 Roll No. ……..

BCA–08

Object-Oriented Programming Through C++

Bachelor of Computer Application

(BCA–11/16/17)

Third Semester, Examination, 2017

Time : 3 Hours **Max. Marks : 80**

Note : This paper is of **eighty (80)** marks containing **three (03)** Sections A, B and C. Attempt the questions contained in these Sections according to the detailed instructions given therein.

Section–A

(Long Answer Type Questions)

Note : Section 'A' contains four (04) long answer type questions of nineteen (19) marks each. Learners are required to answer *two* (02) questions only.

1. What do you mean by dynamic initialization in an object ? Why do we need to do this ? How is dynamic initialization of objects achieved ?
2. What is a virtual base class and when do we make a class virtual ?
3. What is operator overloading ? Why is it necessary to overload an operator ? Give an example.

4. What is object-oriented programming ? How is it different from the procedure oriented programming ? Also explain how data and functions organized in an object-oriented programming paradigm ?

Section–B

(Short Answer Type Questions)

Note : Section 'B' contains eight (08) short answer type questions of eight (8) marks each. Learners are required to answer *four* (04) questions only.

1. What are the different types of operator used in C++ ?
2. What are the applications of Void data type in C++ ?
3. What are the types of inheritance ? Explain.
4. How does a C++ structure differ from a C++ class ?
5. What is a constructor ? Is it mandatory to use constructors in a class ?
6. What is friend function and when it is compulsory ?
7. What is an abstract class ?
8. How is polymorphism achieved at (a) compile time, and (b) run time ?

Section–C

(Objective Type Questions)

Note : Section 'C' contains ten (10) objective type questions of one (01) mark each. All the questions of this Section are compulsory.

1. Adding a derived class to a base class requires fundamental changes to the base class.

   (a) True

   (b) False

2. Format flags may be combined using :
   (a) the bitwise OR operator (|)
   (b) the logical OR operator (||)
   (c) the bitwise AND operator (&)
   (d) the logical AND operator (&&)

3. To expose a data member to the program, you must declare the data member in the — section of the class.
   (a) common
   (b) exposed
   (c) public
   (d) unrestricted

4. A C++ program contains a function with the header int function (double d, char c). Which of the following function headers could be used within the same program ?
   (a) char function (double d, char c)
   (b) int function (int d, char c)
   (c) Both (a) and (b)
   (d) Neither (a) nor (b)

5. If you design a class that needs special initialization tasks, you will want to design a (n) .....
   (a) housekeeping routine
   (b) initializer
   (c) constructor
   (d) compiler

6. The keyword used to define a structure is .....
   (a) stru
   (b) stt
   (c) struct
   (d) structure

7. If container classes are carefully constructed, then these tools are available to work with structure that are not .....
   (a) valid without container classes
   (b) programmer-defined
   (c) type-specific
   (d) public

8. The generic type in a template function :
   (a) must be T
   (b) can be T
   (c) cannot be T for functions you create, but may be for C++'s built-in functions
   (d) cannot be T

9. When a child class function is called, the compiler looks first for a matching function name in the .....
   (a) class of the object using the function name
   (b) immediate ancestor class
   (c) base class
   (d) descendant class

10. A function that is called automatically each time an object is destroyed is a :
   (a) constructor
   (b) destructor
   (c) destroyer
   (d) terminator