



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS**  
**UNIVERSITY EXAMINATION FOR THE BACHELOR OF SCIENCE**  
**IN ICT**  
**YEAR ONE SEMESTER TWO**  
**MAIN CAMPUS**

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**COURSE CODE: ICT 3123**

**COURSE TITLE: FUNDAMENTALS OF ICT**

**EXAM VENUE: STREAM:**

**DATE: EXAM SESSION:**

**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 ONE - 30 MARKS

- a) Define the following terminologies
  - i. ICT
  - ii. System
  - iii. ICT System (6 marks)
- b) List and describe the six components of an ICT System (12 marks)
- c) Procedures are defined as a series of actions or operations intended to achieve a result. List some examples of procedure you are familiar with. (6 marks)
- d) What is the purpose of a computer based information system from a business perspective? What role does it play in the business information value chain? (6 marks)

### QUESTION TWO - 20 MARKS

- a) Using a diagram, identify and describe the four levels of the organizational hierarchy. Which types of information systems serve each level? (8 marks)
- b) List and briefly describe the major types of systems in an organization? (12 marks)

### QUESTION THREE - 20 MARKS

- a) Briefly explain how each of the following documents are useful in programming?
  - i. User manual / guide.
  - ii. Reference guide
  - iii. Quick reference guide (6 marks)
- b) Outline the stages involved in program development. (4 marks)
- c) Define the term *control structure* as applied in program control structures. (1 mark)
- d) Explain the 3 control structures below as used in most of the structured programming languages. (9 marks)
  - i. Sequence.
  - ii. Selection
  - iii. Iteration (looping)

### QUESTION FOUR - 20 MARKS

- a) Define the term Evaluative Criteria (2 marks)
- b) What three (3) things must a marketing manager know before developing a strategy. (6 marks)
- c) List and briefly explain the components of two (2) methods of determining which evaluative criteria are to be used. (4 marks)
- d) Define the term abstraction as used in computer programming. (2 marks)
- e) Mutuku took a loan of KShs. 400,000 from a local bank at an interest rate of 10% payable in four years. Assuming you wish to develop a computer program that will keep track of monthly repayments. Identify the input, processing and output requirements for such a program. (6 marks)

**QUESTION FIVE - 20 MARKS**

- a) An Application Programming Interface (API) is a set of commands, functions and protocols which programmers can use when building a software. How useful is it to a programmer/ (2 marks)
- b) What four characteristics constitute a good API. (8 marks)
- c) Executive Information Systems are essentially a combination of MIS and DSS. Do you agree ? justify your answer. (10 marks)