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**GARISSA UNIVERSITY**

**UNIVERSITY EXAMINATION 2020/201 ACADEMIC YEAR ONE**

**SECOND SEMESTER EXAMINATION**

**SCHOOL OF SCHOOL OF PURE AND APPLIED SCIENCES**

**DIPLOMA IN INFORMATION TECHNOLOGY**

**COURSE CODE: DIT 008**

**COURSE TITLE: PROGRAMMING IN C**

**EXAMINATION DURATION: 2 HOURS**

**DATE: 23/08/2021 TIME: 12.00-2.00 PM**

**INSTRUCTION TO CANDIDATES**

* **The examination has FIVE (5) questions**
* **Question ONE (1) is COMPULSORY**
* **Choose any other TWO (2) questions from the remaining FOUR (4) questions**
* **Use sketch diagrams to illustrate your answer whenever necessary**
* **Do not carry mobile phones or any other written materials in examination room**
* **Do not write on this paper**

**This paper consists of TWO (2) printed pages *please turn over***

**QUESTION ONE (COMPULSORY)**

1. Define the following terms 8 marks
2. Variable
3. Compiler
4. Interpreter
5. Function
6. Briefly explain the difference between call by value and call by reference 4 marks
7. Write a C program to prompt user to enter two integers, multiply and display result to the user 5 marks
8. Draw flow chart for if statement and for loop 6 marks
9. How are variables declared? 2 marks
10. Using a diagram illustrate how arrays are indexed differentiate between index and the actual value 5 marks

**QUESTION TWO 20 MARKS**

1. Using a decision structure of your choice write a **SIMPLE** program to check if a student has passed or failed 7 marks
2. With an aid of a diagram explain how a compiler works 8 marks
3. What are the advantages of compiler over interpreter 3 marks
4. What is an array 2 marks

**QUESTION THREE 20 MARKS**

1. Write an array program that lists numbers from 100-110 8 marks
2. Using a loop of your choice write a program that lists number from 0-9. 8 marks
3. Draw a flow for switch case statement 4 marks

**QUESTION FOUR 20 MARKS**

1. Differentiate the following terms: 12 marks
2. Compiler vs assembler
3. Interpreter vs compiler
4. Assembler vs compiler
5. Interpreter vs Assembler
6. Using functions write a program to add to integers and display the result to the user. 8 marks