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DEPARTMENT: MEDICINE AND HEALTH SCIENCES

COURSE CODE: BIO 102

ASSIGNMENT QUESTIONS

1. Classify plants according to Eichler’s grouping of 1883
2. How are algae of importance to man?
3. Describe a unicellular form of algae
4. How does this unicellular alga described in question 3 carry out its reproduction?
5. Differentiate between the two types of colonial form of algae.
6. Describe a named complex form of alga.

ANSWERS

1. Cryptogamae

Phanerogamae

1. Importance of algae to man
2. Microscopic algae are the source of much of the Earth’s oxygen.
3. Algae have been in use as human food for centuries in places like China, Japan, France etc.
4. They are also used as organic fertilizers in agriculture.
5. They are also used for ornamental purposes
6. They are plant like autotrophs and contain chlorophyll. There are various examples of unicellular algae; yeast, paramecium etc. Describing the paramecium, it is a slipper shaped, unicellular organisms found in pond water capable of feeding, locomotion and even reproduction. It takes food from the water and digests it in its organelles known as food vacuoles.
7. Paramecium reproduces asexually by a process called binary fission. During this reproduction, the macronucleus splits by a type of amitosis and the micronucleus undergoes mitosis. the cell then divides transversally and each new cell obtains a copy of the micronucleus and macronucleus.

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| VOLVOX | SYNURA |
| 1. Numerous cells in colonies | 1. Fewer cells in colonies |
| 1. Reproduction is both sexual and asexual | Sexual reproduction |

1. Spirogyra is a filamentous algae, commonly found in freshwater ditches and ponds. It is a plant like organism because of the presence of chlorophyll. There are more than 400 species of spirogyra in the world. Their cell wall is composed of pectin and cellulose. It reproduces vegetatively and sexually.