NAME: OZIGI AMIRA ONIZE
COLLEGE: MHS
DEPARTMENT: MEDICINE AND SURGERY 100LEVEL
COURSE CODE: BIO 102
GENERAL BIOLOGY II ASSIGNMENT

1.

DIVISION	CLASS
1. Thallophyta	Phycotinae[Algae] Mycotinae [fungi]
2. Bryophyta	Hepaticae [Liverwort], Musci [Mosses]
3. Pteridophyta	Psilotinate [Psilotum] Lycopodinae [lycopodium, Selaginella] Equsetinae[Horsetail] Filicinae [Ferns]
4. Spermatophyta	Gymnospermae [Gymnosperms] Angiospermae [Angiosperms]

2a.Certain species of algae are harvested for food and cosmetics.
b. Algae have high iodine content hence prevent goitre.
c. Different species of red algae provide agar and carragreen used for the preparation of various gels used in scientific research.
d. Algae are nutritious because of their high protein content and high concentration of minerals, trace elements and vitamins.
e. Algae are used as thickening agents in shampoo industry and making of ice cream.
3. Chlamydomonas
It is found in stagnant water.
Flagella are structures for mobility.
The cell is bounded by a cellulose cell wall; contains 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 photo-reception.
The mitochondria mediate the elaboration of energy molecules.
Manufactured sugar is processed into starch in the pyrenoid.
4 In chlamydomonas, reproduction can either be vegetative [asexual] or sexual.
Vegetative reproduction; It results in production of daughter cells in which the amount and quality of genetic material in the nucleus of the

mother cell is maintained in the daughter cell. This kind of cell division is called mitotic division. In chlamydomonas a cell about to divide loses its flagella. The cell undergoes mitotic division leading to two nuclei, cell walls are elaborated which delimit cytoplasm around each nucleus i.e. two daughter cells [zoospores] are released. Increase in the population of cells in the colony is achieved by repeated mitotic division.

Sexual reproduction; Unfavorable conditions trigger sexual reproduction. Instead of forming into spores, the haploid daughter cells form gametes that have two different mating strains which are structurally similar and are positive and negative mating strains. Opposite mating strains fuse together in a process called isogamy to form a diploid zygote, which contains two sets of chromosomes. After a period of dormancy the zygote undergoes meiosis. This cell division i.e. meiosis produces four genetically unique haploid cells that eventually grow into mature cells.

5.

Pandorina	Volvox
1. The colony consists of 16 cells.	There are more cells in the colony, number may run into thousands.
2.Each cell divides to form a new colony.	Only the larger cells at the posterior end [gonadia] divide to form new colonies.
3 Pandorina is evolutionarily less advanced.	Volvox is evolutionarily more advanced.

No 6. Fucus

A genus of brown algae whose specie are often found on rocks in the intertidal zone of the sea shores.

The plant body is flattened, dichotomously-branched thallus with a mid rib, a vegetative apex, a reproductive apex at maturity and a multicellular disk with which plant is attached to rock surface. The plant body also has air bladders which is believed to aid the plant float on water.

Various specie of fucus exist; vary in size a few centimeters to about 2 meters in size. They also vary in terms of whether sex cells are found in the same sexual chambers or different sexual chambers on plant bodies. Sexual reproduction is oogamous, sex cells are produced in conceptacles which have openings [ostioles] on the surface.