



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF EDUCATION
(SCIENCE)
1ST YEAR 2ND SEMESTER 2016/17
MAIN REGULAR

COURSE CODE: SPH 102

COURSE TITLE: ELECTRICITY AND MAGNETISM I

EXAM VENUE: PHY LAB

STREAM: (BED SCI)

DATE: 06/09/16

EXAM SESSION: 2.00 – 4.00 PM

TIME: 2:00HRS

Instructions:

- 1. Answer question 1 (Compulsory) in Section A and ANY other 2 questions in Section B.**
- 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**

Useful constants

$$1/4\pi\epsilon_0 = 9.0 \times 10^9 \text{ N m}^2 \text{ C}^{-2}$$

$$\text{mass of proton} = 1.67 \times 10^{-27} \text{ kg}$$

$$\text{electron charge} = -1.6 \times 10^{-19} \text{ C}$$

$$\text{permittivity of free space } \epsilon_0 = 8.85 \times 10^{-12} \text{ C}^2 \text{ N}^{-1} \text{ m}^{-2}$$