Bago University
Department of Zoology
First Semester Examination, March 2019

First Year BSc
(Zoology Specialization)
Answer ALL questions

Zool. 1101
Organization and Variety of Life
Time Allowed: (3) Hours

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

1. Facilitated diffusion is an example of passive transport.
2. The cell membrane controls the movement of substances in and out of cells.
3. The chromosome is made up of two chromatids that are held together by a centrosome.
4. Adenine can only form a stable bond with thymine.
5. Elastic cartilage is similar to hyaline cartilage.
6. An axon may have infrequent branches called axon collaterals.
7. The platelets are involved in blood clotting.
8. The pharynx is the intersection between the trachea and the oesophagus.
9. Living organisms are grouped into three general categories called domains.
10. Life on Earth is classified into five kingdoms.

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

1. When water diffuses out of the cell, the process is called ---------.
2. A plasma membrane is composed of both lipids and ------ proteins.
3. Simple --------epithelium composed of single layer of tall cells.
4. The second phase of mitosis is called --------.
5. The daughter cells at the end of meiosis II are called ------- in animals.
6. Tendons attach muscle to bones and -------- connect bones to bones.
7. The number of -------- on a neuron varies.
8. The glottis is the opening of the ---------.
9. Anti-diuretic hormone is secreted by the -------- gland.
10. The first -------- were unicellular organisms.

III. Answer All questions. **(10 marks)**

1. State the function of lysosomes.
2. Depict the structure of ribose.
3. Define the cell cycle.
4. Describe all three muscle tissues in higher animals.
5. Explain about the external and internal respiration.

IV. Answer All questions. **(20 marks)**

1. List and explain the two groups of membrane protein.
2. Describe the two major subtypes of stratified squamous epithelial membrances.
3. Explain the residual volume of the mammalian lungs.
4. Tabulate the characteristics of Protists.

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

1. Define the osmosis and explain the direction of osmosis.
2. Describe about the cytokinesis in an animal cell with illustration.
3. Discuss as far as you can on second phase of mitosis with diagram.
4. Mention the structure of typical neurons with illustration.
5. Write an essay about the structure of kidney.
6. Describe the key characteristic of Phylum Mollusa, Annelida and Chordata with examples.

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