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BCS-031

BACHELOR OF COMPUTER APPLICATIONS (BCA) (Revised)

Term-End Examination,

December 2019

BCS-031 : PROGRAMMING IN C++

Time : 3 Hours] *[Maximum Marks : 100*

(Weightage : 75%)

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*Note : (i) Question No. **1** is **compulsory** and carries **40** marks.*

*(ii) Attempt **any three** questions from the rest.*

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1. a) Explain the use of 'Break' and 'Continue' statement in C++, with example program. 5

   b) What are Access control specifiers? Explain various types of access control specifiers. 5

   c) What is 'Copy constructor'? Explain it with the help of a suitable C++ program. 5

   d) Explain the concept of Friend function with suitable example code in C++. 5

   e) Compare while ( ) and do-while( ) looping constructs with the help of suitable example for each. 5

   f) Write a program in C++, to find the largest of given three numbers by using a member function defined in a class. 5

   g) What is Object initialization? Why it is required, explain with the help of an example. 5

   h) Explain the usage of single inheritance and multiple inheritance. 5

2. a) What is a Class template? How it is different from function template? Give example for each. 8

   b) What are Inline functions? Discuss their importance in programming. Write an example program in C++ to clarify the concept of Inline functions. 8

   c) What is Polymorphism? Give three advantages of polymorphism. 4

3. a) Discuss the role of virtual functions in inheritance. What happens if we don't use virtual functions in inheritance? Give suitable example in support of your discussion. 10

   b) What are File stream operations? Write a program in C++ to demonstrate the file reading and writing operations. 10

4. a) Explain the concept of parameter passing using call by value and call by reference with suitable examples. 8

   b) Compare Run time polymorphism and Compile time polymorphism. Give suitable example of each. 8

   c) What is destructor? Explain its use in C++ with the help of an example. 4

5. Write short notes on the following: 4×5=20

   a) Code Reusability

   b) 'this' pointer

   c) Containers and its types in C++

   d) Stream manipulators

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