

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

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

**Bot.2104**  
**Ecology**  
**Time allowed: (3) Hours**

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

**(10 marks)**

1. The behavior of organisms under natural conditions called ethnology.
2. Macroclimate signifies the environments of small areas in contrast to large ones.
3. Thermogenesis is the metabolic production of heat to a hotter environment.
4. The microflora of soil includes bacteria, soil fungi, and algae.
5. Temperature is usually decreases at the rater of 6°-7°C per 1,000 meter.
6. Organisms do not live alone in nature but in a matrix of other organisms.
7. Insectivorous plants are capable of synthesizing its protein.
8. Plants are the prey and carnivores are predators.
9. Soil quality can also affect leaf size.
10. Sunlight is the source of energy that powers almost all life processes.

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

**(10 marks)**

1. The numbers and distribution of plants are influenced by ----- factors.
2. Cloud and fog consist of water -----, or sometimes tiny ice crystals.
3. The plant growing in ----- regions have stunted growth and crooked stems.
4. Rainfall affects plants by increasing the ----- content of the soil.
5. Light has a very strong influence on the number and position of -----.
6. A soil is not sufficiently porous, it will ----- water and become water-logged.
7. At mountain tops the plants may be exposed to very ----- or very dry conditions.
8. Density refers to the numbers of ----- per unit area.
9. A biological community and its abiotic environment together comprise an -----.
10. Sexual reproduction is the key to natural -----.

**III. Answer all questions.**

**(10 marks)**

1. Give the three main approaches to the study of ecology.
2. State the effect of light on plants.
3. What is soil profile? Name the six horizons of a soil layers.
4. What is intraspecific competition?
5. Outline on the mortality rate.

**IV. Answer all questions.**

**(20 marks)**

1. Briefly explain the community.
2. Enumerate the four classes of the world's vegetation.
3. Describe the physiological features of heliophytes and sciophytes.
4. Give the words diagram of the path of energy flow.

**V. Answer any three questions.**

**(30 marks)**

1. Give an account on global patterns with diagram.
2. Explain the effect of temperature on plants.
3. What is weathering? Explain physical weathering and chemical weathering.
4. Define positive interaction. State commensalism and mutalism with suitable example.
5. Write detailed account on the ecological niche.