Bago University
Department of Zoology
Second Semester Examination, September 2019

First Year (B.Sc) — **Zool.1002**
(Botany Specialization) — **Chemicals of Life and Life Processes**
Answer ALL Questions — **Time Allowed: (3) Hours**

State TRUE or FALSE to the following statements. **(10 marks)**

1. That minerals play and equally important nutritional role.
2. Dairy products are source of calcium in our diets.
3. All animals are heterotrophic.
4. Inorganic compounds are immensely important in living things.
5. The best known sugars are the hexoses.
6. Monosaccharides are the building blocks of more complex carbohydrates.
7. Fatty acids and glycerol are the sub-units of a lipid.
8. Cows, deer and other ruminants have large divided stomachs.
9. Krebs cycle is also called the citric acid cycle.
0. Mammals, birds, and crocodiles have a three-chambered heart.

Complete the following statements with appropriate words. **(10 marks)**

1. Calcium ions must be present for the ------ to clot.
2. Good source of ------ are shellfish and green leafy vegetables.
3. The concentration of ------ in the human body is very small.
4. The element present in a ------ are carbon, hydrogen and oxygen.
5. Sucrose is formed by the union of ------ and fructose.
6. If protein is conjugated with carbohydrate the resulting compound is called ------.
7. Carnivores have ------ intestine than herbivores.
8. Neural and hormonal reflexes regulate the activity of the ------ system.
9. Hormones are ------ which affect the rate of vital processes in the body.
0. The pulmonary vein which returns ------ blood to the heart.

I. Answer ALL questions **(10 marks)**

1. State and list the macrominerals.
2. Write a short note on the iodine.
3. Classify three groups of heterotrophs.
4. Clarify transport of carbon dioxide from the tissues to the lungs.
5. Explain two types of circulation in amphibian and reptile.

. Answer ALL questions **(20 marks)**

1. State briefly on the carbohydrates.
2. Write a short note on the secretion of Pancreas.
3. Explain about the circulation of blood in the body.
4. State briefly on blood clots.

Answer ANY THREE questions **(30 marks)**

1. Briefly account on the nature of iron.
2. Explain the removal of water from monosaccharide molecules with a diagram.
3. State the digestive system of human and other vertebrates.
4. Discuss about the vertebrate digestive system.
5. Write an essay on the veins as far as you can.
6. With relevant diagram, explain about capillaries.

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