and reason are true and reason is the correct explanation of assertion.
b)
If both assertion and reason are true but reason is not the correct explanation of assertion.

c) If assertion is true but reason is false. d) If both assertion and reason are false.

23. Read the given statements about lichens and select the incorrect ones.
(i) They represent an example of commensalism.
(ii) Algal partner obtains water and mineral salts from the fungus and the fungal partner obtains food prepared by the alga.
(iii) These do not grow in polluted areas.
(iv) The mycobiont is usually an Ascomycetes or a Basidiomycetes.
(v) The phycobiont is mostly a green alga or a cyanobacterium.
(vi) These constitute the pioneer community in case of hydrosere.
a) (i) and (ii) b) (v) and (vi) c) (i) and (vi) d) (i), (v) and (vi)

24. **Assertion:** The protoplasm of plasmodial slime mould is considered purest in the world.
Reason: Protoplasm of Plasmodium is differentiated into an outer enucleated and central nucleated portions.
a) If both assertion and reason are true and reason is the correct explanation of assertion.
b)
If both assertion and reason are true but reason is not the correct explanation of assertion.
c) If assertion is true but reason is false. d) If both assertion and reason are false.

25. Siliceous frustules of diatoms being indestructible, piled up at the bottom of ocean and formed a thick bed over billions of years. Such a thick bed is known as
a) red sea b) diatomaceous earth c) pseudorocks d) red tides.

26. Select the pair that consists of plant or animal bacterial diseases.
a) Cholera and typhoid b) Citrus canker and crown gall c) Malaria and dengue
d) Both (a) and (b)

27. Which of the following are most suitable indicators of SO_2 pollution in the environment?
a) Conifers b) Algae c) Fungi d) Lichens

28. Which of the following kingdoms has no well-defined boundaries?
a) Monera b) Protista c) Fungi d) None of these

29. Read the following statements and select the correct option.
Statement 1 : Euglena can be considered as a plant due to the presence of chlorophyll.
Statement 2 : Euglena cannot be classified on the basis of two kingdom system of classification.
a) Both statements 1 and 2 are correct
b) Statement 1 is correct but statement 2 is incorrect
c) Statement 1 is incorrect but statement 2 is correct.
d) Both statements 1 and 2 are incorrect

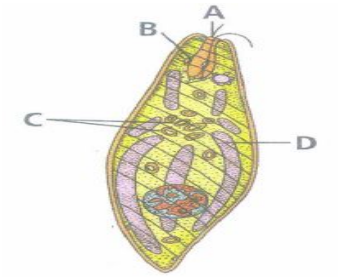
30. Coenocytic mycelium is
a) uninucleate, septate b) multinucleate, septate c) multinucleate, septate
d) both (b) and (c).

31. The five kingdom classification was proposed by
a) R.H. Whittaker b) C. Linnaeus c) A. Roxberg d) Virchow.

32. Malignant tertian malarial is caused by _____ .
a) Plasmodium falciparum b) P.vivax c) P. ovale d) P. malariae

33. Organisms living in salty areas are called as
    a) methanogens b) halophiles c) heliophytes d) thermoacidophiles.
34. _____bacteria oxidise various inorganic substances such as nitrates, nitrites and ammonia and use the released energy for ATP production. They play an important role in recycling of nutrients (N, P, Fe, S etc.).
    a) Photosynthetic autotrophic b) Chemosynthetic autotrophic c) Parasitic
    d) Saprophytic
35. 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) Coraplexity of body organisation.
36. A few organisms are known to grow and multiply- at temperatures of 100- 105^{o}C They belong to _____ .
    a) Marine archaebacteria b) Thermophilic sulphur bacteria
    c) Hot-spring blue-green algae (cyanobacteria) d) Thermophilic, subaerial firngi
37. Contagium vivum fluidum was proposed by
    a) D. J. Ivanowsky b) M. W. Beijerinck c) Stanley d) Robert Hooke.
38. Read the following statements regarding euglenoids and select the incorrect ones
    (i) These are mostly freshwater organisms found in stagnant water.
    (ii) Their body is covered by a protein rich layer called pellicle which makes their body flexible.
    (iii) They are photosynthetic in the presence of sunlight but become heterotrophs in the absence of sunlight.
    (iv) They usually possess two flagella, one long and one short.
    (v) Euglenoids are multicellular ciliate protists.
    a) (i) and (v) b) (iv) and (v) c) (iii) only d) (v) only
39. Excretion in Amoeba occurs through _____ .
    a) Lobopodia b) Uroid Portion c) Plasma membrane d) Contractile vacuole
40. Who crystallised and isolated viruses for the first time?
    a) W.M. Stanley b) K.M. Smith c) D. Ivanowski d) F.C.Bawden
41. The motile bacteria are able to move by :
    a) Fimbriae b) Flagella c) Cilia d) Pili
42. Photosynthetic bacteria have pigments in _____ .
    a) Leucoplasts b) Chloroplasts c) Chromoplasts d) Chromatophores
43. Single-celled eukaryoles are included in
    a) Monera b) Protista c) Fungi d) Archaea
44. To form fruiting bodies for spores formation, plasmodium stage of slime moulds undergoes
    a) Aggregation under favourable conditions
    b) Differentiation under unfavourable conditions
    c) Chemotactic movement to form motile gametes
    d) Differentiation under favourable conditions

45. Study the given figure showing structure of Euglena and select the option that correctly identifies A, B, C and D.



a)

A	B	C	D
Cytostome	Photoreceptor	Paramylum bodies	Myonemes

b)

A	B	C	D
Contractile vacuole	Photoreceptor	Paramylum bodies	Chloroplast

c)

A	B	C	D
Cytostome	Stigma	Paramylum bodies	Chloroplast

d)

A	B	C	D
Cytostome	Stigma	Myonemes	Chloroplast

46. **Assertion:** Archaebacteria are able to survive in harsh habitats.
Reason: Presence of peptidoglycan in cell wall help archaebacteria to survive in extreme conditions.
a) If both assertion and reason are true and reason is the correct explanation of assertion.
b)
If both assertion and reason are true but reason is not the correct explanation of assertion.
c) If assertion is true but reason is false. d) If both assertion and reason are false.

47. **Assertion:** Deuteromycetes is known as fungi imperfect.
Reason: In Deuteromycetes, only the asexual phase is known.
a) If both assertion and reason are true and reason is the correct explanation of assertion.
b)
If both assertion and reason are true but reason is not the correct explanation of assertion.
c) If assertion is true but reason is false. d) If both assertion and reason are false.

48. Archaebacteria can survive in extreme conditions due to
a) Different metabolism b) Similar cell membrane as eubacteria
c) Different cell wall structure d) Diverse types of nutrition

49. Which is wrong for viroids?
a) Their RNA is of high molecular weight b) They lack a protein coat
c) They are smaller than viruses d) They cause infections

50. Which of these is a defining character of plants?
a) Autotrophic nature b) Eukaryotic cell structure c) Cellulosic cell wall
d) Aerobic respiration

51. Haploid sexual spore produced exogenously is
a) Ascospore b) Oospore c) Basidiospore d) Zygospore

52. Which of the following statements about Euglena is correct?

a) Euglena is a flagellate organism.
b) Euglena when placed in continuous darkness, loses its photosynthetic activity and dies.
c) The pigments of Euglena are quite different from those of green plants.
d) Euglena is a marine protist.

53. Select the mismatched pair
a) W.M. Stanley - Viruses could be crystallised b) D.J. Ivanowsky - Coined term virus
c) M.W Beijerinck - Extract of the infected plants of tobacco cause infection in healthy plants
d) None of these

54. Tobacco mosaic virus is a tubular filament of size _____ .
a) 700 x 30 nm b) 300 x 10 nm c) 300 x 5 nm d) 300 x 20 nm

55. Mer karyogamy followed by meiosis, spores are produced exogenously in :
a) Agaricus b) Alternaria c) Neurospora d) Saccharomyces.

56. **Assertion:** Pasteur coined **Contagium Vivum Fluidum.**
Reason: Pasteur found that virus infected plant of tobacco can cause infection in healthy plant.
a) If both assertion and reason are true and reason is the correct explanation of assertion.
b)
If both assertion and reason are true but reason is not the correct explanation of assertion.
c) If assertion is true but reason is false. d) If both assertion and reason are false.

57. Which of the following statement is incorrect?
a) Viruses are obligate parasites. b) Infective constituent in viruses is the protein coat.
c) Prions consist of abnormally folded proteins. d) Viroids lack a protein coat.

58. Sexual reproduction in fungi occurs by all of the following except
a) oospores b) ascopores c) zoospores d) basidiospores.

59. Read the following statements and select the correct option
Statement 1: Almost all bacteria possess lipoproteinaceous plasma membrane.
Statement 2: The plasma membrane of archaebacteria as well as eubacteria have same type of lipids.
a) Both statements 1 and 2 are correct.
b) Statement 1 is correct but statement 2 is incorrect.
c) Statement 1 is incorrect but statement 2 is correct.
d) Both statements 1 and 2 are incorrect.

60. The infective state of malarial parasite Plasmodium that enters human body is _____ .
a) Merozoite b) Sporozoite c) Trophozoite d) Minuta form

61. Fungi show a sexual reproduction by all of the following kinds of spores except.
a) conidia b) oospores c) sporangiospore d) zoospores.

62. The major criterion of five kingdom system of classification is
a) Complexity of cell structure b) Mode of nutrition c) Complexity of body organisation
d) Ecological

63. Some members are saprophytes or parasites whereas a large number of members are decomposers of litter and help in nutrient cycling in case of

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

64. Naked cytoplasm, multinucleated and saprophytic a the characteristics of
a) monerans b) protists c) fungi d) slime moulds.

65. Bacteria are grouped under four categories according to their shape. Study the given figures and select the correct option regarding this.

a)

A	B	C	D
Cocci	Bacilli	Spirilla	Vibrio

b)

A	B	C	D
Spirilla	Bacilli	Vibrio	Cocci

c)

A	B	C	D
Bacilli	Spirilla	Vibrio	Cocci

d)

A	B	C	D
Bacilli	Spirilla	Cocci	Vibrio

66. Bacterial leaf blight of rice is caused by a species of _____ .
a) Xanthomonas b) Pseudornonas c) Alternaria d) Erwinia

67. The primitive prokaryotes responsible for the production of biogas from the dung of ruminant animals include the :
a) Eubacteria b) Halophiles c) Thermoacidophiles d) Methanogens

68. In Penicillium, the asexual reproduction takes place by
a) ascosporesc b) aplanospores c) sporangiospores d) conidiospores.

69. Genetic information in Paramecium is contained in _____ .
a) Micronucleus b) Macronucleus c) Both (a) and (b) d) Mitochondria

70. Which of the following statements regarding viruses are correct?
(i) These are cellular, infectious, nucleoprotien particles.
(ii) They can be grown in culture medium.
(iii) Genetic material is either DNA or RNA, but never both.
(iv) They can be crystallised.
a) (i) and (ii) b) (ii) and (iii) c) (iii) and (iv) d) (i), (ii), (iii) and (iv)

71. Which of the following options incorrectly distinguishes the Kingdoms Monera and Protista?
a)

Monera	**Protista**
Includes unicellular prokaryotes	Includes multicellular eukaryotes

b)

Monera	**Protista**
Membrane bound cell organelles are absent	Membrane bound cell organelles are present

c)

Monera	Protista
Cell wall when present, made up of peptidoglycans	Cell wall, if present, contains cellulose

d)

Monera	Protista
Flagella, when present, comprise of protein flagellin	Flagella and cilia when present, made up of protein tubulin

72. Temperature tolerance of thermal blue-green algae is due to _____ .
    a) Cell wall structure b) Cell organisation c) Mitochondrial structure
    d) Homopolar bonds in their proteins
73. Term used for the closed ascocarp is
    a) apothecium b) amphithecium c) endothecium d) cleistothecium.
74. African sleeping sickness is due to _____ .
    a) Plasmodium vivax transmitted by tse-tse fly
    b) Trypanosoma lewsii transmitted by bed bug
    c) Trypanosoma gambiense transmitted by Glossina palpalis
    d) Entamoeba gingivalis spread by house fly
75. Which one of the following statements about viruses is correct?
    a) Viruses possess their own metabolic system b) Viruses contain either DNA or RNA
    c) Viruses are facultative parasites d) Viruses are readily killed by antibiotics
76. In Whittaker's five kingdom system of classification, eukaryotes are distributed among
    a) two kingdoms b) three kingdoms c) four kingdoms d) all the five kingdoms
77. An association between roots of higher plants and fungi is called
    a) lichen b) fern c) mycorrhiza d) BGA
78. Influenza virus has _____ .
    a) DNA b) RNA c) Both (a) and (b) d) Only proteins and no nucleic acids
79. Causal organisms of sleeping sickness and kala-azar belong to which of the following groups of protozoan protists?
    a) Amoeboid protozoans b) Flagellated protozoans c) Ciliated protozoans
    d) Sporozoans
80. The imperfect fungi which are decomposers of litter and help in mineral cycling belong to :
    a) Ascomycetes b) Deuteromycetes c) Basidiomycetes d) Phycomycetes.
81. Which one of the following statements about mycoplasma is wrong?
    a) They are pleomorphic, b) They are sensitive to penicillin,
    c) They cause diseases in plants, d) They are also called PPLO.
82. Main component of the cell wall of fungi is
    a) cellulose b) pectin c) chitin d) dextrin.
83. Maximum nutritional diversity is found in the group
    a) Monera b) Plantae c) Fungi d) Animalia
84. Cyanobacteria are also referred to as :
    a) Protists b) Golden algae c) Slime moulds d) Blue green algae
85. The correct placement of cyanobacteria according to whittaker system of classification is in

a) Fungi and monera b) Monera only c) monera and protista d) Fungi and plantae

86. _____is a unicellular fungus
a) Yeast b) Rust c) Smut d) Bread mould

87. Organisms called methanogens are most abundant in a _____ .
a) Sulphur rock b) Cattle yard c) Polluted stream d) Hot spring

88. The given statements describe a group of organisms.
(i) Instead of a cell wall they have a protein rich pellicle making their body flexible.
(ii) They have 2 flagella, a short and a long one.
(iii) They show mixotrophic nutrition.
(iv) They are connecting link between plants and animals.
Which of the following groups is referred to here?
a) Dinoflagellates b) Slime moulds c) Desmids and diatoms d) Euglenoids

89. Plant decomposers are _____ .
a) Monera and fungi b) Fungi and plants c) Protista and animalia
d) Animalia and monera

90. Sexual reproduction in fungi is carried out by the fusion of compatible nuclei from two parents at a definite stage in the life cycle. Identify the different types of sexual reproduction occurring in fungi from the given figures and select the correct option.

p
Q
R
S

a)

P	Q	R	S	T
Heterogamy	Gametan-gial contact	Gametangial copulation	Spermatisation	Somatogamy

b)

P	Q	R	S	T
Plano-gametic copulation	Gametangial copulation	Gametangial contact	Spermatogamy	Heterothallism

c)

P	Q	R	S	T
Plano gametic copulation	Gametangial contact	Gametangial copulation	Spermatisation	Somatogamy

d)

P	Q	R	S	T
Heterogamy	Oogamy	Planogametic copulation	Conidiospores	Hetero thallism

91. Read the following statements and select the option arbovirus. which identifies the incorrect ones.
(i) Potato spindle tuber disease and **Chrysanthemum** stunt disease are caused by viroids.
(ii) T_4 bacteriophage exhibits lytic cycle.
(iii) Retroviruses have two copies of ssRNA.
(iv) Interferons which prevent viral multiplication are glycolipid particles.
a) (ii) and (iii) b) (i) and (iv) c) (iii) only d) (iv) only

92. a. Asexual spores generally absent
b. Vegetative reproduction commonly by fragmentation
c. Sex organs absent but sexual reproduction present
d. Used extensively in genetic and biochemical
e. Site of karyogamy and meiosis in asus
f. Basidium produces endogenous sexual spores
g. Morels and truffles are edible members
Out of these given features, which ones are associated with basidiomycetes?
a) a, c and f b) a, b and c c) c, d and f d) f and g only

93. Which statement is correct for bacterial transduction?
a) Transfer of some genes from one bacteria to another bacteria through virus.
b) Transfer of genes from one bacteria to another bacteria by conjugation.
c) Bacteria obtains its DNA directly. d) Bacteria obtains its DNA from other external source.

94. Which of the following are likely to be present in deep sea water?
a) Eubacteria b) Blue-green algae c) Saprophytic fungi d) Archaebacteria

95. The term algae is applied to the cyanobacteria on the basic of
a) Cell wall b) Photosynthetic activity c) Flagella d) Sexual reproduction

96. Which one of the following organisms is not a eukaryote?
a) Paramecium caudatum b) Escherichia coli c) Euglena viridis d) Amoeba proteus

97. Which one of the following is an incorrect pair?
a) Louis Pasteur - Coined the term 'virus' b) Beijerinck - Contagium vivum fluidum
c) Ivanovsky - Discovered retroviruses d) Stanley - Crystallised TMV

98. Pick up the wrong statement.
a) Nuclear numbrane is present is Monera b) Cell wall is absent in Animalia
c) Protista have photosynthetic and heterotrophic modes of nutrition
d) Some fungi are edible.

99. The guts of cow and buffalo possess:
a) Cyanobacteria b) Fucus spp. c) Chiarella spp. d) Methanogen

100. Which of the following is not correctly matched?
a) Root knot disease - Meloidogyne javanica b) Smut of bajra - Tolysporium penicillariae
c) Covered smut of barley - Ustilago nuda d) Late blight of potato - Phl'tophthora infestans

101. Viruses have:
a) DNA enclosed in a protein coat b) Prokaryotic nucleus c) Single chromosome
d) Both DNA and RNA

102. The most abundant prokaryotes helpful to humans in making curd from milk and in production of antibiotics are the ones categorised as:
a) Cyanobacteria b) Archaebacteria c) Chemosynthetic autotrophs
d) Heterotrophic bacteria

103. How many organisms in the list given below are autotrophs?
Lactobacillus, Nostoc, Chara, Nitrosomonas, Nitrobacter, Streptomyces, Sacharomyces, Trypansoma, Porphyrs, Wolfia
a) Four b) Five c) Six d) Three

104. Select the incorrect match.
a) Morels and truffles - Phycomycetes b) Puffballs and toad stools - Basidiomycetes
c) Early blight of potato - Alternaria solani d) Late blight of potato - Phytophthora infestans

105. In five kingdom system, the main basis of classification is _____ .
a) Structure of nucleus b) Mode of nutrition c) Structure of cell wall
d) Asexual reproduction

106. Which one of the following set of items in the option (a-d) are correctly categorized with one exception in it?
a)

Items	Category	Exception
UAA, UAG, UGA	Stop codons	UAG

b)

Items	Category	Exception
Kangaroo, Koala, Wombat	Australian marsupials	Wombat

c)

Items	Category	Exception
Plasmodium, Cuscuta, Trypanosoma	Protozoan	Cuscuta

d)

Items	Category	Exception
Typhoid, pneumonia, diphtheria	Bacteria diseases	diphtheria

107. In which of the animals dimorphic nucleus is found?
a) Amoeba proteus b) Trypanosoma gambiense c) Plasmodium vivax
d) Paramecium caudatum

108. Anoxygenic photosynthesis is characteristic of
a) Rhodospirillum b) Spirogyra c) Chlamydomonas d) Ulva

109. Membrane-bound organelles are absent in :
a) Plasmodium b) Saccharomyces c) Streptococcus d) Chlamydomonas

110. Chemosynthetic autotrophs are included in how many kingdoms according to whittaker's system?
a) Four b) Three c) Two d) One

111. Eukaryotic, achlorophyllous and heterotrophic organisms are grouped under which of the following kingdoms?
a) Monera b) Protista c) Fungi d) Plantae

112. The thalloid body of a slime mould (Myxomycetes) is known as _____ .
a) Plasmodium b) Fruiting body c) Mycelium d) Protonema

113. Which of the following components provides sticky character to the bacterial cell?
a) Nuclear membrane b) Plasma membrane c) Glycocalyx d) Cell wall

114. In five kingdom classification, Chlamydomonas and Chlorella have been included in :
a) Protista b) Monera c) Plantae d) Algae

115. Match column I with column II and select the correct option from the given codes.

Column I	Column II
A. Plant virus	(i) Kuru disease
B. Animal virus	(ii) Potato spindle tuber
C. Viroids	(iii) Polio
D. Prions	(iv) Tobacco mosaic

a) A-(iv), B-(iii), C-(ii), D-(i) b) A-(iv), B-(iii), C-(ii), D-(i) c) A-(iii), B-(iv), C-(i), D-(ii)
d) A-(ii), B-(iii), C-(iv), D-(i)

116. **Assertion:** Sporozoans may have silica shells on their surface.
Reason: Shells of sporozoans help in protection from acidic environment of the host.
a) If both assertion and reason are true and reason is the correct explanation of assertion.
b)
If both assertion and reason are true but reason is not the correct explanation of assertion.
c) If assertion is true but reason is false. d) If both assertion and reason are false.

117. All eukaryotic unicellular organisms belong to
a) Monera b) Protista c) Fungi d) Bacteria.

118. Which one is an incorrectly matched pair?
a) Phycomycetes - Mucor, Albugo b) Ascomycetes - Penicillium, Aspergillus
c) Basidiomycetes - Puccinia, Agaricus d) Deuteromycetes - Ustilago, Colletotrichum

119. The chemical compounds produced by the host plants to protect themselves against fungal infection is _____ .
a) Phytotoxin b) Pathogen c) Phytoalexins d) Hormone

120. Bacterial cell divides every one minute. It takes 15 minutes a cup to be filled one-fourth. How much time will it take to fill the cup full?
a) 30 minutes b) 45 minutes c) 60 minutes d) 17 minutes

121. In an experiment common Tobacco Mosaic Virus (TMV) and its mutant strain 'HR' were used to prepare hybrid particles with 'HR' nucleic acid and 'TMV' protein coat. These hybrids were mixed with antibodies against 'HR' strains. If this mixture is applied to plant materials, it will result in

a) loss of infectivity of virus particles due to inactivation of nucleic acids
b) loss of infectivity due to inactivation of protein coat
c) intact infectivity because only coat is neutralised
d) unchanged infectivity because neither nucleic acid nor protein coat is neutralised.

122. What is wrong about mycoplasma?
a) They are called PPLO b) They are pleomorphic c) They are sensitive to penicillin
d) They produce diseases in plants

123. Choose the wrong statements
a) Neurospora is used in the study of biochemical genetics.
b) Morels and truffles are poisonoues mushrooms.
c) Yeast is unicellular and useful in fermentation.
d) Penicillium is multicellular and produces antibiotics.

124. Which of the following is not a viral disease of plants?
a) Red rot of sugarcane b) Tobacco mosaic disease c) Leaf curl of tomato
d) Tristeza disease of citrus

125. Virus envelope is known as :
a) Capsid b) Virion c) Nucleoprotein d) Core

126. In which group of organisms the cell walls form two thin overlapping shells which fit together?.
a) Chrysophytes b) Euglenoids c) Dinoflagellates d) Slime moulds

127. Macro and micronucleus are the characteristic feature of _____ .
a) Paramecium and Vorticella b) Opelina and Nictothirus c) Hydra and Ballantidium
d) Vorticella and Nictothirus

128. One of the major components of cell wall of most fungi is _____ .
a) Chitin b) Peptidoglycan c) Cellulose d) Hemicellulose,

129. Which of the following statements is incorrect?
a) Claviceps is a source of many alkaloids and LSD.
b) Conidia are produced exogenously and ascospores endogenously
c) Yeasts have filamentous bodies with long thread-like hyphae.
d) Morels and truffles are edible delicacies.

130. Dikaryophase is a specific characteristic of
a) all Fungi b) Phycomycetes and Ascomycetes c) Basidiomycetes and Deuteromycetes
d) Ascomycetes and Basidiomycetes.

131. In the five-kingdom classification, Chlamydomonas and Chlorella have been included in _____ .
a) Protista b) Algae c) Plantae d) Monera

132. Thermococcus, Methanococcus and Methanobacterium exemplify.
a) Bacteria that contain a cytoskeleton and ribosomes
b)
Archaebacteria that lack any histones resembling those found in eukaryotes but whose DNA is negatively supercoiled.

c) Archaebacteria that contain protein homologous to eukaryotic core histones.

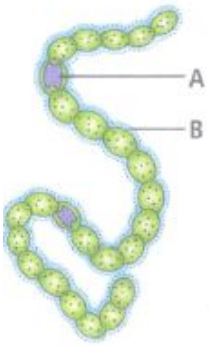
d)

Bacteria whose DNA is relaxed or positively supercoiled but which have a cytoskeleton as well as mitochondria.

133. Viruses that infect bacteria, multiply and cause their lysis, are called _____ .

a) Lysozymes b) Lipolytic c) Lytic d) Lysogenic

134. Given figure is of filamentous blue green alga **Nostoc**. Identify the parts marked as A and B and select the correct option.



a)

A	**B**
Heterocyst	Mucilaginous sheath

b)

A	**B**
Vegetative cell	Mucilaginous sheath

c)

A	**B**
Trichomes	Cell wall

d)

A	**B**
Mucilaginous sheath	Heterocyst

135. **Assertion:** Chemosynthetic autotrophic bacteria oxidise various inorganic substances.

Reason: Energy released during oxidation is used in ATP production.

a) If both assertion and reason are true and reason is the correct explanation of assertion.

b)

If both assertion and reason are true but reason is not the correct explanation of assertion.

c) If assertion is true but reason is false. d) If both assertion and reason are false

136. Which of the following statements regarding the Class Phycomycetes is correct?

a)

These are found in aquatic habitats and on decaying wood in moist and damp places or as obligate parasites on plants.

b) Mycelium in these fungi is aseptate and coenocytic

c) Asexual reproduction occurs by motile zoospores and by non-motile aplanospores.

d) All of these

137. _____are important decomposers that cause decay and decomposition of dead bodies of plants and animals.

a) Saprophytic bacteria b) Saprotrophic fungi c) Plants, like Sarracenia

d) Both (a) and (b)

138. Read the given statements that describe certain infectious particle.

(i) It was discovered by T.O. Diener and was found to be smaller than viruses.

(ii) It causes potato spindle tuber disease.

(iii) It is a free RNA particle which lacks the protein coat.
(iv) It has low molecular weight RNA as genetic material.
Which of the following is referred to here?
a) Virus b) Viroid c) Virion d) Bacteriophage

139. T.O.Diener discovered:
a) Free infectious protein b) Free infectious DNA c) Free infectious RNA
d) Bacteriophage

140. The main role of bacteria in the carbon cycle involves _____ .
a) Photosynthesis b) Chemosynthesis c) Digestion or break down of organic compounds
d) Assimilation of nitrogenous compounds

141. Which one of the following is not true about lichens?
a) Their body is composed of both algal and fungal cells
b) Some form food for reindeers in Arctic regions
c) Some species can be used as pollution indicators
d) These grow very fast at the rate of about 2cm per year

142. The vector for sleeping sickness is _____ .
a) House fly b) tse-tse fly c) Sand fly d) Fruit fly

143. Which one of the following is wrong for fungi?
a) They are both unicellular and multicellular b) They are eukaryotic
c) Allfungi possess a purely cellulosic cell wall d) They are heterotrophic

144. Match column I with column II and select the correct option from the given codes.

Column I	Column II
A. Phycomycetes	(i).Sac fungi
B. Ascomycetes	(ii).Algal fungi
C. Basidiomycetes	(iii)Fungi imperfecti
D.Deuteromycetes	(iv)Club fungi

a) A-(ii), B-(i), C-(iv), D-(iii) b) A-(ii), B-(iv), C-(i), D-(iii) c) A-(iv), B-(i), C-(ii), D-(iii)
d) A-(iv), B-(iii), C-(ii), D-(i)

145. Chrysophytes are
a) planktons b) nektons c) benthic organisms d) rooted submerged.

146. Which among the following is not a prokaryote?
a) Nostoc b) Mycobacterium c) Saccharomyces d) Oscillatoria.

147. Select the wrong statement.
a) Bacterial cell wall is made up of peptidoglycan.
b) Pili and fimbriae are mainly involved in motility of bacterial cells.
c) Cyanobacteria lack flagellated cells. d) Mycoplasma is a wall-less micro-organism.

148. **Assertion:** Virus is an obligate parasite.
Reason: Virus is host specific.
a) If both assertion and reason are true and reason is the correct explanation of assertion.
b)
If both assertion and reason are true but reason is not the correct explanation of assertion.
c) If assertion is true but reason is false. d) If both assertion and reason are false.

149. Identify the given figure of a protozoan protist and select the correct option.

a) Entamoeba histolytica b) Plasmodium vivax c) Giardia intestinalis
d) Trypanosoma gambiense

150. In the five-kingdom system of classification. which single kingdom out of the following can include blue green algae, nitrogen-fixing bacteria and methanogenic archaebacteria?
a) Fungi b) Plantae c) Protista d) Monera

151. The hereditary material present in the bacterium Escherichia coli is _____ .
a) Single stranded DNA b) Deoxyribose sugar c) Double stranded DNA
d) Single stranded RNA

152. Which of the following organisms are known as chief producers in the oceans?
a) Cyanobacteria b) Diatoms. c) Dinoflagellates d) Euglenoids.

153. Plasmodium, the malarial parasite, belongs to class _____ .
a) Sarcodina b) Ciliata c) Sporozoa d) Dinophyceae

154. 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

155. Outerflexible layer in Euglenoids is called
a) cell wall b) Pellicle c) Glycocalyx d) More than one option is correct

156. Viruses are no more "alive" than isolated chromosomes because _____ .
a) Both require the environment of a cell to replicate. b) They require both RNA and DNA.
c) They both need food molecules d) They both require oxygen for respiration.

157. Asexual reproduction by zoospore formation is the feature of
a) Sac fungi b) Fungi imperfecti c) Algal fungi d) Club fungi

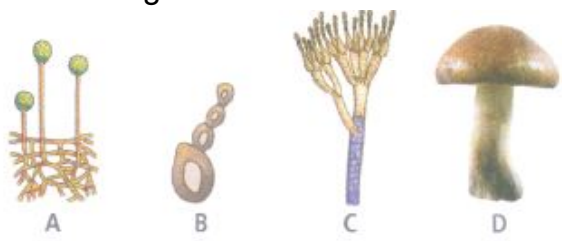
158. The multinucleate slimy mass of protoplasm which forms the body of slime moulds is called as
a) plasmodium b) myxamoeba c) sporocytes d) periplasmodium.

159. Which one is wrongly matched?
a) Gemma cups - Marchantia b) Biflagellate zoospores - Brown algae.
c) Uniflagellate gametes - Polysiphonia d) Unicellular organism - Chlorella

160. In Amoeba and Paramecium osmoregulation occurs through _____ .
a) Pseudopodia b) Nucleus c) Contractile vacuole d) General surface

161. In the light of recent classification of living organisms into three domains of life (bacteria, archaea and eukarya), which one of the following statements is true about archaea?
a) Archaea completely differ from prokaryotes.
b) Archaea resembles eukarya in all respects.
c) Archaea have some novel features that are absent in other prokaryotes and eukaryotes.
d) Archaea completely differ from both prokaryotes and eukaryotes

162. Select the option that correctly identifies the different genera (A. B, C and D) of Kingdom Fungi shown in figure



a)

A	B	C	D
Mucor	Saccharomyces	Morchella	Amanita

b)

A	B	C	D
Mucor	Saccharomyces	Penicillium	Agaricus

c)

A	B	C	D
Rhizopus	Saccharomyces	Aspergillus	Morchella

d)

A	B	C	D
Aspergillus	Rhizopus	Penicillium	Agaricus

163. Which of the following classes of Kingdom Fungi are characterised by the presence of coenocytic, multinucleate and branched mycelium?
a) Basidiomycetes b) Phycomycetes c) Ascomycetes d) Deuteromycetes

164. Consider following features
(A) Organ system level of organisation
(B) Bilateral symmetry
(C) True coelomates with segmentation of body
Select the correct option of animal groups which possess all the above characteristics
a) Annelida, Arthropoda and Mollusca b) Arthropoda, Mollusca and Chordata
c) Annelida, Mollusca and Chordata d) Annelida, Arthropoda and Chordata

165. Virion is
a) nucleic acid of virus b) antiviral agent c) protein of virus
d) completely assembled virus outside host.

166. Which of the following structures is not found in a prokaryotic cell?
a) Ribosome b) Mesosorne c) Plasma membrane d) Nuclear envelope

167. Lichens are a well known combination of an alga and a fungus where fungus has _____ .
a) A saprophytic relationship with the alga. b) An epiphytic relationship with the alga.
c) A parasitic relationship with the alga. d) A symbiotic relationship with the alga.

168. Which of the following statements is incorrect about the Class Deuteromycetes?
a) They reproduce only by asexual spores (conidia).
b) Mycelium in these fungi is branched and septate. c) They have only parasitic forms
d) Examples of these fungi are Alternaria, Colletotrichum, and Trichoderma.

169. Dinoflagellates are mostly
a) marine and saprophytic b) freshwater and photosynthetic
c) marine and photosynthetic d) terrestrial and photosynthetic.

170. Difference between virus and viroid is
a) Difference between virus and viroid is
b) presence of low molecular weight RNA in virus but absent in viroid c) both (a) and (b)
d) none of the above

171. Sex factor in bacteria is _____ .
a) Chromosomal replicon b) F-replicon c) RNA d) Sex-pilus

172. Under favourable conditions slime moulds form
a) Plasmodium b) Spore c) Sporangia d) Cyst

173. The main difference in Gram (+) ve and (Gram (-) ve bacteria resides in their _____ .
a) Cell wall b) Cell membrane c) Cytoplasm d) f1agella

174. Mark the incorret match
a) Lichen-Symbiotic association b) T_2phage -ds-DNA c) TMV-ss-RNA
d) Viroid-Free DNA

175. Most of the lichens consist of _____ .
a) Blue-green algae and Basidomycetes b) Blue-green algae and Ascomycetes
c) Red algae and Ascomycetes d) Brown algae and Phycomycetes

176. Which one belongs to the Monera?
a) Amoeba b) Escherichia c) Gelidium d) Spirogyra

177. 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

178. Which one of the living organisms completely lacks a cell wall?
a) Mycoplasma b) Saccharomyces c) Blue-green algae d) Cyanobacteria

179. Which of the following statements regarding Kingdom Plantae is correct?
a) It includes all eukaryotic chlorophyll containing organisms.
b) Few of its members are partially heterotrophic c) The cell wall is made up of cellulose.
d) All of these

180. Pigment containing membranous extensions in same cyanobacteria are:
a) Basal bodies b) Penumatophores c) Chromatophores d) Heterocysts

181. Select the pair that consists of viral diseases
a) Mumps and small pox b) Herpes and influenza c) Pneumonia and syphilis
d) Both (a) and (b)

182. Match column I with column II and select the correct option from the given codes.

Column I	**Column II**
A. Edible delicacies	(i) Penicillium, Streptomyces
B. Experimental genetics	(ii) Neurospora crassa
C. Source of antibiotics	(iii) Puccinia, Ustilago
D. Rust and smut diseases	(iv) Morels and truffles

a) A-(iv), B-(ii), C-(iii), D-(i) b) A-(iii), B-(i), C-(ii), D-(iv) c) A-(iv), B-(ii), C-(i), D-(iii)
d) A-(iv), B-(iii), C-(ii), D-(i)

183. Members of Kingdom Protista are primarily
a) parasites b) terrestrial c) aquatic d) photosynthetic.

184. Find odd one (w.r.t.contractile vacuole)
a) Ciliates b) Euglena c) Dinoflagellates d) Amoeba

185. Diatomaceous earth is used for all except

a) polishing b) filtration of oils and syrups c) making sound and fire proof rooms
d) biogas production.

186. Which one is the wrong pairing for the disease and its causal organism?
a) Blackrust of wheat - Puccinia graninis b) Loose smeat of wheat - Ustilago nuda
c) Root knot of vegetables - Meloidogyne d) Late blight of potato - Alternaria solani

187. Which of the following fungi is a parasite on mustard plant and causes the disease white rust of crucifers?
a) Albugo candida b) Puccinia graminis tritici c) Saccharomyces cerevisiae
d) Ustilago hordei

188. Methanogens belong to :
a) Eubacteria b) Archaebacteria c) Dinoflagellates d) Slime moulds

189. Which of the following is a mismatched pair of protozoan group and its example?
a) Amoeboid protozoan - Entamoeba histolytica
b) Flagellated protozoan - Giardia intestinalis
c) Ciliated protozoan - Paramecium caudatum d) Sporozoan - Leishmania donovani

190. **Assertion:** Euglena is called as plant animal.
Reason: Pellicle of Euglena is made up of cellulose and not protein.
a) If both assertion and reason are true and reason is the correct explanation of assertion.
b)
If both assertion and reason are true but reason is not the correct explanation of assertion.
c) If assertion is true but reason is false. d) If both assertion and reason are false.

191. Gametangial copulation act of sexual reproduction occurs in
a) Oomycetes b) ascomycetes c) Basidiomycetes d) Zygomycetes

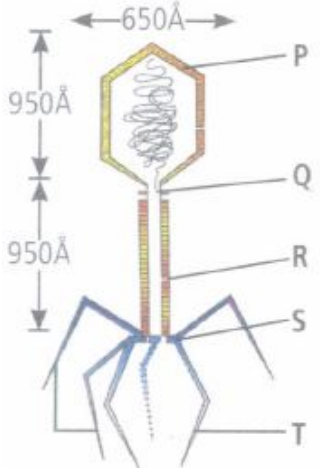
192. _____is a parasite of large intestine of human beings and causes the disease_____.
a) Escherichia coli, amoebic dysentery b) Entamoeba histolytica, amoebic dysentery
c) Plasmodium vivax, malaria d) Trypanosoma gambiense, sleeping sickness

193. What is true about Trypanosoma?
a) Polymorphic b) Monogenetic c) Facultative parasite d) Non-pathogenic

194. Which of the following combinations of characters is true for slime moulds?
a) Parasitic, plasmodium without walls, spores dispersed by air currents
b) Saprophytic, plasmodium with walls, spores dispersed by water
c) Parasitic, plasmodium without walls, spores dispersed by water
d) Saprophytic, plasmodium without walls, spores dispersed by air currents

195. Which of the following are found in extreme saline condition?
a) Archaebacteria b) Eubacteria c) Cyanobacteria d) Mycobacteria

196. Given is an electron microscopic structure of a T_2 bacteriophage. Identify the labelled parts P, Q, R, S and T and select the correct option.



a)

P	Q	R	S	T
Head	Collar	Sheath	Basal plate	Tail fibre

b)

P	Q	R	S	T
Head	Collar	Capsid	Tail	Tail fibre

c)

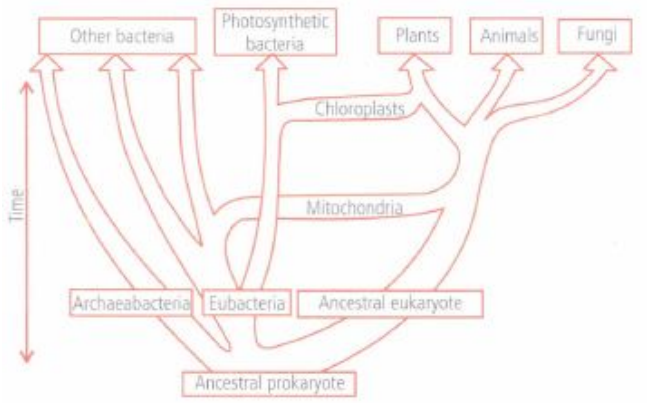
P	Q	R	S	T
Capsid	Sheath	Basal plate	Tail	Tail fibre

d)

P	Q	R	S	T
Head	Collar	Sheath	Capsomere	Tail fibre

197. In eubacteria, a cellular component that resembles eukaryotic cell is:
a) Nucleus b) Ribosome c) Plasma membrane d) Cell wall

198. Given diagram illustrates an evolutionary tree.



Which of the following statements can be deduced from the given evolutionary tree?
(i) The ancestral eukaryotes were anaerobic.
(ii) All eukaryotes possess mitochondria.
(iii) Eubacteria and Eukaryota have a common ancestor whereas Archebacteria have a unique and independent origin.
(iv) Mitochondria and chloroplasts have similar genomes.
(v) Mitochondria are present in plants, animals and fungi.
(vi) Chloroplasts and mitochondria arose as endosymbionts.
(vii) Fungi and animals lost chloroplasts during evolution.
a) (iii), (v) and (vi) b) (i), (v) and (vi) c) (ii), (iii), (iv) and (v) d) (i), (v), (vi) and (vii)

199. Malaria fever coincides with liberation of _____ .

a) Cryptomerozoites b) Metacryptomerozoites c) Merozoites d) Trophozoites

200. Which one of the following is an incorrect statement regarding mycoplasma?
a) They lack a cell wall b) They are the smallest living cells.
c) They cannot survive without oxygen. d) They are pathogenic in plants and animals.

201. Which of the following statements is correct regarding sexual reproduction in Basidiomycetes?
a) Plasmogamy occurs by the fusion of two somatic cells of different strains.
b) Karyogamy and meiosis occur in the basidium producing four basidiospores
c) Basidiospores are exogenously produced on the basidium. d) All of these

202. Read the following statements and select the correct option.
Statement 1 : Viruses are inert crystalline structures outside a living cell.
Statement 2 : Viruses are cellular organisms.
a) Both statements 1 and 2 are correct
b) Statement 1 is correct but statement 2 is incorrect
c) Statement 1 is incorrect but statement 2 is correct
d) Both statements 1 and 2 are incorrect.

203. In bacterial chromosomes, the nucleic acid polymers are _____ .
a) Linear DNA molecule b) Circular DNA molecule c) of two types - DNA and RNA
d) Linear RNA molecule

204. Which of the following is a ciliated protozoan?
a) Plasmodium vivax b) Amoeba proteus c) Paramecium caudatum
d) Leishmania donovani

205. Which one single organism or the pair of organisms is correctly assigned to its or their named taxonomic group?
a) Yeast used in making bread and beer is a fungus.
b) Nostoc and Anabaena are examples of protista
c) Paramecium and Plasmodium belong to the same kingdom as that of Penicillium
d)
Lichen is a composite organism formed from the symbiotic association of an algae and a protozoan.

206. Which one of the following fungi contains hallucinogens?
a) Morchella esculenta b) Amanita muscaria c) Neurospora sp. d) Ustilago sp.

207. In general, viruses that infect plants have
a) ss-RNA b) ds-DNA c) ss-DNA d) ds-RNA

208. Which of the following is the use of lichens in case of pollution?
a) Lichens are not related with pollution b) They act as bioindicators of pollution
c) They treat the polluted water d) They promote pollution

209. Refer to the given figure and select the incorrect option regarding it.

a) It belongs to Class Basidiomycetes. b) It is a non-edible, poisonous mushroom.
c) It possesses an umbrellalike basidiocarp.
d) The basidiospores in it, are exogenously produced on the basidium.

210. Which one of the following statements is incorrect?
a) Yeastis unicellular and useful in fermentation
b) Penicillium is multicellular and produce antibiotics
c) Neurospora is used in the study or biochemical genetics.
d) Morels and truffles are poisonous mushrooms

211. Which of the following secretes toxins during storage conditions of crop plants?
a) Aspergillus b) Penicillium c) Fusarium d) Colletotrichum

212. Mycoplasmas are classified under which of the following kingdoms?
a) Monera b) Protista c) Fungi d) Plantae

213. Lichens indicate SO_2 pollution because they _____ .
a) Show association between algae and fungi b) Grow faster than others
c) Are sensitive to SO_2 d) Flourish in SO_2 rich environment

214. What is common about Trypanosoma, Noctiluca' Monocystis and Giardia?
a) They have flagella. b) They produce spores. c) These are all parasites.
d) These are all unicellular protists.

215. Photosynthetic protistans are
a) Slime moulds and ciliates b) Dinoflagellates and zooflagellates
c) Dinoflagellates and protozoans d) Euglenoids and protozoans

216. Absorptive heterotrophic nutrition is exhibited by _____ .
a) Algae b) Fungi c) Bryophytes d) Pteridophytes

217. Trypanosoma belongs to class _____ .
a) Sarcodina b) Zooflagellata c) Ciliata d) Sporozoa

218. Secondary mycelium in the life cycle of club fungi, represents
a) Haplophase b) Dikaryophase c) Diplophase d) Coenocytic phase

219. Ergot of rye is caused by a species of _____ .
a) Uncimula b) Ustilago c) Claviceps d) Phytophthora.

220. In five-kingdom classification system, the kingdom that includes the blue-green algae, nitrogen-fixing bacteria, and methanogenic archaebacteria is
a) Plantae b) Fungi c) Protista d) Monera.

221. Protistan genome has _____ .
a) Membrane bound nucleoproteins embedded in cytoplasm
b) Free nucleic acid aggregates

c) Gene containing nucleoproteins condensed together in loose mass
d) Nucleoprotein in direct contact with cell substance

222. Which one of the following microorganisms is used for production of citric acid in industries?
a) Penicillium citrinum b) Aspergillus niger c) Rhizopus nigricans
d) Lactobacillus bulgaricus

223. Study the following table carefully and select the correct option for 1, 2, 3 and 4

Characters	**Monera**	**Protista**	**Fungi**	**Plantae**	**Animalia**
Cell type	1	Eukaryotic	Eukaryotic	Eukaryotic	Eukaryotic
Cell wall	2	Present in some	Present	Present	Absent
Nuclear membrane	Absent	Present	Present	Present	3
Body organisation	Cellular	Cellular	4	Tissue/organ	Tissue/organ/organ system

a)

1	2	3	4
Prokaryotic	Absent	Absent	Unicellular

b)

1	2	3	4
Prokaryotic	Present	Present	Multicellular

c)

1	2	3	4
Eukaryotic	Absent	Absent	Unicellular

d)

1	2	3	4
Eukaryotic	Absent	Absent	Unicellular

224. Which of the following statements is incorrect regarding the structure of a typical bacterial cell?
a) Cells possess naked circular DNA which is folded to form nucleoid.
b) Cells are surrounded by a peptidoglycan cell wall and a mucilaginous sheath.
c) Cells possess well developed membrane bound cell organelles.
d) Ribosomes in these cells are 70S in nature.

225. Which of the following organisms have been placed under Kingdom Protista?
a) Chrysophytes and dinoflagellates b) Euglenoids c) Slime moulds and protozoans
d) All of these

226. Puccinia forms _____ .
a) Uredia and aecia on wheat leaves b) Uredia and telia on wheat leaves
c) Uredia and aecia on barbery leaves d) Uredia and pycnia on barbery leaves

227. Which one of the following is a slime mould?
a) Physarum b) Thiobacillus c) Anabaena d) Rhizopus

228. Red tides in warm coastal water develop due to the abundance of
a) dinoflagellates b) euglenoids c) diatoms and desmids d) slime moulds.

229. Association between mycobiont and phycobiont are found in
a) mycorrhiza b) root c) lichens d) BGA.

230. The part of life cycle of malarial parasite Plasmodium vivax, that is passed in female Anopheles is _____ .
a) Sexual cycle b) Pre-erythrocytic schisogony c) Exo-erythrocytic schisogony
d) Post-erythrocytic schisogony

231. Decomposers are organisms that _____ .
a) Elaborate chemical substances, causing death of tissues
b) Operate in living body and simplifying organic substances of cells step by step

c) Attack and kill plants as well as animals

d) Operate in relay terms, simplifying step by step the organic constituents of dead body

232. Cyanobacteria are used in agricultural fields for crop improvement because they cause

a) N_2 fixation b) algal blooms c) photosynthesis d) all of these

233. **Assertion:** Cyanobacteria are photosynthetic autotrophs.

Reason: Cyanobacteria have chlorophyll a and b similar to green plants.

a) If both assertion and reason are true and reason is the correct explanation of assertion.

b)

If both assertion and reason are true but reason is not the correct explanation of assertion.

c) If assertion is true but reason is false. d) If both assertion and reason are false.

234. Fungi producing 8 spores in a sac belong to the Class

a) Phycomycetes b) Ascomycetes c) Basidiomycetes d) Deuteromycetes.

235. The cyanobacteria are also referred to as _____ .

a) Protists b) Golden algae c) Slime moulds d) Blue green algae

236. Incorrect statement in relation to cyanobacteria is

a) Possess chlorphyll a similar to higher plants b) Are unicellular, colonial or filamentous

c) Form blooms in polluted water bodies and possess a gelatinous sheath

d) Can fix atmospheric nitrogen in specialised cells called hormogonia

237. Protists obtain food as _____ .

a) Photosynthesisers, symbionts and holotrophs b) Photosynthesisers

c) Chemosynthesisers d) Holotrophs

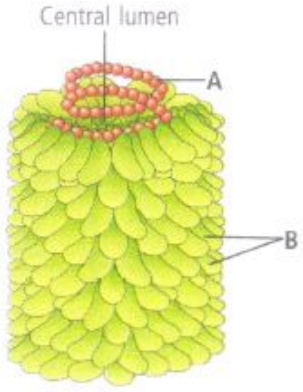
238. Mycorrhiza represents _____ .

a) Antagonism b) Endemism c) Symbiosis d) Parasitism

239. The Kingdom Protista forms a link with Kingdom

a) Plantae b) Fungi c) Animalia d) all of these.

240. Study the given figure of structure of TMV (Tobacco Mosaic Virus) and select the option that correctly identifies the labellings A and B



a)

A	B
dsRNA	Tail fibres

b)

A	B
ssDNA	Capsomeres

c)

A	B
dsDNA	Capsomeres

d)

A	B
ssRNA	Capsomeres

241. The wonder drug, penicillin is extracted from which of the following species of **Penicillium**?

a) Penicillium notatum b) P.chrysogenum c) Both (a) and (b) d) None of these

242. Cyanobacteria are classified under which of the following kingdoms?

a) Monera b) Protista c) Algae d) Plantae

243. Which of the following environmental conditions are essential for optimum growth of Mucor on a piece of bread?
A. Temperature of about 25^{o}C
B. Temperature of about 5^{o} C
C. Relative humidity of about 5%
D. Relative humidity of about 95%
E. A shady place
F. A brightly illuminated place
Choose the answer from the following options :
a) A, D and E only b) B, D and E only c) B, C and F only d) A, C and E only

244. Interferons are _____ .
a) Antiviral proteins b) Antibacterial proteins c) Anticancer proteins d) Complex proteins

245. Reserve food material in photosynthetic protistan having silicified cell wall is
a) Paramylum b) Laminarin c) Chrysolaminarin d) Starch

246. Amoebiasis is prevented by _____ .
a) Eating balanced food b) Eating plenty of fruits c) Drinking boiled water
d) Using mosquito nets

247. Select the correct statement regarding heterocysts
a) These are present in some filamentous cyanobacteria such as **Nostoc** and **Anabaena.**
b) These cells are specialised to perform N_2-fixation
c) These cells contain enzyme nitrogenase d) All of these

248. Escherichia coli is used extensively in biological research as it is _____ .
a) Easily cultured b) Easily available c) Easy to handle d) Easily rnultiplied in host

249. Which of the following groups of organisms are included under chrysophytes?
a) Diatoms and desmids (golden algae) b) Diatoms and dinoflagellates c) Euglenoids
d) Slime moulds

250. **Assertion:** Methanogens are present in the gut of several ruminant animals.
Reason: Methanogens help in the production of methane from dung of ruminants.
a) If both assertion and reason are true and reason is the correct explanation of assertion.
b)
If both assertion and reason are true but reason is not the correct explanation of assertion.
c) If assertion is true but reason is false. d) If both assertion and reason are false.

251. Which of the following is correct about viroids?
a) They have RNA with protein coat. b) They have free RNA without protein coat.
c) They have DNA with protein coat. d) They have free DNA without protein coat.

252. Photosynthetic pigments of cyanobacteria (blue green algae) include
a) chlorophyll a b) carotenes c) xanthophylls d) all of these.

253. Which of the following statements regarding Kingdom Animalia is incorrect?
a) It includes heterotrophic, unicellular eukaryotic organisms.
b) The members of this kingdom lack cell walls. c) The mode of nutrition is holozoic.
d) The sexual reproduction in its members is by copulation of male and female.

254. Infoldings of plasma membrane which help in DNA replication is

a) Plasmids b) Nucleoid c) Mesosome d) Slime layer

255. Tobacco Mosaic Virus (TMV) genes are _____ .
a) Double stranded RNA b) Single stranded RNA c) Polyribonucleotides
d) Proteinaceous

256. What is true for cyanobacteria?
a) Oxygenic with nitrogenase b) Oxygenic without nitrogenase
c) Non-oxygenic with nitrogen d) Non-oxygenic without nitrogenase

257. The chief advantage of encystment to an Amoeba is _____ .
a) The chance to get rid of accumulated waste products.
b) The ability to survive during adverse physical conditions.
c) The ability to live for sometime without ingesting food.
d) Protection from parasites and predators.

258. Match column I with column II and select the correct option from the given codes

Column I	Column II
A. Monera	(i) Chlamydomonas, Solanum
B. Protista	(ii) Bacillus, Oscillatoria
C. Fungi	(iii) Euglena, Trypanosoma
D. Plantae	(iv) Mucor, Penicillium
E. Animalia	(v) Felis, Panthera

a) A-(iii), B-(ii), C-(iv), D-(i), E-(v) b) A-(iii), B-(ii), C-(iv), D-(i), E-(v)
c) A-(ii), B-(iii), C-(i), D-(iv), E-(v) d) A-(ii), B-(v), C-(i), D-(iv), E-(iii)

259. **Assertion:** Phycomycetes are commonly known as sac fungi.
Reason: In Phycomycetes, ascopore (sexual spores) are produced endogenously in sac like asci.
a) If both assertion and reason are true and reason is the correct explanation of assertion.
b)
If both assertion and reason are true but reason is not the correct explanation of assertion.
c) If assertion is true but reason is false. d) If both assertion and reason are false.

260. Which one of the following statements is wrong?
a) Phycomycetes are also called algai fungi
b) Cyanobacteria are also called blue-green algae
c) Golden algaeare are also called desmids d) Eubacteria are also called false bacteria

261. **Assertion:** Mycoplasmas are pathogenic in animals and plants.
Reason: Mycoplasmas lack cell wall and can survive without oxygen.
a) If both assertion and reason are true and reason is the correct explanation of assertion.
b)
If both assertion and reason are true but reason is not the correct explanation of assertion.
c) If assertion is true but reason is false. d) If both assertion and reason are false.

262. 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) Bacillus b) Pseudomonas c) Mycoplasma d) Nostoc

263. The site of respiration in bacteria is _____ .
a) Episome b) Mesosome c) Ribosome d) Microsome

264. Which of the following characters served as the criteria for five kingdom system of classification as used by R.H. Whittaker?
a) Cell structure and thallus organisation b) Mode of nutrition and reproduction
c) Phylogenetic relationships d) All of these

265. The plasmid _____ .
a) Helps in respiration b) Genes found inside nucleus
c) Is a component of cell wall of bacteria
d) Is the genetic part in addition to DNA in microorganisms

266. The most throughly studied fact of the known bacteriaplant interactions is the _____ .
a) Cyanobacterial symbiosis with some aquatic ferns
b) Gall formation on certain angiosperms by Agrobacterium.
c) Nodulation of Sesbania stems by nitrogen fixing bacteria.
d) Plant growth stimulation by phosphate-solubilising bacteria.

267. Which one of the folloting matches is correct :
a) Agaricus - Parasitic fungus - Basidiomycetes
b) Phytophthora - Aseptate mycelium - Basidiomycetes
c) Alternaria - Sexual reproduction absent - Deuteromycet
d) Mucor - Reproduction by conjugation - Ascomycetes

268. Genophore bacterial genome or nucleoid is made of _____ .
a) Histones and non-histones b) RNA and histones c) A single double stranded DNA
d) A single stranded DNA

269. In plants, mosaic formation, leaf rolling and curling, yellowing of plant parts, vein clearing, dwarfing and stunted growth, necrosis etc. are the symptoms of
a) bacterial diseases b) mycoplasmal diseases c) viral diseases d) fungal diseases

270. Select the correct combination of the .statements (a - d) regarding the characteristics of certain organisms.
(1) Methanogens are Archaebacteria which produce methane in marshy areas
(2) Nostoc is filamentous blue-green alga which fixes atmospheric nitrogen.
(3) Chemosynthetic autotrophic bacteria synthesize
(4) Mycoplasma lack a cell wall and can survive without oxygen.
a) (3) b) (1), (2), (3) c) (2), (3), (4) d) (1), (2), (4)

271. The given organism belongs to Class

a) Phycomycetes b) Basidiomycetes c) Ascomycetes d) Deuteromycetes.

272. Viruses are non-cellular organisms but replicate themselves once they infect the host cell. To which of the following kingdom do viruses belong to?
a) Monera b) Protista c) Fungi d) None of these

273. Which statement is wrong for viruses?

a) All are parasites b) All of them have helical symmetry
c) They have ability to synthesize nucleic acids and proteins
d) Antibiotics have no effect on them

274. Bacteria lack alternation of generation because there is _____ .
a) Neither syngapy nor reduction division b) Distinct chromosomes are absent
c) No conjugation d) No exchange of genetic material

275. The cell wall is composed of two thin overlapping shells which fit together like a soap case in
a) desmids b) diatoms c) dinoflagellates d) slime moulds.

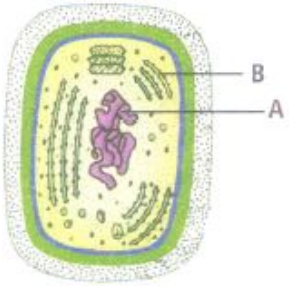
276. A dikaryon is formed when
a) meiosis is arrested b) the two haploid cells do not fuse immediately
c) cytoplasm does not fuse d) none of the above

277. If all ponds and puddles are destroyed, the organism likely to be destroyed is _____ .
a) Leishmania b) Trypanosoma c) Ascaris d) Plasmodium

278. Select the incorrect statement.
a) Most plant viruses are RNA viruses b) Bacteriophages possess dsDNA.
c) Virus having an arthropod as vector is called as arbovirus.
d) Prions possess only nucleoid and no proteins

279. Highly resistant nature of endospore is due to the presence of
a) Dipicolinic acid and peptidoglycan in spore coat b) Peptidoglycon in exosporium
c) Dipicolinic acid and Ca^{2+} in cortex d) Dipicolinic acid and Ca^{2+} in cell membrane

280. Given figure represents the ultrastructure of a typical cyanobacterial cell. Identify the different parts and select the correct option for A and B.



a)

A	B
Naked DNA	Thylakoid

b)

A	B
Thylakoid	Naked DNA

c)

A	B
DNA + Histones	Thylakoid

d)

A	B
DNA + Histones	80S ribosomes

281. Which group of organisms is represented by the given figure?

a) Diatoms b) Dinoflagellates c) Bacteria d) Euglenoids

282. 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) None of the above b) (i) and (iv) c) (ii) and (iii) d) All of the above

283. Which of the following statements is not correct regarding the Class Ascomycetes?
a) Conidia are the asexual spores produced endogenously on conidiophores.
b) Ascospores are the sexual spores produced endogenously in asci.
c) Aspergillus, Neurospora and Claviceps are Ascomycetes fungi.
d) Mycelium is generally branched and septate in Ascomycetes.

284. The sporozoa are all internal _____ that typically have an infective cyst stage in their life cycle. An example of sporozoa is the genus _____which causes malaria.
a) ciliates, Plasmodium b) flagellates, Plasmodium c) parasites, Plasmodium
d) parasites, Trypanosoma

285. **Assertion:** In lichens, mycobiont and phycobiont are symbiotically associated in which algae is predominant and fungi is a subordinate partner.
Reason: The fungus provides food and alga protects the fungus from unfavourable conditions.
a) If both assertion and reason are true and reason is the correct explanation of assertion.
b)
If both assertion and reason are true but reason is not the correct explanation of assertion.
c) If assertion is true but reason is false. d) If both assertion and reason are false.

286. Absorption of DNA of dead relatives from surrounding medium by a living bacterium is called
a) Penicillin b) Streptomycin c) Terramycin d) Chloramphenicol

287. Select the mismatch.
a) Gas vacuoles - Green bacteria Cells b) Large central vacuoles - Animal cells
c) Protists - Eukaryotes d) Methanogens - Prokaryotes

288. Viroids differs from viruses in having:
a) DNA molecules without protein coat. b) DNA molecules without protein coat
c) RNA molecules with protein coat. d) RNA molecules without protein coat

289. A slide under microscope shows following features:
(i) Unicellularity
(ii) Well defined nucleus
(iii) Biflagellate-one flagellum lying longitudinally and the other transversely
What would you identify it as?
a) Protozoan b) Bacterium c) Euglenoid d) Dinoflagellate

290. Which of the following shows coiled RNA strand and capsomeres?
a) Polio virus b) Tobacco mosaic virus c) Measles virus d) Retrovirus

291. How many organisms in the list given below are autotrophs? Lactobacillus, Nostoc, Chara, Nitrosomonas! Nitrobacter, Streptomyces. Saccharomyces, Trypanosomes, Porphyra, Wolffia.
a) Four b) Five c) Six d) Three

292. The causative agent of mad-cow disease is a _____ .

a) Prion b) Worm c) Bacterium d) Virus

293. Who discovered Plasmodiurn in RBCs of human beings?
a) Ronald Ross b) Mendel c) Laveran d) Stephen

294. Identify the given figure and select the correct option.
a) It is photosynthetic protist. b) It is saprophytic protist. c) It is chemosynthetic bacteria
d) Both (a) and (b)

295. _____is the most common method of reproduction in bacteria.
a) Binary fission b) Endospore formation c) Conjugation d) Sexual reproduction