

**Bago University**  
**Department of Botany**  
**First Semester Examination, March, 2019**

**Second Year (B.Sc.)**  
**Botany Specialization**  
**Answer All Questions**

**Bot.2101**  
**Survey of Plant Kingdom I**  
**Time allowed: (3) Hours**

**I. Determine whether each statement is TRUE or FALSE.**

**(10 marks)**

1. Algae are less structurally complex than land plants.
2. The mucilage lack dead cells called necridia.
3. All the cells in the young *Volvox* colony are alike in size.
4. The structure of *Pediastrum* is flatten and star-like shaped.
5. In *Chara*, the nucules always lying below the globules.
6. Toxic protein decomposition products formed by blue algae.
7. Bryophyta divided into Hepaticae, Anthocerotae and Musci.
8. In fertilization of *Riccia*, ventral furrow acts as capillary tube.
9. In *Anthoceros*, dorsal surface bears cup-like out growth called gamma cups.
10. *Sphagnum*, is commonly known as peat moss.

**II. Write correct word to complete the following sentences.**

**(10 marks)**

1. The cells constituting the thallus are ----- Cyanophyta
2. In *Chroococcus*, the central body is called an ----- nucleus.
3. The cells are ellipsoidal, pyriform or ----- in *Chlamydomonas*.
4. Asexual reproduction takes by means of ----- zoospores in *Ulva* .
5. In *Euglena*, a single flagellum ----- at its lower and within the reservoir.
6. *Laminaria* exhibits a ----- alternation of generation.
7. The bryophytes are known as ----- of the plant kingdom.
8. In *Riccia*, each ----- gets metamorphosed into a single biflagellate sperms.
9. In mosses, the ----- are not present in the sporogonium
10. Most of the mosses are used as ----- material.

**III. Answer all questions.**

**(10 marks)**

1. State the oscillatory movements in *Oscillatoria*
2. Give the structure of thallus in *Chlorella*.
3. Clarify the effects of vegetative propagation in *Chara*.
4. Write short note on the algae useful in fish culture.
5. Where is *Marchantia* found?

**IV. Answer all questions.**

**(20 marks)**

1. Enumerate distinctive characters of algae.
2. Describe the structure of the thallus of *Cladophora*.
3. Answer he internal photosynthetic region of *Riccia*.
4. Describe the ecological importance in *Sphagnum*.

**V. Answer any three questions.**

**(30 marks)**

1. Describe the cell structure of *Chroococcus* with diagram.
2. Discuss the alternation of generation in *Cladophora*.
3. Give an account on scalariform and lateral conjugation in *Spirogyra*.
4. Write detail on external structure of *Marchantia* gametophyte with diagram.
5. Annotate the diagram of life cycle of *Anthoceros* species.