



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF HEALTH SCIENCES
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE
IN PUBLIC HEALTH/ COMMUNITY HEALTH AND DEVELOPMENT**

1STYEAR 2NDSEMESTER 2018/2019

KISUMU CAMPUS

COURSE CODE: HCD 3121

COURSE TITLE: MEDICAL PHYSIOLOGY

EXAM VENUE: STREAM

DATE:

EXAM SESSION:

TIME:

Instructions:

- 1. Answer all questions in section A and any other 2 questions in Section B.**
- 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**

SECTION A 30MKS

Answer all questions

1. Describe briefly the spinobulbospinal reflex of micturition (4 marks)
2. a) Define Stroke Volume (2 marks)
b) A man has a resting oxygen consumption of 0.29 l of oxygen per minute, a peripheral arterial oxygen content of 0.26ml of oxygen per ml of blood and venous oxygen concentration of 0.19ml of oxygen per ml of blood. Using Fick principle, calculate the following (2 marks each)
 1. his cardiac output
 2. his stroke volume
3. List two functions of prolactin hormone (2 marks)
4. State the THREE most common types of buffer systems in the human body. (3 marks)
5. Describe briefly the reflex of erection in men (3 marks)
6. Describe 2 major causes of hypebilirubinemia (4 marks)
7. Describe three phases of gastric emptying (3 marks)
8. List 4 ways in which hypothalamo-hypophyseal system compensate for hypovolemia (4 marks)
9. Distinguish between the analgesia system and limbic system. (1 mark)

SECTION B 40MARKS

Answer any TWO questions from this section

1. a) State the name and explain the function of all the cranial nerves (12 marks)
b) Discuss how the catecholamines regulate the blood pressure (8 marks)
2. Discuss using a diagram the pathway for somatic pain- use example of polysynaptic reflex- the flexor and crossed extensor reflexes (withdrawal of leg) (20 marks)
3. Discuss 5 functions of the kidney (20 marks)
4. Discuss 4 disorders of the thyroid gland (20 marks)