

Questions

1. Who coined the term algae?
2. What is the study of algae called?
3. Give four most important characteristic features of algae.
4. Give one example of unicellular, colonial, filamentous and parenchymatous type of algae.
5. Differentiate between
 - a) Algae and fungi
 - b) Isogamy and Oogamy
 - c) Acronematic and pantonematic
 - d) Aplanospore and zoospore

6. Write short notes on:

- a) Eye spot
 - b) Pyrenoid
 - c) Phycobiliproteins
 - d) **Ejectisomes**
7. Discuss the three types of life cycles found in algae.
 8. Discuss briefly the different types of storage products found in various algal groups.
 9. What are water blooms?
 10. Give one example each of Epiphytic, epizooic, endophytic and endozoic alga.
 11. What are the main criteria for the classification of algae.
 12. How are BGA distinguished from the other algae.
 13. What are the reserve food materials found in the cells of Rhodophyceae.
 14. What are the common pigments present in algae. State the importance of these pigments in the classification of algae.

Put (✓) or (×)

- 1- Alginic acid and fucoidin, and phlorotannins are a constituent of the cell walls of Rhodophtra (red algae).

- 2- Agarose, carrageenan, porphyran, and funoran occur in the cell wall of Phaeophyta (brown algae).
- 3- A cell wall of *Euglena* consists of cellulose
- 4- Rhodophyceae and Cyanophyceae are motile
- 5- Chlorophytes have two acronematic flagella,
- 6- Phaeophyceae, have one acronematic (whiplash) and one pleuronematic (tinsel) flagellum.
- 7- Cryptomonas, both flagella are pleuronematic
- 8- Cryptomonads, Prasinophytes, and **motile colonial green algae** contain **more than one** chromatophores per cell.
- 9- The thylakoids of Rhodophyceae and Cyanophyceae, are **stacked together into bands**

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- 1- Diatoms grow easily with saving cell energy budget.
- 2- Euglena moves flexibly and easily
- 3- Rhodophyta characterized by red colour, whereas Cyanophyta characterized by blue colour.
- 4- The presence of pyrenoid is essential in photosynthesis.
- 5- Stigma causes the movement the algal cell towards or away from light.
- 6- Dinoflagellates is considered primitive organism
- 7-

Complete

- 1- The type of cyanobacteria cell wall is
- 2- The function of haptonema is
- 3- **Isokont** flagella means
- 4- **Heterokont** flagella means
- 5- Phaeophyceae generally contain a band of thylakoids

- 6- The reserve food of Rhodophyceae is and Phaeophyceae is
- 7- Starch grains are stored within the chloroplast in the, and in the cytoplasm outside the chromatophores in both and and between the wall of the chromatophore and the sac of endoplasmic reticulum present around the plastid in the
- 8- Pyrenoid containsthat used essentially in photosynthesis.
- 9- Fucoxanthin is the characteristic pigment found in, and responsible for their characteristic color.
- 10-The core of the phycobilisomes are made of
- 11- The blue colored phycocyanin and the red colored phycoerythrin together are called.....but when they attached to protein part are calledand when the previous three components are aggregated on the surface of the thylakoids, they form
- 12-The eyespot of, and occurs in the chloroplast, but free of the chloroplast in the.....,.....and
- 13- The outer nuclear membrane is continuous with the membranes of the endoplasmic reticulum in and
- 14- The outer nuclear membrane isn't continuous with the membranes of the endoplasmic reticulum in in and
- 15- The primitive features that occurs in dinoflagellates mitosis are,.....

Write the scientific name

- 1- An additional flagellum like structure which can coil and anchor the cell to the substratum.
- 2- It is found on some flagella and may be fibrous or tubular.
- 3- The phycobiliproteins which are aggregated on the surface of the thylakoids.