

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

Third Year (B.Sc.)
Botany Specialization
Answer All Questions

Bot.3103
Plant Physiology I
Time allowed: (3) Hours

I. Determine whether each statement is TRUE or FALSE. (10 marks)

1. Every observing person is familiar with certain aspects of part life.
2. Total acidity, as already noted, is customarily expressed in terms of normality.
3. The gel-forming capacity of some substances is very remarkable.
4. Some colloidal systems possess the property of solidity.
5. The diffusion pressure of the water is influenced by still another factor.
6. The molecules of both carbon dioxide and hydrogen are larger than water molecules.
7. The concentration of oxygen in the water of a rushing mountain brook is very high.
8. Hydrogen diffuse more rapidly than the other gases.
9. Most cell walls are highly permeable to water.
10. Water may be imbibed as a vapour as well as in the solid stage.

II. Write correct word to complete the following sentences. (10 marks)

1. Some aqueous solution conduct an electrical -----.
2. Electrolytes vary greatly in degree of an -----.
3. Most colloidal systems composed of ----- substances dispersed.
4. The simplest kinds of membranes are essentially molecular -----.
5. Gases vary widely in their ----- in water.
6. The final volume of the entire system liquid and ----- is always less.
7. The process of imbibitions always results in the ----- of heat.
8. Most water soluble molecules cannot cross the -----.
9. The rate of diffusion is directly proportional to the difference in diffusion -----.
10. The dimension of pores being expressed in terms -----.

III. Answer all questions. (10 marks)

1. What is simple solution?
2. Define strong electrolytes and weak electrolytes.
3. Define solubility .
4. Give outline the differentially permeable.
5. Write short note on the guard cell.

IV. Answer all questions. (20 marks)

1. Write about the turgor pressur
2. Give fully labeled diagram of osmotic pressure.
3. Describe the volume change in imbibition.
4. Explain the temperature factor in the opening and closing of stomata.

V. Answer any three questions. (30 marks)

1. Explain solution of a gas in a liquid.
2. Discuss the factors influencing the rate of diffusion of gasses.
3. With help of diagram explain the osmosis.
4. Write about the mechanics of foliar transpiration.
5. Explain role in the absorption and translocation of mineral salts.