



MACHAKOS UNIVERSITY

University Examinations 2018/2019

SCHOOL OF EDUCATION

DEPARTMENT OF EARLY CHILDHOOD EDUCATION & EDUCATIONAL
COMMUNICATION & TECHNOLOGY

THIRD YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR
BACHELOR OF EDUCATION

ECT 306: TEACHING METHODS-PHYSICS

DATE: 27/9/2019

TIME: 2.00-4.00 PM

INSTRUCTIONS

Answer Question One and Any Other Two Questions

1.
 - a) Write a **brief five-point text** that would convince a Form One that Physics is important in everyday life. (10 marks)
 - b) With reference to a practical on refraction through a converging lens, explain the following aspects:
 - (i) **Three (3)** objectives in the psychomotor domain. (6 marks)
 - (ii) **One (1)** objective in the cognitive domain. (2 marks)
 - c) Prepare an 80 minute Lesson Plan to actualise the above practical activity. (12 marks)
2.
 - (a) Describe the steps you would use to help learners **determine the Refractive Index of a Glass block.** (10 marks)
 - (b) Outline the procedure you would use to teach **How to interpret the graph of (u v) versus (u + v) for a given lens.** (10 marks)
3. Explain and illustrate the following steps involved in the teaching of Physics through the **learning -cycle approach:**
 - a) Exploration. (8 marks)
 - b) Elaboration. (6 marks)
 - c) Application. (6 marks)
4. Explain and illustrate the key steps in the efficient planning for a balanced Physics Test. (20 marks)
5. Write a brief essay **on one of the following topics:** (20 marks)
 - a) Physics and Engineering Technology.
 - b) The value of Project Work in the teaching of Physics.
 - c) Physics and Medicine.

d) Physics and Energy generation.