

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**FOURTH YEAR EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR
OF SCIENCE IN BIOMEDICAL SCIENCE AND TECHNOLOGY**

BMED 451: MEDICAL ENDOCRINOLOGY

STREAMS: BSC BIOMEDICAL SCIENCES Y4S2

TIME: 2 HOURS

**DAY/DATE: TUESDAY 16/04/2019
1.30 P.M.**

11.30 A.M. -

INSTRUCTIONS:

- **Answer question ONE and TWO other questions**
- **Sketch maps and diagrams on the question paper**
- **This is a closed book exam. No reference materials are allowed in the examination room**
- **There will be No use of mobile phones or any other unauthorized materials**
- **Write your answers legibly and use your time wisely.**

SECTION A (30 MARKS)

QUESTION 1

- (a) Describe the effect of glucose on the regulation of insulin secretion. (5 marks)
- (b) What is hyperthyroidism? How can this condition be treated. (5 marks)
- (c) Highlight the synthesis of steroid hormones. (5 marks)
- (d) Citing an example, describe positive feedback regulation. (5 marks)
- (e) Describe the regulation of testicular hormones. (5 marks)
- (f) Describe the mode of action and effects of aldosterone. (5 marks)

SECTION B (40 MARKS)

QUESTION 2

- (a) Discuss the therapeutic uses of estrogen. (10 marks)

(b) Discuss the regulation of cortisol in protein, lipid and carbohydrate metabolism. (10 marks)

QUESTION 3

(a) Describe the role of hormones in the menstrual cycle. (10 marks)

(b) Elaborate on the three main insect regulators with respect to growth and reproduction.

(10 marks)

QUESTION 4

(a) Discuss the metabolic effects of growth hormone and any ONE abnormality associated with the secretion of this hormone. (10 marks)

(b) Elaborate on the role of hormones in parturition. (10 marks)
