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Roll No. _____

# 18/2086

# B.C.A. Examination, 2018

## Third Semester

### First Paper

### (Object Oriented Programming Using C++)

**Time : Three Hours**      **Maximum Marks : 75**

**Note :** Answer five questions. All questions carry equal marks. The answers to short questions should not exceed 200 words and the answers to long questions should not exceed 500 words.

1. (a) What are the benefits of object-oriented Programming?      5+5+5

   (b) What do you understand by Type Casting? Explain with the help of examples.

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   (c) What is meant by quantifier? Name the various quantifiers used in C++.

2. (a) Define Inline function-Illustrate with the help of an example.      5+5+5

   (b) Enumerate various storage classes used in C++.

   (c) Define the following functions and state their use :

   (i) Calloc ( )

   (ii) Malloc ( )

3. (a) Explain the features of Data Abstraction. What is the benefits to be gained by it?      5+5+5

   (b) What are command line arguments? Give example of the same.

   (c) What do you understand by the term "access specifiers in a class"? Elaborate.

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4. Explain the following with examples. 5+5+5

   (a) >> and << operators

   (b) Operator overloading

   (c) Private and Public functions

5. Differentiate between the following :

   5+5+5

   (a) Local and Global variables

   (b) Nested classes and Nesting of Member functions

   (c) Call by value and Call by Reference

6. (a) Write the output of the following :

   5+5+5

   x=5

   y=x$^{++}$

   Cout < x << y

   (b) What is the difference between default arguments and constant arguments? Explain with the help of examples.

   (c) What do you mean by 'friend' function?

   Illustrate its use with an example.

7. Explain the facilities available in C++ to :

   $3 \times 5 = 15$

   (i) Open a file

   (ii) Close a file

   (iii) Read from a file

   (iv) Write upon a file

   (v) Detecting EOF

8. Write a C++ program to store student data in a sequential file called student. dat. Use the fields Roll-Number, Name, Course-Code, and marks obtained in five subjects : $M_1$, $M_2$, $M_3$, $M_4$, $M_5$. 15

9. Write notes on the following : 5+5+5

   (a) Exception Handling

   (b) Streams

   (c) Function name overloading