



MACHAKOS UNIVERSITY

University Examinations 2017/2018

SCHOOL OF EDUCATION

DEPARTMENT OF COMMUNICATION TECHNOLOGY

THIRD YEAR SECOND SEMESTER EXAMINATION FOR BACHELOR OF
EDUCATION

ECT 306: TEACHING METHODS IN PHYSICS

DATE: 6/12/2017

TIME: 2.00-4.00 PM

INSTRUCTIONS

Answer Question One and Any Other Two Questions

1.
 - a) Explain any two (2) reasons as to why Physics is important to the survival of mankind. (4 marks)
 - b) Describe the fundamental skills that are tested in Physics Practical on **Refraction of Light**. (12 marks)
 - c) Prepare an 80 minute Lesson Plan on the topic **Ohms Law**. (14 marks)
2. Outline the use of Metacognitive tools for teaching a named topic in Physics. (20 marks)
3.
 - a) Explain how Physics has contributed to Medical Science. (8 marks)
 - b) Choose a topic from the Physics Syllabus for Secondary Schools and describe how you would teach it using the **Learning Cycle**. (12 marks)
4. Explain the significance of each of the following components of a Lesson Plan:
 - a) The Objectives.
 - b) The Timing of each step.
 - c) The Learning Activities.
 - d) The Teaching Resources.
 - e) The Remarks. (20 marks)
5. Write a brief essay on **one** of the following topics: (20 marks)
 - a) Physics for Career development.
 - b) Physics in out of class settings.
 - c) The use of ICT in the teaching of Physics.
 - d) The Skills tested in Physics Practical on Electricity.