



**JARAMOGI OGINGA ODINGA UNIVERSITY  
OF SCIENCE & TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2012/2013**

**3<sup>RD</sup> YEAR 1<sup>ST</sup> SEMESTER EXAMINATION FOR THE DEGREE  
OF BACHELOR OF EDUCATION (ARTS) WITH IT**

**MAIN**

**COURSE CODE: ECT 335**

**COURSE TITLE: SPECIAL METHODS OF TEACHING PHYSICS**

**DATE: 5.5.2013      TIME: 14.00-16.00PM**

**DURATION: 2 HOURS**

**INSTRUCTIONS**

- 1. This paper consists of 5 Questions.**
- 2. Answer Question 1 (Compulsory ) and any other 2 questions**
- 3. Write your answers on the answer booklet provided**

## QUESTION ONE

- a) Give three reasons why the knowledge of history of physics is important to the physics learner. [6 marks]
- b) State any three general objectives of teaching physics at secondary school level and indicate the activities the teacher would involve his class to achieve the objectives [6marks]
- c) Name three advantages and three disadvantages of using Group-Discussion method in a physics class. [6marks]
- d) Briefly explain how the knowledge of physics and Technology complement each other. [8 marks]
- e) Construct a test item for a form one class on pressure testing the application level of cognitive domain. [4 marks]

## QUESTION TWO

- a) Outline the main points a physics teacher has to consider in planning a whole-class practical lesson. [12marks]
- b) State any four safety risks or causes of accidents in a physics laboratory [4marks]
- c) Explain the role of the physics laboratory technician. [4marks]

## QUESTION THREE

Identify and discuss any five issues in the teaching and learning of physics at secondary school level in Kenya. [20marks]

#### **QUESTION FOUR**

- a) Define the discipline physics. [3marks]
- b) Explain the investigative and critical aspects of physics. [5 marks]
- c) Discuss the relationship between physics and other curricular areas. [12 mrks]

#### **QUESTION FIVE**

- a) What are the values of a lesson plan? [5 marks]
- b) Prepare a 40- minute lesson plan on effects of force on objects. [15 marks]