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KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATIONS, 2019/2020 ACADEMIC YEAR
FIRST YEAR, FIRST SEMESTER EXAMINATIONS
BACHELOR OF SCIENCE IN COMPUTER SCIENCE

KCS 101 - INTRODUCTION TO PROGRAMMING

Date: 10th April 2019
Time: 8.30am – 10.30am

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE COMPULSORY (30 MARKS)

- a) Distinguish between:
- i) Keywords and Literals (2 Marks)
 - ii) Switch...case and Nested If...Else Statements (2 Marks)
- b) Explain what a ternary operator is with the aid of correct syntax. (4 Marks)
- c) Explain the structure of a C Program with the aid of a simple program that displays your name and age? (6 Marks)
- d) Write a program that displays the elements contained in a two-dimensional array? (8 Marks)
- e) Write a program that uses a function to calculate the volume of a cylinder. (8 Marks)

QUESTION TWO (20 MARKS)

- a) Describe the types of storage specifiers used in the C Programming language.? (4 Marks)
- b) Write a program that calculates the GCD of both positive and Negative Numbers provided by the user. (8 Marks)
- c) With the aid of flow diagrams and syntax, explain how selection statements are used in C Programming Language. (8 Marks)

QUESTION THREE (20 MARKS)

- a) Distinguish between the following:
- i) Union and Structure (2 Marks)
 - ii) Array and Pointer (2 Marks)
- b) Write a program which uses a structure to store and display the following student information: Name, Age, Course and Hostel. (8 Marks)
- c) Explain the types of loop control structures used to implement a program. (8 Marks)

QUESTION FOUR (20 MARKS)

- a) Distinguish between
 - i) Relational and Logical operators (2 Marks)
 - ii) Call-by-value and Call-by-reference. (2 Marks)
- b) Explain the categories which are used to classify programming languages and mention relevant examples. (8 Marks)
- c) Use the for loop to display the alphabet in both uppercase and lowercase (8 Marks)

QUESTION FIVE (20 MARKS)

- a) Explain the concept of exception handling and use relevant code snippets to demonstrate. (8 Marks)
- b) Write a C Program to calculate the factorial of a number using recursion. (6 Marks)
- c) Write a program in C Programming Language that demonstrates how to use a pointer (6 Marks)