UNIT – 1

DIVERSITY IN THE LIVING WORLD

CHAPTER 2 : BIOLOGICAL CLASSIFICATION

One Mark Questions:

1) What is biological classification ?

Ans: Grouping of organisms based on similarities & dissimilarities is called biological classification.

2) What is Taxonomy ?

Ans: The systematic study of identification classification and naming of oraganisms is called taxonomy.

3) Who made 1st attempt for scientific basis of classification ?

Ans : Aristotle.

4) On what morphological criteria Aristotle classified the plants ?

Ans : Based on the morphological nature of the stem.

5) Based on the nature of the steam name the types of plants classified by Aristotle.

Ans: Herbs, Shrubs & Trees.

6) Name the 2 kingdoms of classification ?

Ans: (1) Plantae & Metaphyta (2) Animatia Metazoa

7) What are prokaryotas ?

Ans: The organisms which do not have well organized nucleus in their cell are called prokaryotes.

OR

Organisms containing Incipient nucleus (Nucleoid) in their cells are called prokaryotes.

8) Give one example for prokaryote ?

Ans: Bacteria, Nostoc (cyano bacteria/ B.G. Algae)

9) What are Eukaryotes ?

Ans: Organisms which have well organized nuclei (True nuclear) are called Eukaryotes.

10) Give an example for Eukaryotes ?

Ans: Amoeba, mango, Man.

11) What are Unicellular organisms ?

Ans: One called or Single called organisms are called unicellular organisms.

12) Give an example for unicellular organisms ?

Ans: Chlamydomonas, Amoeba, Euglena.

13) What are Multi cellular organisms ?

Ans: Organisms whose body is made up of many numbers of cells are called multi cellular organisms.

14) Give an example for multi cellular organisms.

Ans: Spirogyra, Mango, Man.

[15) Name the five kingdoms of living organisms ?

Ans: (1) Kingdom monera, (2) Kindom Protista, (3) Kindom – Fungi (mycota) (4) Kindom – plautae (metaphyta). (5) Kindom – Animalia (metazoan).]

15) Who proposed five kingdom classification ?

Ans: R.H. Whittaker (1969)

16) What are Monerans ?

Ans: Prokaryotic cell natured organisms are called monerans.

17) Name the kingdom which includes monerans ?

Ans: Kingdom Monera.

18) Give an example for kingdom morera.

Ans: Bacteria, Nostoc, Mycoplasma.

19) Name the kingdom which includes Bacteria.

Ans: Kindom Monera. .

20) What are autotophic bacteria ?

Ans: The bacteria which synthesize their own food from triorganic substrates are called autotophic bacteria.

21) Give an example for autotrophic bacteria.

Ans: Nostoc, Anabaena.

22) What are heterotrophic bacteria ?

Ans: The bacteria which do not synthesize their own food but depend on other organisms or dead organic matter are called heterotrophic bacteria.

23) Why archea bacteria can also live in extreme conditions ?

Ans: Archea Bacteria are having different cell walls structure responding survival in extreme conditions.

24) What are halophiles ?

Ans: The archea bacteria which live in extreme salty areas are called halophiles.

25) What are thermoacidophiles ?

Ans: The archea bacteria which live in hot springs are called thermoacidophiles.

26) What are methanogens ?

Ans: The archea bacteria which live in marshy areas are called methanogens.

27) Where does methanogens live ?

Ans: In the gut of several ruminant animals (cows & buffaloes)

28) Name the gas produced by methanogens.

Ans: Methane (biogas)

29) Name the gas produced by dung of cows & buffaloes with the help of methanogens ?

Ans: Methane.

30) What are Eubacteria ?

Ans: True bacteria with rigid cell wall are called Eubacteria.

31) What are cyano bacteria ?

Ans: Blue, green, orange are called cyano bacteria.

32) Give an example for cyanobacteria.

Ans: Nostoc.

33) What are heterocysts ?

Ans: The colourless specialized cells of nostoc filament meant for fixing atmospheric N_2 are called heterocysts.

34) What are chemosynthetic autotrophic bacteria ?

Ans: The bacteria which oxidize inorganic substances like nitrate, Nitrities & ammonia to release energy in the form of ATP are called chemosynthetic bacteria.

35) What are mycoplasmas ?

Ans: The smallest living organisms without cell walls & survive without oxygen are called mycoplasmas.

36) Name the kingdom which includes single celled eukaryotes?

Ans: Kingdom Protista.

37) What are protistans ?

Ans: Single celled eukaryotes are called protistants.

38) Name the 2 methods of protisan's reproduction.

(1) A sexual reproduction (cell fusion)

(2) Sexual reproduction (Zygote formation)

39) What are planktons ?

Ans: The microscopic organisms which floats on water are called planktons.

40) Name the chemical component of cell wall of chrysopytes (Diatoms)

Ans: Chitin

41) The walls of chrysophytes (diatoms) are indestructible. Why ?

Ans: Because of the presence of chitin in their walls.

42) What is diatomaceous earth ?

Ans: Acumination of cell wall deposition of dead diatoms.

43) Which are chief producer of oceans ?

Ans: Diatoms.

44) Give an example for red dianoflagelletes ?

Ans: Gonyaulax

45) Which organisms make the sea water red ?

Ans: Dianoflagelletes.

46) What are dianoflaellates ?

Ans : Marine, Photosynthetic organisms with 2 flogella are called diamoflagellates.

47) What are engleuoids ?

Ans: The fresh water organisms found in stagnant water with protein rich pothicle in their cell wall are called enlenoids.

48) Give an example for englenoids.

Ans: Euglena (photosynthetic protozoan)

49) What are slime moulds ?

Ans: Saprophytic protists are called Slime moulds.

50) What are plasmodium ?

Ans: Aggregation of slime moulds under suitable conditions are called plasmodium, which may grow & spread over several feet. During unfavorable can they differentiate & follows fruiting bodies.

51) What are psendopodia ? (flase feet)

Ans: Locomotor organs of amoebia are called psendopodia.

52) Name parasitc protozoa.

Ans: Entamoeba, Plasmodium (Malorial parasite)

53) Give an example for flagellated protozoans.

Ans : Trubanosoma, Euglena.

54) Name parasitic flagellated protozoan.

Ans: Trypanosoma.

55) Name the disease caused by Trypanosoma.

Ans: Sleeping sickness.

56) Which is the locomotor organ of flagellated protozoa (or Trypanosoma or Euglena)

Ans: Flagella.

57) Give one example for ciliated protozoans.

Ans: Paramaecium.

58) Which is the locomotor organ of paramecium or ciliated protozoans.

Ans: Cilia.

59) Ciliated protozoans are actively moving organisms, why ?

Ans: Because of the presence of thousands of cilia.

60) Give one example for sporozoan. ?

Ans: Plasmodium

61) Which one is called material parasite ?

Ans: Plasmodium.

62) Name the disease caused y plasmodium ?

Ans: Malaria.

63) Name the kingdom which includes eukaryotic heterotrophic organisms?

Ans: Kingdom Mycota (Fungi)

64) Name unicellular Fungi.

Ans: Yeast.

65) Name the fungi used in the preparation of broad & beer ?

Ans: Yeast.

66) Which fungi art as a source of antibiotics ?

Ans: Penicillium.

67) Name the disease caused by puccinia ?

Ans: Wheat rust disease.

68) We should keep fruits & vegetables in refrigerator, why ?

Ans: to prevent food form going bad due to bacterial or fungal infections.

69) What are hyphae ?

Ans: Long slender thread like structure of fungi are called hyphae.

70) Name non filamentous fungi

Ans: Yeast (It is unicellular)

71) What are coenocytic hyphae?

Ans : Continuous tube like hyphae filled with multinucleated hyphae are called cocnocytic hyphae.

72) Name the cell wall component of fungi ?

Ans: Chitin and polysaccharides.

73) What are saprophytic fungi ?

Ans: The heterotrophic fungi which absorb soluble organic matter from dead substrates are called saprophytes.

74) What are parasitic fungi ?

Ans: The heterotrophic fungi which absorb food from living plants and animals are called parasitic fungi.

75) What are symbionts ?

Ans: The association of 2 organisms in which both the organisms (pastneri are mutually benefited are called symbionts.

Ex: Fungi with algae as lichens.

76) Name the organisms of lichens ?

Ans: Fungi & Algae.

77) What are mycorshiza ?

Ans: Fungi in association with roots are called mycorrhiza.

78) Name A sexual method of reproduction in fungi ?

Ans: By producing spores called conidia or sporangia spores or

79) Name sexual method of reproduction of fungi ?

Ans: By producing Oospores, Osco spores, & basidiospores.

80) What are fruiting bodies ?

Ans: Spores producing structures in fungi are called fruiting bodies.

81) What is plasmogamy ?

Ans: Fusion of protoplasm of 2 motile or non motile gametes.

82) What is Karyogamy ?

Ans: Fusion of 2 nuclei is called karyogamy.

83) What are haploid spores ?

Ans: The spores produced through meiosis is zygote are called haploid spores

84) What is dikaryon ?

Ans: Fungal cell with 2 nuclei is called dikaryon.

85) What is mycelium ?

Ans : The plant body of fungi is called mycelium. It is made up of aggregation of hyphae.

86) What is the nature of mycelium of phycomycetes ?

Ans: Aseptate and Coenocytes

87) Name asexual method of reproduction in phycomycetes ?

Ans: By formation of Zoospores (motile) & by aplanospores (non motile)

88) Name 2 types of spores produced by phycomycetes ?

Ans: (1) Zoospores (motile) (2) Aplanospores (non motile)

90) What is zygospore ?

Ans: The spore formed by the fusion of 2 gametes is called zygospore.

91) What are isogamous gameter ?

Ans: Morphologically similar gameter are called isogamous gametes.

92) Give example for phycomycetes ?

Ans : Mirror, (2) Rhizopus (bread mould) (3) Albugo (parasitic fungi on mustara)

93) Name the parasitic fungi on mustard ?

Ans : Albugo

94) Give an example for unicellular Ascomycetes ?

Ans : Yeast (saccharomyces)

95) Give an example for multicellular Assocmycetes ?

Ans: Pencillium

96) What are condiospores ?

Ans : A sexual conidia produced exogenously on the special mycolinies called conidiospores.

97) Give an example for Ascomycetes ?

Ans: Aspergillus, Claviceps, Neurosporea.

98) What is the importance of Neureospora ?

Ans: It is extensively used in bio chemical & genetic work.

99) Name edible ascomycetes ?

Ans : Morels & buffles are echible & are considered as delicacies.

100) Give an example for Basidiomycetes ?

Ans: Mushrooms (2) bracket fungi (puff balls)

101) Name the most common vegetative method of reproduction in basidomycetes.

Ans: Fragmentation.

102) What are basidiocarps ?

Ans: Fruiting bodies of basidiomycetes are called basidocarps.

103) How many basidiospores are produced per basidium ?

Ans : Four Basidiospores.

104) Give an example for basidomycetes ?

Ans: Agericus (mushroom) (2) Ustilago (smut) (3) Paccinia (rust fungus)

105) Deuteromycetes are called imperfect fungi, why ?

Ans: Because in deuteromycetes we know only a sexual or vegetative phase of reproduction.

106) What are conidia ?

Ans: A sexual spores of deuteromycetes are called conidia.

107) What is the nature of mycelium in basidiomycetes and deuteromycetes?

Ans: Separate and branched.

108) Write the importance of deuteromycetes.

Ans: (1) helps in decomposition of litter.

(2) helps in mineral cycling.

109) Give an example for deuteromycetes.

Ans: (1) alternaria (2) colletotricheism (3) Trichoderma.

110) Give an example for insectivorous plants or parasitic plants.

Ans: Bladder work (2) Venus fly trap (3) Cuscuta.

111) What is the cell wall component of plants.

Ans : Cellulose.

112) What are the 2 distinct phases of life cycles of plants.

Ans: (1) Naploid gametophytic generation.

(2) Diploid sporophytic generation.

113) What is alternation of generation ?

Ans: The alternate occurrence of both haploid and diploid sporophytic generation in the life cycle of plants is called alternation of generation.

114) Name the kingdom which includes heterotrophic eukaryotic muscellular organisms which lack cell walls?
Ans: Kingdom animalia.

115) Which is the reserve food materials of animals ?
Ans: Glyrogen of fat

116) What is the mode of nutrition in animals ?
Ans: Holozoic (by ingestion of food)

117) Name the major type of reproduction ?
Ans: By copulation of male and female followed by embryological development.

118) Name the organisms which are not included in five kingdom?
Ans: classification of whittaker.

119) What is meant by virus ?
Ans: Virus means venom or poisonous fluid.

120) Who coined the term virus ?
Ans: Louis parteur

121) Who discovered mosaic diseases of tobacco ?
Ans: D.J. Ivanowsky

122) Who called viruses as “contagium virus fluidum ?

Ans : M.W. Beijerinek.

123) Viruses are called “contagium vivim fluidum” why ?

Ans: Because the extract of the infested plants of tobacco could cause infection in healthy plants.

124) Who filtered viruses for the first time ?

Ans: W.M. Stanley.

125) What is the component of crystals of viruses ?

Ans: Largely proteins (a/c to W.M. Stanley)

126) Name the genetic material of viruses ?

Ans : Either DNA or RNA never both.

127) What is the type of genetic material in plant viruses ?

Ans: Single stranded R.N.A

128) What is the type of genetic material in animal viruses ?

Ans: Either single or double stranded RNA or double stranded.

129) What are bacteriophages ? (double stranded DNA viruses)

Ans: The viruses that infect the bacteria are called bacteriophages.

130) What is the type of genetic material in bacteriophages ?

Ans: Double stranded D.N.A.

131) What is capsid ?

Ans: The protein coat viruses is called capsid.

132) What are capsomeres ?

Ans: Sub units of protein coat capsid are called capsomeres.

133) Give an example for obligate parasites ?

Ans: Viruses.

134) Why viruses are called obligate parasites ?

Ans: Because viruses can live inside or outside the body of host cell.

135) Name any two diseases.

Ans: (1) Mumps (2) Small pox (3) Herpes (4) Influenza (4) AIDS.

136) What are viroids ?

Ans: Infections R.N.A particles smaller than viruses protein coat are viroids.

137) Who discovered viroids ?

Ans: T.O. Diener

138) Name the disease caused by viroids ?

Ans : Potato spindle tuber disease.

139) What are lichens ?

Ans: Symbiotic associations (mutually useful association) b/n algae and fungi are called lichens.

140) What is phycobiont ?

Ans: The algal component of lichen is called phycobiont. It is autotrophic.

141) What is mycobiont ?

Ans: The fungal component of lichen is called mycobiont. It is heterotrophic.

142) Name autotrophic and heterotrophic component of lichens ?

Ans: Algal component is autotrophic

Fungal component is heterotrophic.

143) What is the role of algae & fungi in lichens ?

Ans: Algae prepare food for fungi & fungi provide shelter & absorb mineral nutrients & water for algae.

144) Which organisms are called pollution indicators ?

Ans: Lichens.

145) Lichens are called pollution indicator, why ?

Ans : Because they do not grow in polluted areas.

146) What are the two component of viruses ?

Ans : (1) Genetic material either DNA or RNA.

(2) Protein coat.

TWO MARKS QUESTIONS

1) Name the 5 kingdoms of living organisms ?

Ans: 1) Monera 2) Protista 3) Fungi (mycota) 4) Plantae (Metaphyto) 5)Animalia (Metazoa).

2) Mention the main criteria of R.H. Whittaker's classification ?

Ans: 1) Cell structure 2) Thallus organization 3) Mode of nutrition 4)Reproduction 5) Phlogenetic relationships were considered by Whittaker.

3) Where does bacteria live ?

Ans: Bacteria are live in extreme habitats such as (1) hot springs (2) deep oceans (3) Snow (4) Deserts (5) as parasites on other organisms.

4) Based on the shape classify the bacteria ?

Ans: (1) The coccus (spherical) (2) Vibrium (comma shape)

(3)The bacillur (rod shaped) (4) Spirillum (spiral)

5) What are the 2 kinds of autotrophic bacteria ?

Ans: (1) Photosynthetic autotrophic bacteria

(2) Chemosynthetic autotrophic bacteria.

6) What are arche bacteria ?

Ans: The special type of bacteria which live in most harsh (adverse) habitats such as extreme salty areas, hot springs & marshy areas are called arche bacteria.

7) List out any 4 properties of cyano bacteria ?

Ans: 1) Cells are prokaryotic in nature.

2) They are unicellular, colonial or filamentous.

3) They are either fresh water or marine water or terrestrial B.G.A

4) The colonies are surrounded by gelatinous mucilaginous sheath.

8) What is the role played by chemosynthetic bacteria ?

Ans: Recycling nutrients like Nitrogen Phosphorus, Iron & Sulphur.

9) Mention the methods of reproduction in bacteria ?

Ans: 1) Finsion 2) by spore formation 3) Transduction (by mutual DNA transfer) (sexual reproduction)

10) Which kind of eukaryotic protists are included in monera ?

Ans: All single celled eukaryotes are placed under protista.

11) Name the different group of organisms included in monera ?

Ans: Chryosophytes, Dinoflugellates, Euglenoids, Scime molds & Protoazoans are the group of organisms included in monera.

12) Write the two characteristic features of kingdom protista ?

Ans: 1) All are single celled eukaryotes.

2) It includes plant protists (photosynthetic protozoan) & animal protozoan's (protista)

3) Protist members are primarily orgnatic in nature & some are parmitic ?

4) The kingdom protista liks with other plants, fungi & animals.

5) Some protistam numbers have fiagella or cilia as cocomotary organs.

6) Protists reproduce asexually by binary fission and sexually by a process involving cell fusion & Zygote ferment ion.

13) Mention the two important characters of Chryesophytes ?

Ans: (1) Chryesophytes are the protistan unicellular eukaryotic protists.

(2) This game includes the diatoms & Elesmicls which are called "golden algae" (Jewels of the plant kingdom).

14) (How do you) Give the outline classification of bacteria.

15) Write the outline classification of kingdom protista.

16) What are parasites ? Name two protozisum parasites you have studied.

Ans: The organisms which depend on the other host organism for their requirement of food are called parasites.

Examples : (1) Plasmodium (2) Trypanosome.

17) Name the flagellated protozoan & ciliated protozoan ?

Ans: (1) flagellated protozoan Ex: Euglena.

(2) ciliated protozoan Ex: Paramecium.

18) What are symbionts ? Give an example

Ans: The close association of two different organisms living together where both are benefited for thin equipments are called symbionts.

19) What are the 3 steps involved in the life cycle of fungi ?

Ans: (1) Plasmogamy (2) Karyogany (3) meiosis in bygote.

20) Name the examples of phycomycetes ?

Ans: (1) Mucor (2) Rhizopues (3) Albugo.

21) Write the outline classification of the kingdom – Fungi.

22) Name the fungi belongs to ascomuscetes ? which are of them is used in biochemical & genetic work ?

Ans: (1) Aspergillus (2) Clavicles (3) Neurospora.

23) Name the fungi belongs to basidiomycetes ?

Ans: (1) Agaricus (mushroom) (2) Ustilago (Smurt) (3)Pucccinics (rust fungus)

24) Name the examples of denteromycetes ?

Ans: (1) Alternaria (2) Colletotrichum (3) Tricho derma.

25) Write briefly about lichens?

Ans: (1) Lichens are symbiotic close association of two different organisms such as algae & fungi.

(2) Algal component of lichen known as phycobiant which is photosynthetic in nature.

(3) Fungal component of living is known as mycobiont which is non photosynthetic, but helps in absorption of minerals, nutrients & water.

(4) Lichens are very good pollution inchicutas them do not grow in polluted areas.

FOUR / FIVE MARKS QUESTIONS:

1) What are the importance of heterotrophic bacteria.

Ans: (1) Conversion of milk to curd.

(2) Antibiotic productions.

(3) N_2 fixation in leguminous roots.

(4) Act as pathogen, causing diseases like cholera, typhoid, Tetanus.

(5) Damage corps (citrus canker disease)

(6) Act as 'Scavengers of nature' by decomposing dead & decaying organic matter.

2) Write the characteristic features of the kingdom – moneron – protists.

Ans: (1) All protists are single celled eukaryotes.

(2) It includes plant protist (photosynthetic protozoans) & animal protists.

(3) Protist members are primarily agnatic in nature & some are Parasitic.

(4) The kingdom protista links with other, plants, fungi & animals.

(5) Same protistans members have flagella orcilia as locomotary organs.

(6) Protists reproduce asexually by binary fission & sexually by aprocose involving cell fusion & Zygote formation.

3) Write the important characters of chrysophytes ?

Ans: (1)Chrysophytes use the unicellular, microscopic eukaryotic protists.

(2) This group includes diatoms & desmids which are called "golden algae" (the Jewels of the plant kingdom due to their beautiful designed cell wall or fragmentation)

(3) They are found in fresh water and marine water.

(4) They float passively in water currents (plankter)

(5) Most of chrysophytes (diatoms) are photosynthetic in nature & are the chief producers in the oceans.

(6) The diatoms cell walls have two twin silicones overlapping walls.

(7) Diatomaceous earth the gritty soil deposited over a period of billions accumulated) of years is useful in polishing, filtration of oils & syrups.

4) Write the characters of Dinoflagellutes ?

Ans: (1) Dianoflagellates are mostly found in marine water.

(2) They are photosynthetic in nature.

(3) Depending on the main pigment in their cells, they appear blue, green, brown, yellow or red in colour.

(4) The cell wall has stiff cellulose plates on the enter surface.

(5) Most of dinoflagellates have two flagella.

(6) Due to rapid multiplication, red dinoflagellates lix gonya and the toxizes released by these large numbers of dinoflagellates may kill the other marine animals such as fishes.

5) Write the five characters of engrenoids?

Ans: (1) Engrendois are the unicellular, microscopic protists found in stagnant fresh motor.

(2) Cell wall is absent but proteinocous flexible pellicle is present a protective layer.

(3) They have two flagella, one is long & other is short.

(4) They are photosynthetic in presence of light.

(5) In the alosence of light, they behave like heterotrophs (dseprived) by preduting on other smaller organisms.

(6) The interesting feature of the engrenoids is the presence of the pigments identical to those present in higher plant.

6) Write the important characters of Slime moulds ?

Ans: (1) Slime moulds are the unicellular saprophytic protists.

(2) Under suitable conditions, aggregntion of the slime mould body moves along decaying twigs & learns which may grow & spread several feet called plasmodium.

(3) This plasmodium during unfavorable conditions, differentiates to produce fruiting bodies bearing spores at their tips.

(4) Even under adverse conditions these spores extremely resistant & can survive.

(5) The spores are dispersed by air currents.

7) Write the salient features of protozoan's ?

Ans: (1) All protozoan's are eukaryotic, microscopic, unicellular.

(2) They are heterotrophic, live as predators or parasites (plasmodium & Trypanosome)

(3) They are believed to be primitive relatives of animals.

(4) Protozoan's are grouped in to four major groups, such as

(1) Amoeboid protozoan's (2) Flagellated protozoan's (3) ciliated protozoan's (4) Sporozoan's

8) Write the general character of kingdom Fungi ?

Ans: (1) The fungi are the unique heterotrophic organisms either saprophytic or parasitic or symbiotic.

(2) The fungi are cosmopolitan in distribution and occur in air, water, soil and on plants & animals.

(3) They are unicellular (yeast) or multi cellular, eukaryotic, organisms.

(4) Fungi are filamentous and the body consisting of long, slender thread like structures called hyphae, may be coenocytes hyphane or septate hyphore.

(5) The network of hyphae in fungi is called mycelium.

(6) The cell walls of fungi are composed of chitin and polysachandes.

(7) Reproduction in fungi can takes place by three methods (1) Vegetative (2) Asexual (3) Sexual reproduction.

(8) Fungi are classified into 4 major classes :-

(1) Phycomycetes (2) Ascomycetes (3) Basidiomycetes & (4)Denteromycetes.

9) Write the 4 characters phyconmycetes ?

Ans: (1) Phycomycetes are found in a genetic habitats, moist & damp places where wood is decaying.

(2) Some of are parasites on plants.

(3) A sexual reproduction takes place by zoopsores (motile) or by aplanospores (non – motile)

(4) Sexual reproduction takes place by the fusion of gametes to produce the zygospore.

10) Write the characters of Ascomycetes?

Ans: (1) Ascomycetes are commonly called as "Sac – fungi"

(2) These are multicellular namely unicellular (yeast)

(3) They are saprophytic, decomposers, coprophilory (growing in dung) or parasitic.

(4) Mycelium is branched & septet.

(5) The Asexual spores are called conicha, developed on Conidiophores.

(6) The sexual spores are called ascospores, developed in sue like asci, on ascocarps.

(7) Many members are edible (morels & buffles)

11) Write the important characters of Basidiomycetes ?

Ans: (1) They grow soil, on loss, & tree stumps.

(2) Some are plant parasites (rusts & smuts)

(3) These are commonly known as mushrooms, bracket fungi & puff balls.

(4) The mycelium is branched & septate.

(5) Vegetative reproduction takes place by fragmentation.

(6) Asexual reproduction with sexual spores is absent.

(7) The sex organs absent, but plasmogumy & karyogamy processes are found basidiomycetes.

(8) The fruiting bodies are called basidiocarps.

(9) The basidium produces 4 basidiospors by meiosis.

11) Write the important characters of denteromycetes ?

Ans: (1) Denteromycetes are commonly known as imperfect fungi.

(2) The nycelium is branched and septate.

(3) They have only the vegetative or asexual phases.

(4) They reproduce only by asexual spores known as conidia.

(5) Some are saprophytes or decomposers or parasites.'

(6) Decomposers are helpful in Mineral recycling.

12) Write the important characters of the kingdom plantae ?

Ans: (1) Kingdom plantae includes all eukaryotic chlorophyll containing organisms called plants.

(2) Prominent chloroplasts are found in the cells.

(3) Cells have cellulosic cell wall.

(4) Except few most plants are autotrophic.

(5) some are heterotrophic, include insectivorous plants. (like venus fly trap & bladder wort) and parasites (Cuscuta).

(6) Life cycle of plants has two distinct phases –

(1) The diploid (2n) saprophytic phase.

(2) The haploid (n) gamatophytic phase.

(7) There is the phenomenon of alternation of generation.

(8) The kingdom plant a includes algae, bryophytes, pteridophytes, gymnosperms & angiosperms.

13) Write the important characters of the kingdom- Animalia ?

Ans; (1) Kingdom Animalia includes heterotrophic, multicellular, eukaryotic organisms.

(2) Cells are not containing cell walls.

(3) Animals directly or indirectly depend on plants for food.

(4) they digest their food in an internal cavity.

(5) Animals store food reserves as glycogen or fat.

(6) The mode of nutrition in animals is holozoic (by ingestion of food)

(7) Higher forms animals show elaborate sensory and neuromotor mechanism.

(8) Most of the animals are capable of locomotion.

(9) The sexual reproduction is by copulation of male & female, followed by embryological development.

14) List the characteristics of Viruses ?

Ans: (1) Viruses are neither living nor non – living.

(2) Viruses for this reason do not find a correct place in classification.

(3) Viruses do not possess cells, hence they are not truly living.

(4) viruses are non cellular organisms.

(5) They are inert crystalline structure outside the living cell.

(6) Once a virus infect a cell, replicate themselves in the host cell and kill the host.

(7) Viruses contain both protein and genetic material either RNA or DNA, never both.

(8) No virus contains both RNA & DNA.

(9) A virus is nucleoprotein and its genetic material is infectious.

(10) Virus that infect plants have single strand of RNA.

(11) The virus that infect animals have either single or double stranded RNA or double stranded DNA.

(12) Viruses that infect bacterial cells are called bacteriophages, which have double stranded DNA.

(13) The protein coat of virus is called capsid, made of small units called Capsomeres, which protect the central nucleic acid.

(14) The capcid capsomeres are arranged in heleical or polyhedral geometric forms.

(15) In plants TMV causes leaf mosaic disease, leaf curling disease, leaf rolling disease, yellowing and vein clearing disease.

(16) Viruses cause diseases in human being such as – AIDS, Small pox, Mumps, Herpes, Influenza.