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Assignment

① Classify Plant according to Eicher's group of 1883

Division	Class
① Thallophyta	Algae, fungi
② Bryophyta	Liverworts, mosses
③ Pteridophyta	Psilotum, Lycopodium, Heterostichia, ferns
④ Spermatophyta	Gymnosperms, Angiosperms

② How are algae of importance to man?

- ① It serves as food for people.
- ② It can be used as thickening agent in ice cream and shampoos.
- ③ Algae have high iodine content therefore prevent goitre.
- ④ It serve also drug to ward off diseases.

③ Describe ~~one~~ unicellular form of algae.

We are using Chlamydomonas to represent the unicellular algae. It's found in stagnant water. It has the flagella which enable movement. The cell is bounded by a cellulose cell wall. The stigma is for photoreception.

④ How does this unicellular algae in question 3 carry out reproduction?

Ans: Chlamydomonas reproduces both asexually (vegetative) or sexually.

Asexually reproduction

It occurs by zoospores, by aplanospores, by hypnospores or by aplanella stage. In the reproduction of daughter all the amount and quality of genetic material in a nucleus of the mother cell is maintained in the daughter cell. The

Amount of genetic material in the mother cell nucleus of n . The daughter cell also have a quantity of genetic material. The mitotic division maintains the quality and quantity of genetic materials.

Sexual reproduction

Condition are usually unfavorable. Chlamydomonas switches to sexual reproduction. The adult haploid chlamydomonas divides repeatedly to produce isogametes (gametes that look alike and are both motile). The isogametes are released, fuse together by their flagella, fertilization occurs to form a fertilized egg or a diploid ($2n$) zygote. Process called isogamy.

⑤ Differentiate between the two types of colonial form of algae

The colonial are - Volvox & Pandorina

- Volvox
- It's complex form of pandorina
 - Its sexually reproduction is oogamous
 - It has many colonies

- Pandorina
- It's a genus of green algae
 - Its sexually reproduction is anisogamous
 - Its colony consists 16 cells

⑥ Describe a named complex form of algae

Fucus

It is a genus of brown algae whose species are often found on rocks in the intertidal zones of the sea shores. The plant body is flattened, dichotomously branched thallus with a midrib, a vegetative apex and multicellular disk with ~~plant~~ ^{which} plant is attached to rock surface. The body of the plant has air bladder which aid the plant to float on the water. It vary in size from a few centimetres to above 2 metres in length. They also vary in terms of whether the sex cells are found in the same sexual chamber or in different sexual chambers on different plant bodies.

Sexual reproduction is oogamous, sex cells are produced in conceptacles which have openings (ostioles) on the surface of the thallus.