

BOBI NAOMI NINIORITSE

19/MHS09/005

MEDICINE AND HEALTH SCIENCES

DENTISTRY

100LEVEL

BIOLOGY 102 ASSIGNMENT

1. In a system of plant taxonomy, the Eichler's system was the first phylogenetic (phyletic) or evolutionary system. He gave the system of classification for the whole plant kingdom and classified the plants into two subkingdoms; cryptogamae and phanerogamae.

a) Cryptogamae: are seedless and fruitless plants. They are simple and flowerless plants like algae, mosses and ferns which do not produce flowers, fruits and seeds. They are considered as lower plants.

b) Phanerogamae: are seed bearing plants, so they are known as spermatophytes. They are higher plants, the plants body is differentiated into roots, stems and leaves with well developed vascular system. e.g angiosperms and gymnosperms.

2. The importance of algae to man are;

a) manufacture of iodine

b) manufacture of soaps and alum

c) ornamental uses

d) used as fertilizer

e) Direct use of algae as food for man

f) it's a source of agar in the production of ice cream, jellies and desserts

g) In alginic acid, algin and mannitol which is used in the production of dyes, combs and buttons.

h) in medicine and minerals.

3. A unicellular form of algae also called acellular algae as they function as complete living

organisms. Unicellular forms are common in all the group of algae except Rhodophyceae, phaeophyceae, and charophyceae. The unicells may be motile or non-motile.

4. Cell division of fission is the simplest method of reproduction for unicellular forms of algae. It is often called binary fission as found in Chlamydomonas. In this method, the two vegetative cells divide mitotically into two daughter cells, those finally divide and form new individuals. The reproduction is asexual.

5. Differences between Volvox and Synura;

a) Reproduction in Volvox is both sexual and asexual, while that of Synura is sexual only.

b) Volvox has spherical colonies of up to 50,000 cells, while Synura has few cells in colonies.

6. Spirogyra is a filamentous charophyte green algae of the order of Zygnematales, named for the helical or spiral arrangement of the chloroplasts that is characteristic of the genus. It is commonly found in freshwater habitats, and there are more than 400 species of Spirogyra on planet earth.