

110



**MASINDE MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY**

**(MMUST)**

**MAIN CAMPUS**

**UNIVERSITY EXAMINATIONS**

**2021/2022 ACADEMIC YEAR**

**SEMESTER II EXAMINATIONS**

**FOR THE BACHELOR OF SCIENCE**

**IN**

**CHEMISTRY/NUTRITION**

**COURSE CODE: BSC 110/CSC 110**

**COURSE TITLE: FUNDAMENTALS OF COMPUTING**

**DATE: Wednesday 20/04/2022**

**TIME: 3:00P.M-5:00P.M**


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**INSTRUCTIONS TO CANDIDATES**

Question 1 is compulsory  
Answer Any Two (2) questions

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 3 Printed Pages. Please Turn Over. 

### QUESTION ONE (30 MARKS)

- a. Define the following terms as applied in Computers [5 marks]
- Peripheral device
  - Tailor made software
  - Hard copy output
  - ROM
  - Troubleshooting
- b. Discuss the types of computers as classified by:
- Generation [5 marks]
  - Functionality [6 marks]
- c. List four types of keys found on a computer keyboard [4 marks]
- d. Describe four specific ways in which computers can be applied in the following areas:
- Business and Commerce [2 marks]
  - Industry [2 marks]
  - Transport [2 marks]
  - Homes [2 marks]
- e. Explain two characteristics of the Binary number system [2 marks]

### QUESTION TWO (20 MARKS)

- a. Distinguish between the following terms:
- System software and Application software [2 marks]
  - Translator and Compiler [2 marks]
  - Impact and non-impact printers [2 marks]
- b. Describe five functions of an operating system [5 marks]
- c. With the aid of a well labelled diagram explain the functional parts of a digital computer [7 marks]
- d. Explain how a light pen works to input data to a computer [2 marks]

### QUESTION THREE (20 MARKS)

- a. How are computers applied in your area of specialization? Cite 6 ways [6 marks]
- b. Explain 2 types of computer networks [2 marks]
- c. Convert the following numbers to Binary numbers: [12 marks]
- $9CD_{16}$
  - $279_{10}$
  - $823_8$
  - $351_{16}$

### QUESTION FOUR (20 MARKS)

- a. With the coming of technology, most companies have embraced networking. Explain three purposes of networking. [3 marks]
- b. Convert the following number systems: [9 marks]
- $100110_2 = ?_{10}$
  - $10101010_2 = ?_8$
  - $100010101010_2 = ?_{16}$
- c. Using relevant examples, explain four categories of computer hardware [8 marks]

**QUESTION FIVE (20 MARKS)**

- a. Using diagrams, explain the following Network topologies: [8 marks]
- i) Ring
  - ii) Star
  - iii) Mesh
  - iv) Bus
- b. State 2 characteristics of the Decimal number system [2 marks]
- c. Explain why one would prefer to store information in secondary memory as opposed to primary memory [5 marks]
- d. Define a computer Network. [2 marks]
- e. Explain the following terms: [3 marks]
- i) Bit
  - ii) Byte
  - iii) Word