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KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATION, 2022/2023 ACADEMIC YEAR
FIRST YEAR, SECOND SEMESTER EXAMINATION
FOR THE DEGREE OF BACHELOR OF SCIENCE
(COMPUTER SCIENCE)

Date: 1st August, 2022
Time: 11.30am – 1.30pm

KCS 102 - OBJECT ORIENTED PROGRAMMING 1

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE (30 MARKS)

- a) Describe the main differences between compilers and interpreters. (4 marks)
- b) Differentiate between program testing and debugging. (4 marks)
- c) Explain five benefits of object oriented programming paradigm. (5 marks)
- d) Define documentation. Identify the advantages of documentation (6 marks)
- e) State three advantages and two disadvantages of using flowcharts in programming. (5 marks)
- f) Using π as 3.142, write a C++ program to calculate the area of a circle. (6 marks)

QUESTION TWO (20 MARKS)

- a) Using if else structure, write a C++ program to accept the character representing the color and display the appropriate meaning for the color entered (10 marks)

Color	Meaning
R or r	Stop
Y or y	Get ready
G or g	Move
All other cases	Wrong entry

- b) Using relevant symbols, draw a flowchart that a programmer will use to write a program that adds 10 numbers and displays the sum (10 marks)

QUESTION THREE (20 MARKS)

- a) Draw a program flowchart that finds the area of a circle. The program should only accept the value radius between/ and 7 to 70 (6 marks)
- b) Define the following terms
 - i) Identifier
 - ii) Data type(4 marks)
- c) Write the syntax for declaring nested IF. Else structure (4 marks)
- d) Using appropriate examples explain the following errors (6 marks)
 - i) Syntax error
 - ii) Run time Error
 - iii) Logical Error(6 marks)

QUESTION FOUR (20 MARKS)

- a) Write a program to determine whether a given number is „odd” or „ even” and print the message: NUMBER IS EVEN OR NUMBER IS ODD (6 marks)
- b) Describe any four types of operators in C++ programming (8 marks)
- c) Describe the two categories of variables in programming (6 marks)

QUESTION FIVE (20 MARKS)

- a) Describe five qualities of a good program (10 marks)
- b) Using *for* loop and *do-while* loops write a C program to output the first 100 numbers (10 marks)