



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**SCHOOL OF HEALTH SCIENCES**  
**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE**  
**PUBLIC HEALTH/COMMUNITY HEALTH AND DEVELOPMENT**  
**1<sup>ST</sup> YEAR 1<sup>ST</sup> SEMESTER 2018/2019 ACADEMIC YEAR**  
**NAMBALE CAMPUS**

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**COURSE CODE:** HCD 3121  
**COURSE TITLE:** MEDICAL PHYSIOLOGY  
**EXAM VENUE:** STREAM: BSc Public/ Comm. Hlth & Dev  
**DATE:** **EXAM SESSION:**  
**TIME: 2.00 HOURS**

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**Instructions:**

- 1. This exam consists of 10 questions. Questions 1 to 6 carry 10 marks each. Questions 7-10 carry 20 marks each. ANSWER QUESTIONS 1-6 AND ANY OTHER TWO QUESTIONS.**
- 2. Candidates are advised not to write on the question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**

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1. Define the following terms in cell physiology

a) Membrane potential b) Action potential

2. With specific examples describe the use of reflexes in the human body.

3. Describe the mechanism of action of the following

a) Voltage gated channels b) Sodium potassium pump

4. Outline the anatomical structures in thermoregulation

5. Define a) A specialized cell

b) Name four examples of specialized cells indicating their specialized functions

6. Name any five hormones released from the hypothalamus stating their functions.

7. Describe the flow of blood through the heart

8. a) Define neurotransmitters

b) Name any four neurotransmitters stating their basic function in the body.

9. Describe the function of any five intracellular membrane bound structures

10.a) Define Cerebrospinal fluid

b) Describe the formation and flow of Cerebrospinal fluid (CSF)