

UNIT-I.Diversity of Living World

Chapter-1.Living World

I.Choose the correct answer:-

- Which one of the following statement about virus is correct?
a. Possess their own metabolic system b. They are facultative parasites
c. **They contain DNA or RNA** d. Enzymes are present
- Identify the incorrect statement about the Gram positive bacteria
a. **Teichoic acid absent** b. High percentage of peptidoglycan is found in cell wall
c. Cell wall is single layered d. Lipopolysaccharide is present in cell wall
- Identify the Archaeobacterium
a. *Acetobacter* b. *Erwinia* c. *Treponema* d. ***Methanobacterium***
- The correct statement regarding Blue green algae is _____
a. **lack of motile structures** b. presence of cellulose in cell wall
c. absence of mucilage around the thallus d. presence of floridean starch
- Identify the correctly matched pair
a. Actinomycete – a) Late blight b. Mycoplasma – b) lumpy jaw
c. **Bacteria – c) Crown gall** d. Fungi – d) sandal spike

II.Two, Three, Five mark questions:-

6.Differentiate homoimerous and heteromerous lichens.

Homoimerous Lichen	Heteromerous Lichen
Algal cells are evenly distributed in the thallus	A distinct layer of algae and fungi is present

7.Write the distinguishing features of monera.

- They are prokaryotic organisms.
- They are autotrophic and heterotrophic organisms.
- Cell wall is made up of Peptidoglycan and Mucopeptides.

8.Why do farmers plant leguminous crops in crop rotations/mixed cropping?

Leguminous plants are fixing the atmospheric nitrogen into soil and increasing the plant growth.
Hence, farmers are cultivating the leguminous crops in crop rotations and mixed cropping.

9.Briefly discuss on five Kingdom classification. Add a note on merits and demerits.

Criteria	Monera	Protista	Fungi	Plantae	Animalia
Cell type	Prokaryotic	Eukaryotic	Eukaryotic	Eukaryotic	Eukaryotic
Level of Organization	Unicellular	Unicellular	Multicellular	Tissue/organ	Tissue/organ
Cell wall	Present	Present	Present	Present	Absent
Nutrition	Autotrophic	Autotrophic	Heterotrophic	Autotrophic	Heterotrophic
Motility	Motile	Motile	Non- Motile	Non- Motile	Motile
Example	Cyanobacteria	Amoeba	Yeast	Algae	Vertebrates

Merits of five kingdom classification:

- It is based on the mode of nutrition.
- Separation of fungi from plants.
- It shows the phylogeny of the organisms.

Demerits of five kingdom classification:

- Viruses are not included in the system.
- Cell wall lacking and cell wall bearing organisms are placed in the same kingdom.

10.Give a general account on lichens.

- The symbiotic association between algae and fungi is called lichens.
- The algal partner is called Phycobiont or Photobiont. The fungal partner is called Mycobiont.
- Asexual reproduction takes place through fragmentation, Soredia and Isidia.
- Phycobionts reproduce by akinetes, hormogonia, aplanospore etc.,
- Mycobionts undergo sexual reproduction and produce ascocarps.

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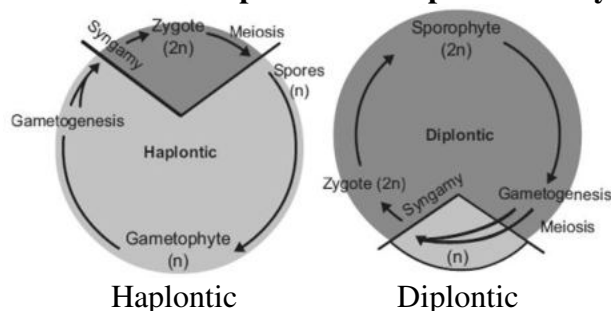
Chapter-2.Plant Kingdom

I.Choose the correct answer:-

- Which of the plant group has gametophyte as a dominant phase?
a. Pteridophytes **b. Bryophytes** c. Gymnosperm d. Angiosperm
- Which of following represents gametophytic generation in pteridophytes?
a. Prothallus b. Thallus c. Cone d. Rhizophore.
- The haploid number of chromosome for an angiosperm is 14, the number of chromosome in its endosperm would be
a. 7 b. 14 **c. 42** d. 28
- Endosperm in gymnosperm is formed.
a. At the time of fertilization. **b. Before fertilization** c. After fertilization
d. Along with the development of embryo.

II.Two, Three, Five mark questions:-

5.Differentiate haplontic and diplontic life cycle.



6.What is Plectostele? give example.

Xylem plates alternate with phloem plates is called Plectostele. Example: Lycopodium.

7.What do you infer from the term pycnoxylic?

During the secondary growth of pinus compact narrow medullary rays are formed. This wood is called as pycnoxylic.

8.Mention two characters shared by gymnosperms and angiosperms.

- Both plants are produce seeds.
- Presence of Eustele.

9.Do you think shape of chloroplast is unique for algae. Justify your answer?

Yes, I think the shape of chloroplast is unique for algae. Because of its different shape and size.

- Cup shape – Chlamydomonas.
- Discoid – Chara
- Girdle shaped – Ulothrix.
- Reticulate – Oedogonium
- spiral – Spirogyra.

10.Do you agree with the statement ‘Bryophytes need water for fertilization’? Justify your answer.

- Yes, I agree with the statement ‘Bryophytes need water for fertilization’.
- Biflagellated antherozoids are swims in water and reach to the archegonium and form diploid zygote.
- Hence, water is essential for fertilization.
