

16/239-C

BCA (Second Semester) Examination, 2016

(BCA- 201 : Object Modeling &  
C++ Programming)

First Paper

Time : Three Hours ]

[ Maximum Marks : 75

**Note :** Attempt questions from **all** sections as per instructions.**Section - A****Note:** Attempt **all** parts of this question. Give answer of each part in about **50** words. $1\frac{1}{2} \times 10 = 15$ 

1. (i) Differentiate between object model and functional model.
- (ii) Define links and association
- (iii) State the characteristics of the constructor.
- (iv) What is meta data?

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(2)

- (v) What are tokens?
- (vi) Explain what is meant by a method.
- (vii) Define states and events.
- (viii) What is the role of 'this' pointer?
- (ix) Differentiate between class and structure.
- (x) Why it is necessary to overload an operator?

**Section - B****Note :** Attempt **all** questions. Give the answer of each question in about 200 words.<https://www.vbspustudy.com> 8×5=40

2. List the features of OOPS. Explain polymorphism and encapsulation.

**OR**

What is state diagram? Explain the static diagram of an ATM system.

3. What is an inline function? Explain with an example and also discuss its limitations.

**OR**

What are the various techniques for dynamic memory management?

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4. What is data flow diagram? Construct the data flow diagram of student management system.

OR

What is the difference between call by value & call by reference? Explain with suitable example.

5. Differentiate between the Dynamic Modeling and Functional Modeling.

OR

Write the syntax for the following control statements along with an example for each:

- (i) Switch statement
- (ii) For statement

6. What do you mean by default arguments? When it is useful?

OR

What is pure virtual function? Why do we need pure virtual function?

(4)

### Section - C

**Note :** Attempt any two questions. Give answer of each question in about 500 words.

10×2=20

7. Explain the following with illustrative examples.
- (i) Copy Constructor
  - (ii) Parameterized Constructor
8. Write a C++ program that overlads the operators +, -, \* and / to perform additions, subtraction, multiplication and division.
9. Write a recursive program in C++ to generate the first 10 terms in a fibonacci series.
10. What are the different forms of inheritance supported by C++ ? Explain with examples.
11. Write short notes on **any two** of the following:
- (i) Storage classes
  - (ii) Pointers
  - (iii) Abstract class