



MACHAKOS UNIVERSITY

University Examinations 2019/2020 Academic year

SCHOOL OF EDUCATION

DEPARTMENT OF EDUCATIONAL COMMUNICATION TECHNOLOGY

AUGUST SESSION EXAMINATION FOR

DOCTOR OF PHILOSOPHY IN EDUCATIONAL ADMINISTRATION

ECT 923: CONTEMPORARY AND EMERGING ISSUES IN PHYSICS.

DATE: 16/12/2019

TIME: 2.00-5.00 PM

INSTRUCTIONS

ANSWER QUESTION ONE AND ANY TWO OTHERS.

QUESTION ONE (20 MARKS)

- a) Critically explain ISSUES emerging from the new Competence-Based Curriculum in the following areas:
- i. The readiness of the Physics Teacher. (3 marks)
 - ii. The competence of the trainers. (3 marks)
 - iii. Transition between levels of Education. (3 marks)
 - iv. Teacher Education pre-service programme. (3 marks)
- b) Assess four ways in which the teaching of Physics can promote Industrial Development. (8 marks)

QUESTION TWO (15 MARKS)

Defend your suggestion for five ways in which the quality of the Physics teacher can be developed.

QUESTION THREE (15 MARKS)

Explain five ways in which research in Physics Education has promoted the growth of Physics.

QUESTION FOUR (15 MARKS)

Some Science Educators advocate for a focus on Problem-Solving and Process-Skills approach to science teaching; while others advocate for innovative speculation. Discuss how these views would be integrated into the planning for teaching Physics.

QUESTION FIVE (15 MARKS)

Discuss and illustrate three ways in which the Government may enhance the teaching of Physics.