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**Paper Code : 21314**

**F-414**

**B.C.A. (Third Semester) Examination, 2021**  
**(New Course)**

**Paper - BCA-304-N**

**OBJECT ORIENTED DESIGN AND  
PROGRAMMING IN C++**

***Time : Three Hours ] [ Maximum Marks : 70***

**Note : Attempt any five questions. All questions  
carry equal marks.**

1. (a) How object oriented programming languages is different from procedural oriented languages?  
(b) What do you mean by “Class” and “Object”? Describe using a small code.

2. (a) How to achieve abstraction?  
(b) Describe OOD-Methodology. What is SA/SD?
3. (a) Write a program using “class” and “object” to perform all basic arithmetic operations.  
(b) Explain various operators in C++.
4. (a) Differentiate “continue” and “break” statements with the help of a code.  
(b) How “Call-by-value” is different from “Call-by-Reference”?
5. (a) How “Scope resolution operator” is useful in C++ programming? Justify using a code.  
(b) What is “Friend-Function”?
6. (a) Elaborate the advantages of “Inheritance” in any programming. What are its different types? Explain using their structures.

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

7. (a) Write a program to show the concept of operator overloading.

(b) What are “virtual functions”?

8. Write short notes on the following :

- (a) Pointers in C++
- (b) JSD
- (c) Metadata
- (d) Static Binding versus Dynamic Binding