



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2014/2015
DIGITAL SCHOOL OF VIRTUAL AND OPEN LEARNING
FIRST SEMESTER EXAMINATION FOR THE DEGREE OF
BACHELOR OF EDUCATION
ECT 306: PHYSICS SUBJECT METHODS

DATE: Monday, 22nd December 2014

TIME: 2.00 p.m. – 4.00 p.m.

INSTRUCTIONS:

Attempt question **one** and any other **two**

- Q1. a) State the static view of science and explain its implications in the teaching of science. (4 marks)
- b) Explain the view that “Physics (science) is a way of thinking”. (8 marks)
- c) Outline the abilities that expository class experiments enhance in the learners of physics. (6 marks)
- d) Draw an experiment circuit diagram that you would expect of your learners for the potential difference across a bulb and the current passing through it. (6 marks)
- e) Explain any three sources of hazards in a physics laboratory. (6 marks)
- Q2. a) One of the objectives of secondary school physics is to help students to develop capacity to “Use the acquired knowledge in the conservation and management of the environment”. Explain using specific examples how this is achieved. (10 marks)
- b) Explain how the physics curriculum helps students to appreciate and explain the role of physics in promoting health in society. (10 marks)

- Q3. a) Explain any of the three components of a curriculum review. (6 marks)
- b) Describe the external pressures that led to the review of physics curriculum in Kenya immediately after attaining independence. (6 marks)
- c) Discuss the reasons that made the School Science Project (SSP) curriculum not to be scaled up to all secondary schools in Kenya. (8 marks)
- Q4. a) Explain circumstances in which experiment demonstration is a suitable teaching method. (10 marks)
- b) Explain the components of physics (science) as a body of knowledge. (10 marks)
- Q5. a) Explain four ways in which drawing a lesson plan is important to the physics teacher. (8 marks)
- b) Draw a 40-minutes plan for lesson on a topic area of your choice, showing clearly the content, learning activities and resources at each stage of the lesson. (12 marks)