# B.Sc. 1st Semester (Honours) Examination, 2019-20
## COMPUTER SCIENCE

**Course ID : 11511**                     **Course Code : SH-CSC-101-C-1**

### Course Title : Programming Fundamentals using C/ C++

**Time: 1 Hour 15 Minutes**                               **Full Marks: 25**

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words
as far as practicable.*

**1.** Answer *any five* questions from the following:                    1×5=5

   (a) What is meant by procedural programming language?

   (b) What is mean by void main (void)?

   (c) What is the function of Continue statement?

   (d) Define one dimensional array.

   (e) What is command line argument?

   (f) What is meant by multiple inheritance?

   (g) What is the difference between class and structure?

   (h) What is data encapsulation?

**2.** Answer *any two* questions from the following:                    5×2=10

   (a) Write differences between function call by value and function call by reference. Give example. Write a recursive C-function that will calculate factorial of a given number.   2+3=5

   (b) Discuss about different storage classes available in C.                    5

   (c) What is dynamic memory allocation? Write a C-program to calculate sum of $n$ numbers using dynamic memory allocation.                    1+4=5

   (d) Write a C-program to print the following use for loop.

         1
         1  2
         1  2  3
         1  2  3  4

   Write difference between while and do-while loop.                    4+1=5

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**3.** Answer *any one* from followings:                                                     10×1=10

    (a) Write use of any two string manipulating library functions. Write a C-program to copy the content of a file into another. Write difference between printf ( ) and fprintf ( ).      3+5+2=10

    (b) Write differences between run time polymorphism and compile time polymorphism.

        Design a C++ class to represent a bank account. Add suitable functions in it to display the balance, to deposit and withdraw a specified amount. Write a program to test the class.

        What is pure virtual function?                                                     3+5+2=10

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