



(Knowledge for Development)
KIBABII UNIVERSITY

**UNIVERSITY EXAMINATIONS
2019/2020 ACADEMIC YEAR**

**SPECIAL / SUPPLEMENTARY EXAMINATIONS
YEAR ONE SEMESTER ONE**

**FOR THE DEGREE OF BACHELOR OF SCIENCE
COMPUTER SCIENCE**

COURSE CODE : REN123

**COURSE TITLE : FUNDAMENTALS OF
PROGRAMMING**

DATE: 05/02/2021 TIME: 08:00 A.M – 10:00 A.M

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTIONS ONE AND ANY OTHER TWO.

QUESTION ONE (COMPULSORY) [30 MARKS]

- a) Distinguish between a compiler and an interpreter. [4 Marks]
- b) Explain the meaning of the follows escape sequence [4 Marks]
- I. \a
 - II. \n
 - III. \000
 - IV. \t
- c) Explain how decision making is achieved in C programming language [4 Marks]
- d) Explain what is meant by arithmetic operators [4 marks]
- e) Write a program to calculate simple interest in C programming language. [4 Marks]
- f) Describe 4th generation programming language. Clearly stating characteristics, advantages, disadvantages and example. [6 Marks]
- g) Explain the following [4 Marks]
- I. Flowchart
 - II. Algorithm.

QUESTION TWO [20 MARKS]

- a) Explain the meaning of the following
Expr1 ? Expr2 : Expr3. [4 Marks]
- b) Write a program to output the following [6 Marks]
- I.
1111
1111
1111
 - II.

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- c) Write pseudocode to calculate the area of a compound interest [2 Marks]
- d) Write a program using for loop to get product of numbers 1 to 10. [8Marks]

QUESTION THREE [20 MARKS]

- a) Differentiate while loop and do while loop. Give relevant examples. [4 Marks]
- b) Describe THREE types of error in a computer program [6 Marks]
- c) Distinguish between rvalues and lvalues in C programming language. [4 Marks]
- d) Describe the steps followed when a programmer intends to write a program [6 Marks]

QUESTION FOUR [20 MARKS]

- a) Describe the following storage classes
- I. Register
 - II. Extern.
- [4 Marks]
- b) Analyze and Identify the errors in the following program
- ```
Include<stdio.h>
Main(){
Printf("please input Number");
Scant("%d,k);
Printf("Number =",k);
```
- [6 Marks]
- c) Write c program that will prompt the user to input student name and marks. The program should be able to grade the student ie. marks<40 grade E, marks<50 grade D, marks<60 grade C, marks<70 grade B and marks<=100 grade is A.
- [10 Marks]

#### QUESTION FIVE [20 MARKS]

- a) Explain two ways how you can incorporate a constant like Pie=3.142 in c programming language.
- [4marks]
- b) Explain the meaning of the following syntax in c programming language
- I. X++
  - II. X- -
  - III. ++X
  - IV. - -X.
- [4 Marks]
- c) #include <stdio.h> is what type of commands.
- [2 Marks]
- d) Describe the rules followed when coming up with identifiers.
- [4 Marks]
- e) Write a programming arrays to add numbers one to twenty and output the sum.
- [6 Marks]