NAME: ADESAMUEL OLUWADAMILOLA FAITH
COURSE: BIOLOGY 102
MATRIC NO: 19/MHS01/038
DEPT: MEDICINE AND SURGERY(MBBS)

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

Answer

DIVISION	CLASS
1) Thallophyta	Phycotinae(Algae) Mycotinae(Fungi)
2) Bryophyta	Hepaticae(liverworts) Musci(Mosses)
3) Pteridophyta	Psilotinate(Psilotum) Lycopodinae(Lycopodium, Selaginella) Equisetinae(Horsetails) Filicinae(Ferns)
5) Spermatophyta	Gymnospernae(Gymnosperms) Angiospermae(Angiosperm)

2) How are algae of importance to man?

Answer

a) Algae are important as food for fishes.
b) It serves as food for people and livestock.
c) It serves as thickening agents in ice cream and shampoo l, drugs to wash off diseases.
d) Algae are considered nutritious because of their high protein content and high concentrations of minerals, trace elements and vitamins.
e) Algae have high iodine content therefore prevent goitre.

3) Describe a unicellular form of Algae

Answer

UNICELLULAR FORM IN THE ALGAE

Chlamydomonas represents the unicellular and motile forms of green algae. Found in stagnant water usually along with other forms.
Flagella are the structures for mobility.
The cell is bounded by a cellulose cell wall; contain organelles e.g nucleus, mitochondria, stigma(eyespot), cup-shaped chloroplast, pyrenoid etc.
The nucleus carries the genetic programme of the cell;
The stigma is for photoreception.
The mitochondria mediate the elaboration of energy molecules.
Manufactured sugar is processed into starch on the pyrenoid.

4) How does this unicellular algae described in question 3 carry out it's reproduction?

Answer

Cell division or fusion is the simplest method of reproduction for the unicellular forms of algae it is often called binary fusion as found in chlamydominas. In this method the two vegetative cells divides mitotically into two daughter cells which finally forms new individual. This reproduction is asexual

5) Differentiate between the two types of colonial forms of algae.

Answer

The colonial forms in the Algae- PANDORINA AND VOLVOX

PANDORINA- Usually occurs in water bloom. The colony consists of 16 cells attached to one another. Each cell has many attributes/features in common with chalamydomonas.e.g nucleus, large chloroplast, pyrenoid, flagella and stigma. The sexual reproduction is achieved by anisogamous pairing.

VOLVOX- Shows more complex form than pandorina. There are more cells in the colony, number may run into thousands and connected with cytoplasmic strands that runs through it cells.

Not all cells form new colonies; but the large cells at the posterior ends(gonidia) are the only ones that divide to form new colonies. Other cells remain vegetative throughout the life of the colony. Sexual reproduction is oogamous.I.e the male gamete is motile while the female gamete(egg) is not motile.

6) Describe a named complex form of algae

Answer

Sipogera is a filamentous charophyte green algae of the order of zypementales, named helical or spinal arrangement of the chloroplasts that is characteristic of the genus , it is commonly found in fresh water habitats , and there are more than 400 species spirogera in the world

.