



MACHAKOS UNIVERSITY COLLEGE

(A Constituent College of Kenyatta University)

University Examinations 2015/2016

SCHOOL OF EDUCATION

DEPARTMENT OF EDUCATION COMMUNICATION AND TECHNOLOGY

SECOND SEMESTER EXAMINATION FOR DIPLOMA IN EDUCATION

ECT 0205: PHYSICS SUBJECT METHODS

Date: 4/8/2016

Time: 2:00 – 4:00 PM

INSTRUCTIONS

Answer Question One and Any Other Two Questions

QUESTION ONE

- a) Explain five characteristics that define physics as a science. (5 marks)
- b) What factors influence choice of a teaching method? (5 marks)
- c) Differentiate between heuristic and expository methods of teaching. (4 marks)
- d) What are the five functions of question and answer method in teaching physics. (5 marks)
- e) Discuss five limitations of using practical work in the teaching of physics. (5 marks)
- f) Discuss the role of the teacher during practical work in physics learning. (6 marks)

QUESTION TWO

- a) Explain why assessment should be done in physics (8 marks)
- b) Describe in details five types of assessment technique/procedures used in physics. Give at least one merit and one demerits of each assessment technique. (12 marks)

QUESTION THREE

- a) Discuss six advantages of improvising materials for teaching chemistry. (12 marks)

- b) Give a detailed description of how you would improvise and use locally available materials to teach the topic of pressure. (8 marks)

QUESTION FOUR

- a) Explain the importance of developing instructional objectives for the teaching of physics (5 marks)
- b) Describe five ways in which a teacher can sustain classroom attention during the teaching of physics. (5 marks)
- c) Using specific examples, discuss how Chemistry has contributed to the following areas:
- i. Better health
 - ii. More food production
 - iii. Better Social life
 - iv. Career development
 - v. Country's economic growth (10 marks)

QUESTION FIVE

- a) Assume you are to teach the topic "Magnetism". Discuss the steps you would follow in planning and implementing a teacher demonstration on this topic (10 marks)
- b) Write a lesson plan for the lesson. (10 marks)