

## General Biology II

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Mbbs

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1. Classify plants according to Eichler's grouping of 1883.

Division	Class
Thallophyta	Phycotinae (Algae) Mycotinae (Fungi)
Bryophyta	Hepaticae (Liverworts) Musci (Mosses)
Pteridophyta	Psilotinae (Psilotum) Lycopodiinae Equisetinae (Horse-tails) Filicinae (Ferns)
Spermatophyta	Gymnospermae Angiospermae

2. How are algae of importance to man?

- (1) Source of food for fish and livestock
- (2) Algae is used in cosmetics
- (3) Algae is nutritious as it has high trace elements
- (4) Algae can be used to ward off diseases
- (5) Algae has chemicals used in pharmaceuticals

3. Describe a unicellular form of algae.

- It is motile
- It is found in stagnant water
- has two flagella for mobility
- has a cellulose cell wall and contains organelles
- Can reproduce either by vegetative (or asexual) or by sexual reproduction.
- Presence of eyespot, chloroplast and nucleus

4. How does this unicellular algae described in question 3 carry out its reproduction.

- It carries out its reproduction by either vegetative (asexual) reproduction or by sexual reproduction.
- In vegetative (asexual) reproduction, the cell divides mitotically to produce two identical daughter cells called zoospores.
- In sexual reproduction, caused by lack of nutrients or certain environmental conditions, the gametes are produced instead of spores which then fuse in a process called isogamy to form a zygote which divides via meiosis to form four haploid daughter cells.

5. Differentiate between the two types of colonial form of algae.

Pandorina	Volvox
has 16 cells in the colony	has thousands of cells
Less complex	more complex
all cells undergo division	not all cells undergo division.
Sexual reproduction is Anisogamous	Sexual reproduction is Oogamous

6. Describe a named complex form of algae.

+ Describing Fucus;

- It is a genus of brown algae
- often found on rocks in the intertidal zones of the sea
- plant body is flattened, dichotomously-branched thallus
- plant body has air bladders
- vary from about a few centimetres to 2 metres
- Sexual reproduction is oogamous
- has a vegetative apex (a reproductive apex), and a multicellular disk.