

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

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

ZOOL 431: ENDOCRINOLOGY

STREAMS: BSC

TIME: 2 HOURS

DAY/DATE: THURSDAY 20/4/2023

11.30 A.M. – 1.30 P.M.

Instructions:

Answer all Questions in Section A and any Two questions in Section B

SECTION A (30 MARKS)

1. a) Define the following terms. (3 marks)
 - i) Hormones
 - ii) Endocrine gland
 - iii) Neurosecretion
2. Explain the mechanism of action of a protein/polypeptide hormone at the target tissue. (6 marks)
3. a) State the role of the following hormones in insects' development. (4 marks)
 - i) Juvenile hormone
 - ii) Ecdysone

b) Outline the symptoms of hypothyroidism. (2 marks)
4. a) Explain the effect of parathyroid hormone (PTH) on:
 - i) Kidneys (2 marks)
 - ii) Bones (2 marks)
5. a) Mention the cell types of the islets of Langerhans and their secretions. (2 marks)

b) Differentiate between Type 1 and Type 2 diabetes. (2 marks)

- c) Complete the grid with appropriate hormones. (2 marks)
- i) Hypothalamus.....inhibits release of growth hormone
 - ii) Neurohypophysis.....controls reabsorption of water.

SECTION B: (40 MARKS)

6. a) Discuss the metabolic effects of Antidiuretic Hormone (ADH) and any ONE abnormality associated with the secretion of this hormone. (8 marks)
- b) Describe the structure, secretion and functions of adrenal gland. (12 marks)
7. a) Discuss the synthesis and major physiological actions of thyroid hormone (12 marks)
- b) Elaborate on the hormonal regulation of the female reproductive system. (8 marks)
8. Describe the functions of five adenohypophysial hormones and relate them to hypothalamic hormones which control them. (20 marks)

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