University of Venda

Department of Mathematical and Computational Sciences

Special Examinations - 2023

Module   : COM 2123 – Imperative Programming

Duration   : 3 Hrs.   **Marks:**   100

Examiner   : V. Tshipuke

Internal Moderator   : N. Soganile

Instructions to candidates

This question paper consists of **FOUR (4)** questions. Answer **ALL** Questions.

Question 1 [40 Marks]

a) Write an algorithm for finding N factorial and draw the corresponding flowchart   [15]

b) What is an operator? Explain arithmetic and relational operators with an example. [8]

c) What data types would you use to represent the following items?
      i. The number of in a employees in the department [2]
     ii. The target sale by a salesman. [2]
    iii. Name of the employee [2]
    iv. The population of 8 city [2]
     v. The height of the employee   [2]

d) Write a simple C++ Function to calculate the Compound interest rate of any given loan [8]

e) What is the difference between Function overload and Function override   [8]

Question 2 [25Marks]

a) Explain the difference between for and do-while loop with example   [8]

b) Write a short note on nested if-else statements in C ++ program.   [5]

c) What do you understand by the term algorithm as used in programming?   [4]

d) Explain the use of break and continue with examples   [8]

Question 3 [35 Marks]

a) What is an array? Show by an example how one can initialise an array [8]

b) Explain how to use a pointer in C++, use syntax and an example to demonstrate your explanation   [10]

c) Write a full C++ program to convert Kilometres into meters, the program should accept input from the user [17]

End of question paper