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100 level

Bio 102

Assignment

1. A system of plant taxonomy, the earlier system was the first evolutionary system. He gave a system of classification of the whole plant kingdom. Each kingdom is divided into two sub-requires.

- They are gymnosperms and phanerogams.

(i) Gymnosperms; are flowerless and seedless plants. They are mostly plants like ferns, algae, mosses which don't produce flowers, fruits and seeds. Gymnosperms are considered as lower plants.

(ii) Phanerogams; are seed bearing plants. So they are also known as Spermatophytes. They are higher plants. The plant body is differentiated into roots, stem and leaves with well developed vascular system. Examples are gymnosperms and angiosperms.

2) Below are the importance of algae to man

- (i) Marine or minerals
- (ii) Used as fertilizer
- (iii) As a source of agar in the production of jelly ice-cream etc
- (iv) Alginic acid, algin and methyl which is used in the production of dyes, butters and cosmetics
- (v) Manufacture of iodine

3) Unicellular form of algae are also called acellular algae as they function as complete living organisms. Unicellular forms are common in all the groups of algae except Rhodophyceae, Phaeophyceae and Charophyceae. They

unicells may be mobile or non-mobile.

4) Cell division or fission is the simplest method of reproduction for the 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, these finally divide as new individuals. The reproduction is asexual.

5) Below are the differences between Volvox and Synura.

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| i) Spherical colonies of up to 1000 cells | i) Few cells in colonies |
| ii) Reproduction is both sexual and asexual | ii) Reproduction is sexual |

6) Spirogyra is filamentous chlorophyte green algae of the order 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 in the world.