III Semester B.C.A. Degree Examination, November/December 2018  
(F+R) (CBCS) (2015 – 16 and Onwards)  
COMPUTER SCIENCE  
BCA – 303 : Object Oriented Programming using C++  
Time : 3 Hours
Max. Marks : 70

**Instruction**: Answer all Sections.

**SECTION – A**

I. Answer any ten questions. (10×2=20)

1) Mention any four differences between C and C++.

2) What are objects and how they are created?

3) Mention the uses of scope resolution operator.

4) Define constructor.

5) Write the syntax of operator function.

6) Mention the memory allocation operators in C++.

7) List the operators which cannot be overloaded.

8) Define inheritance.

9) Differentiate between function overloading and overriding.

10) Define stream.

11) What are templates?

12) Give the general syntax of cin and cout statements.

P.T.O.
II. Answer any five questions. \( (5 \times 10 = 50) \)

13) a) Explain any five basic concepts of Object Oriented Programming (OOP).
   
   b) What is an inline function? Write an inline function to find absolute value of a number.

14) a) Briefly explain function with default arguments.
   
   b) What is a friend function? Explain with suitable example.

15) a) Give the general form of a class and illustrate access specifiers.
   
   b) Define constructor. Explain any three different types of constructors.

16) a) Define polymorphism. Discuss different types of polymorphism.
   
   b) Write a C++ program to add two complex numbers by overloading '+' operator.

17) Explain different types of inheritance with suitable examples.

18) a) Define pure virtual function. Give an example.
   
   b) What is exception handling? Explain the different blocks in exception handling.

19) a) Explain function template with its general form.
   
   b) Write a function template to sort a set of elements.

20) Write a short note for the following:
   
   a) Input and output streams.
   
   b) fstream class.
   
   c) File opening modes.