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DEPARTMENT:ANATOMY

MATRIC NO:17/MHS03/023

(C.O)

1.)Eichler classified the plant kingdom into two sub kingdoms . They are the chryptogamae and the phanerogamae.

a.)Chryptogamae: They are flowerless a

nd seedless plants.They are like alga,mosses amd ferns that do not produce seed,flowers or fruits.They are lower plants.

b.)Phanerogamae:These are seed bearing plants.They are higher plants also known as spermatophytes .The plant body is differentiated into root,stems and leaves with well developed vascular system.Examples are angiosperms and gymnosperms.

2.)Algae Constitute the Link of Food Chain.Algae is Useful in Fish Culture.Algae is Used for Recreational Purposes.Algae is Useful in Sewage Treatment Plants.Algae is Used as Food.Algae is Used as Fodder.Algae is Used as Fertilizers.Algae is Used as Medicine

3.)Diatoms:They are photosynthetic organisms referred to as algae with a length/diameter of between 2 and 500 microns.They have a transparent cell wall(frustule)made of silicon dioxide, which is itself hydrated with a little amount of water. Therefore, diatoms are simply aquatic organisms,which can be found in such environments as fresh and marine(salty) waters and moist souls.The hydrates silica that makes the cell wall of these organisms look like opal,which is transparent,forming what resembles a glass house for the algae.The cell wall(frustule)is composed of two halves(valves) that fits into each other like a pill capsule. Because silica is impervious( it does not let anything through)this system allows for exchange of nutrients and waste in the environment where the organism resides.The valves also play an important role in the identification and in their classification.Although they grow as single cells,they can also form filaments or simple colonies in a group.

4.)Reproduction in Diatoms:Typically, diatoms divide and reproduce by a process referred to as vegetative division, which involves the division of a single cell into two new cells. During the reproduction cycle, the new cell is formed inside the parent cell. The new cell is smaller in size given that it forms within the mother cell that has a rigid cell wall that does not expand.During this process, the daughter cell also takes a valve of the parent frustule as its epitheca before building its own hypotheca in a period of about 15 minutes. This process may be repeated a number of times a day (1 to 8 times). However, this largely depends on the availability of dissolved silica.The process also results in reduced size of the cells with each division, which in turn results in a relative change in dimensions. This change in size and shape of a population is commonly referred to as Size Reduction Series. In this case therefore, one can expected to see a variation of shapes and sizes of a given population of diatoms under the microscope.As a result of the reducing average size of the diatom frustule in a population, there comes a point where restoration of the size of the frustule is necessary. It’s at this point that auxospores are produced.These particular cells possess a different cell wall compared to the former generation and lack the swelling of the frustule as well. This allows for swelling of the frustule to the maximum size.

5.) Volvox Syn