

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

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

BMET 111: HUMAN PHYSIOLOGY

STREAMS:

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 19/04/2023

11.30 A.M. – 1.30 P.M.

INSTRUCTIONS

Answer question one and any other two questions

Question 1 (Compulsory) (30 marks)

- a) Explain the of biosynthesis and effects of testosterone in male reproductive system. (5 marks)
- b) Describe the mechanism of blood pH regulation by the respiratory system. (5 marks)
- c) Compare and contrast the short-term and long- term stress response. (5 marks)
- d) Highlight five major functions played by human stomach in digestive process. (5 marks)
- e) Describe the feedback mechanism involved in regulation of human body temperature (5 marks)
- f) Explain the mechanism of ADH water-regulation on renal collecting tubules. (5 marks)

Question 2 (20 marks)

- a) Explain the various components of heart conduction system. (10 marks)
- b) Explain the steps in oogenesis. (10 marks)

Question 3 (20 marks)

- a) Discuss the processes and control of ingestion, propulsion, mechanical digestion, chemical digestion, absorption, and defecation. (10 marks)

- b) Explain the process of intrinsic, extrinsic and common pathway in blood coagulation cascade. (10 marks)

Question 4 (20 marks)

- a) Compare and contrast the signaling events involving the second messengers CAMP and IP3. (10 marks)
- b) Discuss the various fluid compartments and composition in the human body (10 marks)
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