



**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**

**1<sup>ST</sup>YEAR 2<sup>ND</sup> SEMESTER 2015/2016 ACADEMIC YEAR**

**KISUMU LEARNING CENTER**

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**COURSE CODE: HCD 3121**

**COURSE TITLE: MEDICAL PHYSIOLOGY**

**EXAM VENUE: STREAM**

**DATE:**

**EXAM SESSION:**

**TIME:**

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**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 30MARKS**

**Answer all questions**

1. Which structure of the eye houses the photoreceptors **(1marks)**
2. Differentiate between **(2marks each)**
  - a) Somatic sensory system
  - b)Visceral sensory system
3. What is an oligodentocytes, what does it do? **(2marks)**
4. a) Define glomerular filtration rate GFR **(1mark)**  
b) Enlist the determinants of GFR. **(3marks)**
5. Explain the meaning and function of the electrocardiogram. **(2marks)**
6. Give a summary of actions of estrogens(4marks)
7. a) What is a cardiac index **(2marks)**  
b) List methods of measuring cardiac output **(2marks)**
8. Describe 3 functions of the lymphatic system **(3marks)**
9. Describe osmoregulation by anti-diuretic hormone ADH **(3marks)**
10. Describe the three phases of secretion of gastric juice **(3marks)**

## SECTION B 40MARKS

Answer any **TWO** questions from this section

1. a) Explain how the sound travelled through ear and get interpreted in the brain.  
**(12marks)**  
b) Discuss the factors that regulate gastric emptying **(8marks)**
  
2. a) Discuss in detail the anatomy of the male reproductive system and functions of the various parts.**(12marks)**  
b)Discuss the homeostasis of calcemia **(8marks)**
  
3. a) Using a diagram describe the structure of the eye and functions **(12marks)**  
b) Describethe differences between obstructive and hemolytic jaundice**(8marks)**
  
4. a) Discuss the features of metabolic acidosis and compensation of acidosis**(12mark)**  
b) Discuss the factors which increase insulin secretion**(8marks)**