



GARISSA UNIVERSITY

**UNIVERSITY EXAMINATION 2017/2018 ACADEMIC YEAR TWO
FIRST SEMESTER EXAMINATION**

SCHOOL OF BUSINESS AND ECONOMICS

FOR THE DEGREE OF BACHELOR OF BUSINESS MANAGEMENT

COURSE CODE: BBM 220

COURSE TITLE: INTRODUCTION TO STRUCTURED COMPUTER PROGRAMMING

EXAMINATION DURATION: 3 HOURS

DATE: 13/12/17

TIME: 09.00-12.00 PM

INSTRUCTION TO CANDIDATES

- The examination has SIX (6) questions
- Question ONE (1) is COMPULSORY
- Choose any other THREE (3) questions from the remaining FIVE (5) 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 THREE (3) printed pages

please turn over



QUESTION ONE (COMPULSORY)

- (a) Differentiate between machine language and low level language [2 marks]
- (b) Distinguish between procedural and visual programming [4 marks]
- (c) A student would like to write a program that could compute and display the average of ten integers entered through the keyboard one at a time. Use a flow chart to design the program [4 marks]
- (d) d. Assuming C programming language, evaluate the expression;
 $Z = a + b \bmod c * (d^2)$
Given that $a=10$, $b=23$, $c=7$ and $d=5$ [5 marks]
- (e) Write a program that prompts the user to enter the height and base of triangle. Compute and display the area. The output should be in the format shown below [10 marks]

RECTANGLE

Height =

Base =

Its area is

Its base is

QUESTION TWO

- (a) Explain two types of errors that may be encountered during program execution. [4 marks]
- (b) The following are identifiers used in C programming language during program writing. myval, const, integer and switch. Citing a reason in each case, state whether these identifiers are valid or not. [5 marks]
- (c) Write a program in C programming language that could generate random numbers between 0 and 1. [6 marks]

QUESTION THREE

- (a) Distinguish between register and static storages as used in C programming language [4 marks]
- (b) Write a program in C programming language that would prompt a user to enter an integer. The program should then check whether the integer entered is a prime number and output the result [6 marks]
- (c) Draw a flowchart that shows how to solve a quadratic equation [5 marks]



QUESTION FOUR

- (a) Differentiate between low level language from machine language. **[4 marks]**
- (b) Describe three types of operators used in C programming language. **[6 marks]**
- (c) Outline two uses of comments in C programming language **[5 marks]**

QUESTION FIVE

- (a) Write a program in C to compute the minimum number among three inputted integers **[10 marks]**
- (b) The following is a segment of a C program created by a student. Use it to answer the question that follows

```
main ()  
(  
    int I;  
    for (I=1; I less than=50; I++)  
        if ("I% d ", I)/n;  
)
```

- i. Write the output generated when the program is corrected and executed **[5 marks]**

QUESTION SIX

- (a) Outline two reasons why program documentation is important. **[2 marks]**
- (b) Explain three types of program testing. **[6 marks]**
- (c) Write a C program code that would prompt the user to enter two integer values. The program should then compute the product and the sum of the two numbers and display the results. **[6 marks]**

