**Q1/ Fill the following blanks with correct words: (9Marks)**

1. Algae form the oxygen necessary for the metabolism of the …………………. Organisms.
2. Cross wall between adjacent cells of a filamentous thallus is known as ……………
3. The name dinoflagellate comes from word dinos (Greek) ………….which describes their distinctive swimming pattern, and flagellum (Latin), ………….
4. In most habitats, algae function as the ……………in the food chain.
5. Blue green algae is called Schizophyaceae, because they don’t have ……………
6. Desmids are divided into two……………cell by a distinct …………….
7. The Dinoflagellate are sometimes called Pyrrhophyta (fire plants) because some species are capable of ………………………

**Q2/ In each of the following, determine whether the statement is True or False with correction the false: (10 Marks)**

1. In green algae, sexual reproduction is totally absent.
2. In blue green algae genetic and respiratory apparatuses are present in the cell.
3. All types of reproduction can be found in cyanophyta.
4. In Oscillatatoria, individual sheaths of the trichome absent or obscure.
5. Autotrophic algae use organic compounds for growth.

**Q3/A/ Define only 4 of the following:**  (**12 M)**

1- Bioluminescence 2- Heterocyst

3- Thallus 4- Pyrenoid 5- Phycocolloids

Q4/ A/ **Enumerate the 3 of following: (9M)**

1. Types of terminal heterocyst’s.
2. Types of dinoflagellate related illnesses
3. Vegetative and asexuall reproduction in algae
4. Types of movement in algae

B / **Answer the following** **statements: (10M)**

1. Difference between ***Spirogyra, Zygnema and Mougeotia*** in conjugation process.
2. Sexual reproduction in spirogyra