



MACHAKOS UNIVERSITY

University Examinations 2018/2019

SCHOOL OF EDUCATION

DEPARTMENT OF EDUCATIONAL COMMUNICATION AND TECHNOLOGY

DECEMBER SESSION EXAMINATION FOR

BACHELOR OF EDUCATION

ECT: 306: TEACHING METHODS-PHYSICS

DATE: SCHOOLBASED

TIME:

INSTRUCTIONS: Answer Question One and Any Other Two

1. a) Explain **how you** would introduce Physics to a Form One Class so as to Stimulate their interest in the subject. (INCLUDE key points and resources). (6 marks)
b) Briefly Analyse the steps you would use in the **Demonstration of Snell's Law of Refraction**. (Include a brief on: the resources needed, the key recordings and format of recording, the involvement of learners as well as the conclusion to be drawn. (16 marks)
c) Discuss any **four Values** of Science that are promoted through the teaching of Physics. (8 marks)
2. Prepare an 80minute Lesson Plan for a practical lesson on **determination of the focal length of a concave mirror**. (20 marks)
3. Describe how each of the following documents assist the teacher in planning for Physics Teaching. (20 marks)
 - i) **The Examination Syllabus.**
 - ii) **The content Syllabus.**
 - iii) **The Schemes of Work.**
 - iv) **The Lesson Plan.**
4. Explain the significance of ONE of the following approaches to the teaching of Physics: (20 marks)
 - i) Constructivism.
 - ii) The Learning Cycle.
 - iii) The Meta-Cognitive approach.
 - iv) The Process-Skills approach.
 - v) Problem-solving.
5. Write briefly about the practical skills tested in one of the following topic areas of Physics: (20 marks)

- i) Oscillations.
- ii) Electricity.
- iii) Optics.