



MACHAKOS UNIVERSITY

University Examinations 2022/2023

SCHOOL OF EDUCATION

DEPARTMENT OF EARLY CHILDHOOD EDUCATION COMMUNICATION AND
TECHNOLOGY

THIRD YEAR SECOND SEMESTER EXAMINATION FOR
BACHELOR OF EDUCATION (EARLY CHILDHOOD EDUCATION)

ECT 306: PHYSICS TEACHING METHODS

DATE:

TIME:

INSTRUCTIONS: Answer Question ONE and ANY OTHER TWO.

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Using specific examples discuss three contribution of learning Physics in the society (6 marks)
- b) Explain two characteristics of a good chart (4 marks)
- c) Discuss three advantage of lecture method of instruction (6 marks)
- d) State three components of a properly written instructional objective (3 marks)
- e) During your physics instruction, a student by bad luck touches a live wire in the laboratory. Briefly explain the steps you may undertake to help the student. (4 marks)
- f) Give Three guideline a teacher should consider when choosing a good textbook. (3 marks)
- g) Teaching methods in physics is a very co unit in the University for a Teacher Trainee before one goes to the field for the actual teaching practice. Discuss this context . (4 marks)

QUESTION TWO (20 MARKS)

Discuss how emerging issue affecting teaching and learning in Physics based on:

Resources factor

- i. Student negative attitude towards learning of physics
- ii. Student factor

QUESTION THREE (20 MARKS)

- a) Discuss four reasons why a physics teacher would choose to use demonstration methods of teaching instead of a class experiment (8 marks)
- b) Explain functions of physics syllabus (4 marks)
- c) Discuss critical points to be considered when making physics schemes of work (3 marks)
- d) Justify the need for a physics teacher to prepare a lesson plan before attending physics lesson (5 marks)

QUESTION FOUR (20MARKS)

- a) The Physics teacher is supposed to ensure lesson is more interesting and motivating depending on how the lesson is being implemented. According to this context, what is the rationale of using teaching aids. (4 marks)
- b) Explain motivational strategies that a physics teacher can apply in order for effective learning to take place. (5 marks)
- c) Proper storage of apparatus in a physics laboratory is Explain main advantages of proper storage of apparatus. (3 marks)
- d) Laboratory work is one key area where students learn a substantial amount of Physics. Explain ways in which a Physics teacher can make Experimental work successful. (8 marks)

QUESTION FIVE (20 MARKS)

- a) Justify the need for a physics teacher to prepare a record of work before attending physics lesson (4 marks)
- b) Describe the changes that have taken place from independence to present on curriculum changes in Physics Education in Kenya. (6 marks)
- c) The 8-4-4 physics curriculum has been reviewed several times since its inception. Discuss some of the factors that led to its review. (4 marks)
- d) By use of examples, explain how the study of physics helps in technological advancement. (6 marks)