

Bago University
Department of Zoology
First Semester Examination, March 2019

First Year BSc
(Botany Specialization)
Answer ALL questions

Zool.1001
Animal Kingdom and Organization of Life Forms
Time Allowed: (3) Hours

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

1. The cell is the smallest unit of matter that can carry on all the processes of life.
2. Lysosome can also fuse with a feeding vacuole to digest its contents.
3. Nucleus is the smallest organelle within human cell.
4. The nuclear envelope is a single membrane that surrounds the nucleus.
5. Thymine and cytosine are derived from pyrimidines.
6. Reticular connective tissue located in lymphoid organs.
7. Connective tissue contains solitary, branching elastic fibers.
8. Smooth muscle cells are not striated have a single nucleus.
9. Bones is composed of a series of Haversian systems.
10. The oxygenated blood returns to the heart through the pulmonary veins.

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

1. Protoplasm is the living contents of a cell surrounded by a ----- membrane.
2. Cytosol and extracellular fluid are made up of mostly -----.
3. Blood plasma and the fluid that baths our cells are usually -----.
4. Glucose cannot cross the cell membrane by simple -----.
5. All cells in metazoan animals take part in the formation of -----.
6. Nucleic acids are made up of long chains of -----.
7. Hyaline cartilage tissues are ----- but firm matrix.
8. The ----- end of the telodendria are slightly enlarged.
9. The heart of a mammal is divided into ----- chambers.
10. Blood enters the heart through the -----.

III. Answer ALL questions (10 marks)

1. Write down the modern cell theory.
2. Mention the functions of the nucleus.
3. State the function and location of stratified columnar epithelia tissue.
4. Describe the nature of neuroglia.
5. Describe about the internal and external respiration.

IV. Answer ALL questions (20 marks)

1. Explain two forms of endoplasmic reticulum.
2. Give a general account on the direction of osmosis.
3. Tabulate a comparison of RNA and DNA.
4. Write short notes on the peripheral nervous system.

V. Answer ANY THREE questions (30 marks)

1. Describe the nature of cytoplasm.
2. Write an interesting account on the cell membrane.
3. State briefly the structure of nucleic acids.
4. Explain about the adipose tissue with illustration.
5. State the functions of skeletal and cardiac muscles.
6. Explain briefly the heart of a mammal as far as you can.
