

**CHUKA**



**UNIVERSITY**

**UNIVERSITY EXAMINATIONS**

**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE**

**ZOOL 431: ENDOCRINOLOGY**

**STREAMS: BSC SCIENCE**

**TIME: 2 HOURS**

**DAY/DATE: TUESDAY 16/04/2019**

**11.30 A.M. – 1.30 P.M.**

**INSTRUCTIONS:**

- Answer ALL questions in section A and any TWO from section B
- Use illustrations where applicable

**SECTION A (30 MARKS)**

- Q1. (a) Distinguish endocrine from paracrine and apocrine systems. (3 marks)
- (b) By reference to Adrenocortropic hormone (ACTH), describe hormone negative feedback mechanism. (3 marks)
- Q2. (a) Explain the mechanism of action of a protein/polypeptide hormone at the target tissue. (4 marks)
- (b) Describe two antagonistic hormones in insects. (2 marks)
- Q3. Explain the effect of parathyroid hormone (PTH) on:
- (a) Kidneys (3 marks)
- (b) Bones (3 marks)
- Q4. Describe how the Hypothalamo-Pituitary axis regulates the functions of the testes. (6 marks)
- Q5. (a) Mention the cell types of the islets of Langerhans and their secretions. (3 marks)
- (b) Describe the symptoms of type 2 diabetes. (3 marks)

**SECTION B (40 MARKS)**

- Q6. (a) Describe Renin-Angiotensin-Aldosterone system in man. (12 marks)
- (b) Explain the effects of excess cortisol in the blood. (8 marks)
- Q7. Describe the principal ovarian and endometrial changes that occur during the menstrual cycle. (20 marks)
- Q8. (a) Identify six adenohypophysial hormones and relate them to hypothalamic hormones which control them. (12 marks)
- (b) Describe the main actions of Iodothyronines. (8 marks)
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