



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF EDUCATION

UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF EDUCATION
(SCIENCE)

3RD YEAR 1ST SEMESTER 2018/2019 ACADEMIC YEAR

REGULAR PROGRAMME

MAIN CAMPUS

COURSE CODE: ECT 335

COURSE TITLE: SPECIAL METHODS OF TEACHING PHYSICS

EXAM VENUE:

STREAM: B.ED. (SCIENCE)

DATE:

EXAM SESSION:

TIME: 2 HOURS

INSTRUCTIONS

1. Answer question ONE (compulsory) and any other TWO questions.
2. Candidates are advised not to write on the question paper.
3. Candidates must hand in their answer booklets to the invigilator while in the examination room.

QUESTION ONE

- a. Discuss the nature of scientific method (5marks)
- b. Discuss steps for conducting a laboratory experiment (7marks)
- c. Discuss challenges of implementing information technology (ICT) in Physics teaching (6marks)
- d. Discuss what should be considered when lesson planning (7marks)
- e. Justify why gender is critical to special methods of teaching Physics (5marks)

QUESTION TWO

- a) Discuss “effective classroom management” (8marks)
- b) Outline a Physics scheme of work used in Kenya secondary schools (6marks)
- c) Justify field trip as a strategy of teaching Physics at secondary school (6marks)

QUESTION THREE

- a) Discuss the role of the following Philosophies in Physics instruction at secondary school
 - (i) Empiricism
 - (ii) Rationalism (6marks)
- b) Explain how the Examination System can affect achievement of teaching and learning objectives (6marks)
- c) Discuss how culture and language of students can influence teaching and learning of Physics in secondary schools (8marks)

QUESTION FOUR

- a) Discuss attributes of creative learners at secondary school level (8marks)
- b) Discuss limitation of IMPROVITATION as a resource for learning and teaching materials in secondary school (6marks)
- c) Discuss the following Bloom’s Cognitive level objectives in relation to Physics teaching
 - i. Application
 - ii. Analysis
 - iii. Evaluation (6marks)

QUESTION FIVE

- a) Outline suggestions for improving Lecture as a method for teaching Physics in high school (10marks)
- b) Prepare a two period- practical lesson plan from any form one or form two Physics topic (10marks)