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Answers Key:

IV. Answer in detail:

1. (i) The symbiotic association between algae and fungi is called lichens.
(ii) The algal partner is called Phycobiont or Photobiont and the fungal partner is called Mycobiont.
(iii) Algae provide nutrition for fungal partner in turn fungi provide protection and also help to fix the thallus to the substratum through rhizinae.
(iv) Asexual reproduction takes place through fragmentation, Soredia and Isidia. Phycobionts reproduce by akinetes, hormogonia, aplanospore, etc., Mycobionts undergo sexual reproduction and produce ascocarps.
Classification:
(i) Based on the habitat lichens are classified into following types: Corticolous (on Bark) Lignicolous (on Wood) Saxicolous (on rocks) Terricolous (on ground) Marine (on siliceous rocks of sea) Fresh water(on siliceous rock of fresh water).
(ii) On the basis of morphology of the thallus they are divided into Leprose (a distinct fungal layer is absent) Crustose-crust like; Foliose-leaf like; Fruticose-branched pendulous shrub like.
(iii) The distribution of algal cells distinguishes lichens into two forms namely Homoiomerous (Algal cells evenly distributed in the thallus) and Heteromerous (a distinct layer of algae and fungi present)
(iv) If the fungal partner of lichen belongs to ascomycetes, it is called Ascolichen and if it is basidiomycetes it is called Basidiolichen.
2. Salient features:
1. The members of this group are prokaryotes and lack motile reproductive structures.
2. The thallus is unicellular in Chroococcus, colonial in Gloeocapsa and filamentous trichome in Nostoc.
3. The protoplasm is differentiated into a centroplasm and a chromatophore bearing chromoplasm.
4. The photosynthetic pigments include c-phyocyanin and c-phycoerythrin along with myxoxanthin and myxoxanthophyll.
5. The reserve food material is Cyanophycean starch.
6. They reproduce only through vegetative methods and produce Akinetes, Hormogones, Endospores, Nanocysts.
7. Sexual reproduction is absent.



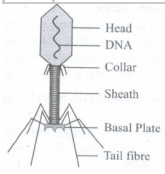


III. Answer in brief:

3.

S.No	Criteria	Monera
1.	Cell type	Prokaryotic
2.	Level of organization	Mostly unicellular, rarely Multicellular
3.	Cell wall	Present (made up of peptidoglycan and mucopeptides)
4.	Nutrition	Autotrophic (Phototrophic, Chemoautotrophic) Heterotrophic (Parasitic and Saprophytic)
5.	Motility	Motile or non-motile
6.	Organisms	Archaebacteria, Eubacteria, Cyanobacteria, Actinomycetes and Mycoplasma

4.



II. Answer the following:

5.

Homoiomerous	Heteromerous
Algal cells evenly distributed in the thallus	A distinct layer of algae and fungi present

6. Virion is an intact infective virus particle which is non-replicating outside a host cell

I. Choose the correct answer:

7. (d) Lipopolysaccharide is present in cell wall
8. (d) Methanobacterium
9. (a) lack of motile structures
10. (a) Mycorrhiza

11. (d) Glycocalyx

QB 365 Study Material
QUESTION BANK 365