



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS**  
**DEPARTMENT OF COMPUTER SCIENCE & SOFTWARE ENGINEERING**  
**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN**  
**ACTUARIAL SCIENCE**  
**1<sup>ST</sup> YEAR 1<sup>ST</sup> SEMESTER 2016/2017 ACADEMIC YEAR**  
**MAIN CAMPUS**

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**COURSE CODE: SCS 3111:**

**COURSE TITLE: COMPUTER ORGANIZATION AND APPLICATION**

**EXAM VENUE: LAB 1**

**STREAM: (ACTUARIAL)**

**DATE: 19/12/16**

**EXAM SESSION: 2.00 – 4.00 PM**

**TIME: 2.00 HOURS**

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**INSTRUCTIONS**

- 1. Answer Question 1 (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 1 [30 MARKS]

- a. Define the term 'Computer' and discuss its four basic operations. (5mks)
- b. Differentiate between system software and application software and give examples. (5mks)
- c. Discuss the five basic elements of a computer system. (5mks)
- d. Compare and contrast input devices and output devices with examples. (10mks)
- e. Define the following terminologies as used in computer organization and application: (10mks)
  - i. Drivers Motherboard
  - ii. Network card
  - iii. Platform
  - iv. Peripheral device

### QUESTION 2 [20 MARKS]

- a. Define the 'central processing unit'. (5mks)
- b. Discuss the following three parts of the central processing unit:
  - i) Arithmetic Logic Unit. (5mks)
  - ii) Memory. (5mks)
  - iii) Control unit. (5mks)

### QUESTION 3 [20 MARKS]

- a. Discuss the hardware and software considerations when purchasing your computer. (10mks)
- b. Give a diagrammatic representation of the five basic elements of a computer system.(5mks)

**QUESTION 4 [20 MARKS]**

- a. List five capabilities and five limitations of computers. (10mks)
- b. Explain how computers can be used in the following areas(10 mks)
  - Education
  - Government
  - Defense
  - Health and Medicine
  - Safety

**Question 5 [20 marks]**

- a. Discuss the history of computing hardware in light of the five computer generations. (10mks)
- b. Discuss the tips to follow to ensure that your computer is running smoothly and has a long and productive life (10mks)