



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY  
SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS  
DEPARTMENT OF COMPUTER SCIENCE AND SOFTWARE  
ENGINEERING  
UNIVERSITY EXAMINATION FOR THE DEGREE OF  
BACHELOR SCIENCE IN COMPUTER SECURITY AND FORENSICS  
1<sup>ST</sup> YEAR 1<sup>ST</sup> SEMESTER 2024/2025 ACADEMIC YEAR  
MAIN CAMPUS**

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**COURSE CODE: IIT 3111**

**COURSE TITLE: INTRODUCTION TO COMPUTER SYSTEMS**

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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**
  - 4. No mobile devices (e.g. laptops, phones. e.t.c.) are allowed into the Examination Room**
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### **QUESTION ONE 30 MARKS**

- a) Define the following terms as used in computing. (5 Marks)
  - i) Program
  - ii) Data
  - iii) PROM
  - iv) System
  - v) Peripheral
- b) Define the term *computer system*. (2 Marks)
- c) Describe atleast FIVE characteristics of a computer. (10 Marks)
- d) List THREE significant limitations of computers. (3 Marks)
- e) Explain some of the disadvantages of computer networks. (2 marks)
- f) Discuss any THREE network topologies. (6 marks)
- g) Discuss the term *operating system* as used in computing systems (2 marks)

### **QUESTION TWO 20 MARKS**

- a) Briefly describe the functions of an operating system (8 Marks)
- b) Explain the FIVE major operations or functions a computer performs irrespective of its size and make. (5 Marks)
- c) Using appropriate examples, discuss *application software*. (4 Marks)
- d) Explain virus as used in computing. (1 mark)
- e) Assuming you are the one responsible for JOOUST computer Labs, how would you safeguard and protect the computers against the viruses? (2 marks)

### **QUESTION THREE 20 MARKS.**

- a) Using a diagram, describe the functional units of a computer system. (10 marks)
- b) Define the term Internet and hence explain its advantages and disadvantages (6 marks)
- c) Using appropriate examples, discuss any TWO methods that may be used to prevent an unauthorized users from accessing a computer. (4 Marks)

### **QUESTION FOUR 20 MARKS**

- a) Briefly discuss the generations of computers. (8 marks)
- b) Explain the term device drivers (2 Marks)
- c) Calculate the number of bytes in each of the following: (4 Marks)
  - i. Kb (kilobyte)
  - ii. Mb (megabyte)
  - iii. Gb (gigabyte)
  - iv. Tb (terabyte)
- d) Distinguish between hardware and software, giving three examples of each. (4 marks)
- e) Explain how tailor made software differ from off the shelf software. (2 marks)

**QUESTION FIVE 20 MARKS**

- a) The use of computers has become a necessity in many fields. Computers have revolutionized the way businesses are conducted. This is due to the advantages that computer systems offer over manual systems. Using examples, discuss computer applications in different fields. (10 Marks)
- b) Discuss the utility software and system software. (4 marks)
- c) Convert the following numbers into decimal: (4 marks)
- i. 1101102
  - ii. 25738
- d) Explain the term I/O device. (2 marks)

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