Bago University
Department of Zoology
Second Semester Examination, September 2019

Fourth Year (B.Sc) **Zool. 4111**
(Zoology Specialization) **Endocrinology I**
Answer ALL questions **Time Allowed: (3) Hours**

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

1. Exocrine and endocrine glands are the major categories of glands in the body.
2. The endocrine system affects almost every organ and cell in the body.
3. The target tissue is localized in a single gland or organ.
4. Several important feedback systems are mediated via the hypothalamus and pituitary.
5. The thyroid hormones help the maintaining of our body's metabolic and energetic processes.
6. The pituitary gland releases hormones related to growth, mental development and sexual reproduction.
7. Thymus gland makes white blood cells called T-lymphocytes.
8. Positive feedback loops act to reverse changes in the body's physiological condition.
9. Diabetes can be linked to obesity, diet and family.
10. The term thyroid nodule refers to any normal growth.

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

1. The exocrine glands have ------ or a hollow lumen.
2. The heart, kidney and liver also act as ------ endocrine organs.
3. Calcitonin is secreted by the parafollicular ------ of the thyroid gland.
4. Thymus gland secretes hormones important for ----- and a healthy immune system.
5. The thyroid cannot make sufficient hormone if there is an ------ deficiency.
6. Oxytocin hormone causes contractions of the ------ during childbirth.
7. Thyroid gland is butterfly-shaped and located in the ------.
8. Testosterone promote sperm production and sex ------.
9. In adults, low or absent growth hormone can cause ------ symptoms.
10. The African elephant has a ------ time of over 20 months.

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

1. Define the term of exocrine glands.
2. Define the term of hormone found in multicellular organisms.
3. Describe the nature of thymus gland.
4. Give an illustration to show the structure of human ovary.
5. Write notes on the functions of lymphatic system.

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

1. Write an interesting account on the typical mode of cell signaling in the endocrine system.
2. Write down on iodine deficiency goiter caused by the thyroid enlargement.
3. Mention about the clinical significance of endocrine diseases.
4. Tabulate showing the hormones regulated by the pituitary system.

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

1. State the nature of parathyroid glands with illustration.
2. Explain the structure and function of thyroid gland with diagram.
3. Explain how the endocrine system regulates physiological functions by releasing hormones.
4. Discuss as far as you can on the hormones secreted by hypothalamus and some of their effects.
5. Write an interesting account on diabetes caused by insulin hormones.
6. Mention about the hypogonadism caused by sex hormones.

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