

Name: ASIEGBU CYNTHIA OGECHE

Matrix No: 19/MHS/01/106

Department: Medicine and Surgery

D	Division	Class
-	Thallophyta	Phycotinae (Algae) Mycotinae (Fungi)
-	Bryophyta	Hepaticae (Liverworts) Musci (mosses)
-	Pteridophyta	Psilotinae (Psilotum) Lycopodiinae (Lycopodium, Selaginellae) Equisetinae (Horsetails) Filicinae (Ferns)
-	Spermatophyta	Gymnospermae (Gymnosperm) Angiospermae (Angiosperm)

2. Algae can be used as food for people and livestock.

Thickening agents for ice cream and soups

Drugs to control off diseases

Seaweeds are source of chemicals extracts used in the food, pharmaceutical, textile & cosmetic industries

Brown algae yields Alginic acid used to stabilize emulsions & suspensions found in products like syrup, ice cream and paint.

Red algae provide agar and carrageen for preparation of various gels

3) The unicellular algae (*Chlamydomonas*) is a mobile green alga found in stagnant water. They use flagella for mobility and their cell contains organelles bounded by a cellulosic cell wall. The nucleus has the genetic programme of the cell. It has eyespot for photoreception. The mitochondria mediate the elaboration of energy molecules. Manufactured sugar is processed into starch in the pyrenoid.

4) *Chlamydomonas* reproduces both asexually and sexually.

Asexually, it does so via mitotic division whereby the quantity & quality in the parent cell is equal to that of the daughter cells. In *Chlamydomonas*, a cell about to divide ~~loses~~ loses its flagella. The cell undergoes mitotic division leading to two nuclear cell walls are elaborated which delimit cytoplasm around each nuclei i.e. two daughter cells are formed.

Sexual: If involves the union of sex cells. In *Chlamydomonas*, aggregation of cells in a colony occurs under favourable conditions. These cells pair by their posterior ends. This pairing is isogamous. The cytoplasm of the pairing cells fuse and the flagella are lost. The two nuclei fuse to form a single cell with 2n nuclear material. The zygote secretes a thick wall called zygospore. The zygote undergoes two successive cell divisions. These divisions give rise with

four haploid

5) *Volvox* has number

6) *Fucus* an
brown, erect
Vegetative
Unilar disc

The float
and the p
Carries in
length. They
are found
bunches.

Four haploid cells known as 1 hap Zoospore

5) Pandorina colony contains just 16 cells while ~~other~~ has numbers that may run to thousands.

6) Fucus, an example of ~~com~~ complex algae has flattened bodies, eletotomously-branched fronds with a midrib, a vegetative apex, a reproductive apex at maturity, and a multicellular disc with which plant is attached to rock surface. The plant body also has air bladders which is believed to aid the plant to float on the water. Various species exist varying in size from a few centimetres to about 2metres in length. They also vary in terms of whether the sex cells are found in the same or different chambers in plant bodies.