

NAME: UGOCHUKWU CHIZITEREM PRECIOUS

MATRIC NUMBER: 19/MHS01/414

COLLEGE: MEDICINE AND HEALTH SCIENCES

DEPARTMENT: MEDICINE AND SURGERY

COURSE: BIOLOGY 102

LEVEL: 100

1. Classify plants according to Eichler's grouping in 1883
 - (a) cryptogamae
 - (b) Phanerogamae

Cryptogamae: flowerless and seedless plants. E.g. algae, mosses and ferns which do not produce flower, fruits and seeds.

Phanerogamae: seed bearing plants they are known as spermatophytes; gymnosperms and angiosperms.

2. How are algae of importance to man?
 - Algae can be used as cosmetics
 - They serve as thicken agent in ice-cream and shampoo industry
 - They are nutritious (high content of proteins, vitamins and trace elements).
3. Describe a unicellular form of algae.

Chlamydomonas:

It is a mobile and unicellular form of algae. They are found in fresh water lakes and ponds, in garden and farm soil. They are oval in shape, about 10um, unicellular with a distinct cell wall and a single chloroplast in close proximity to the nucleus. The nucleus is typically located in the center and with a distinct nucleolus. They have an eyespot with one or more contractile vacuoles.

4. How does this unicellular algae described in question three carry out in reproduction?

Chlamydomonas reproduce through vegetative (asexual) and sexual

Vegetative results in the production of daughter cells in which the amount and quality of genetic material in the nucleus of the mother cell is maintained in the daughter cells (mitosis occurs). Two daughter cells called zoospores it increases the number of cell in that colony.

Sexual reproduction occurs when environmental condition is favorable, it involves union of sex cells. These cells pair by their posterior end. The pairing is said to be isogamous because the pairing cells are said to be morphologically identical.

5. The colonial form of algae and their differences

- Pandorina
- Volvox

pandorina	volvox
Unicellular motile thallus	Multicellular motile thallus
It is a genus of green algae	It is a complex form of pandorina
Sexual reproduction is angisogamous	Sexual reproduction is oogamus

6. Describe a named complex form of algae.

Focus

It is a genus of the brown algae whose specie are found on rocks in the intertidal zone of the sea shores. The body of the plant is flattened, dichotomously branched thallus with a midrib, a vegetative apex and a multicellular disk with which plant is attached to rock surface. The body has air bladders which is believed ti aid the plant to help float on water. It varies in size from a few centimeters to about two meters in length. Sexual reproduction is oogamous, sex cells are produced in conceptacles which have opening (ostioles) on the surface of the thallus.