



MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2016/2017

**THIRD YEAR FIRST SEMESTER EXAMINATIONS FOR THE
DEGREE OF BACHELOR OF SCIENCE AND BACHELOR OF
EDUCATION SCIENCE WITH INFORMATION TECHNOLOGY**

MAIN CAMPUS

SZL 307: COMPARATIVE ENDOCRINOLOGY

Date: 1st December, 2016

Time: 8.30 - 11.30 am

INSTRUCTIONS:

- Answer ALL questions in SECTION A (5 marks each) and any TWO in SECTION B (15 marks each).



SZL 307: COMPARATIVE ENDOCRINOLOGY

TIME: 2 Hours

Section A (40 Marks): Answer all questions. Each question carries 5 marks.

Q1: Briefly describe the process of hormone secretion.

Q2: Using a clearly labeled diagram, identify the three zones of the adrenal cortex.

Q3: Briefly describe the hormonal mechanism of the emergency pill.

Q4: Briefly describe the etiological differences between Type I and Type II diabetes.

Q5: Define the following terms as used in chemical signaling.

- a) Autocrine
- b) Paracrine
- c) Endocrine
- d) Exocrine
- e) Ectocrine

Q6: Arnold Berthold is credited as one of the founders of the discipline of endocrinology. Briefly describe the experiment that earned him this credit.

Q7: The anterior pituitary gland is composed of five major cell types. List any three of these cell types and give one example of a hormone secreted by each cell type.

Q8: Define the following terms

- a) Somatostat
- b) Puberty
- c) Pubarche
- d) Menarche
- e) Adrenarche

Section B (30 Marks): Answer any TWO questions. Each question carries 15 marks

Q9: Describe the two major mechanisms of hormonal action.

Q10: Describe the regulation of parathyroid hormone.

Q11: Answer the following questions

- a) List any three endocrine glands in insects and an example of a hormone each of the listed gland secretes.
- b) Describe the hormonal regulation of ecdysis and metamorphosis in a holometabolous insect.

Q13: The stress response is adaptive in the short-term but maladaptive in the face of a chronic stressor. Discuss. (20 marks)