Roll No. .....

Total No. of Questions : **9**] [Total No. of Printed Pages : **4**

(2111)

BCA (CBCS) RUSA IIIrd Semester Examination

4516

OBJECT ORIENTED PROGRAMMING WITH C++

BCA-0304

Time : 3 Hours] **[Maximum Marks : 70**

Note :– Attempt *five* questions in all. Question No. **1** (Part A) is compulsory containing 10 fill in the blanks of 1 mark each and *five* short answer questions of 4 marks each. Select *one* question each from Parts– B, C, D and E.

Part–A

(Compulsory Question)

1. Fill in the blanks :

   (i) The ability of a function or operator to act in different ways of different data types is called ..... .

(ii) If class A inherits its properties from class B, then A and B are known as ..... class and ..... class respectively.

(iii) ..... member function can never be accessed by inherited classes.

(iv) A function with no return type is declared as ..... .

(v) Variable of a class is called ..... .

(vi) OOPs follow ..... approach in program design.

(vii) A ..... method does not return a value.

(viii) A ..... is a special member function whose task is to initialize the objects of its class.

(ix) An ..... is a instance of a class.

(x) In function overloading, two functions can have the same ..... in a program. 1×10=10

Short answer type questions (**25** to **50** words) :

(i) What is the difference between equal to (= =) and Assignment operator (=) ?

(ii) Explain scope resolution operator.

(iii) What are the comments in C++ ?

(iv) What is class ?

(v) What is the role of protected access specifier ? Explain with example. 4×5=20

Part–B

Unit–I

2. Explain various characteristics of object oriented programming language. 10

3. (a) Explain the basic structure of C++ program with example.

(b) Define variable in C++. Explain with example. 6+4=10

Part–C

Unit–II

4. (a) Write a program in C++ to print first 10 natural numbers.

(b) Explain if-else and switch statements with the help of example. 5+5=10

5. (a) Explain structures. How the structure members are accessed.

(b) Explain the concept of overloaded function with the help of example. 5+5=10

Part–D

Unit–III

6. (a) Define Constructors. What is the use of a constructor ? Explain.

   (b) Describe objects and classes. What are the components of a class. ? 5+5=10

7. (a) Explain Array. How the elements of an array can be accessed ? Explain with example.

   (b) Explain Multidimensionall arrays. How an array can be initialized ? Describe. 5+5=10

Part–E

Unit–IV

8. (a) Define operator overloading. Explain the limitations of increment operator.

   (b) Explain the pitfalls of operators overloading and conversion. 5+5=10

9. (a) Explain the concept of derived class and base class.

   (b) Define Inheritance. Explain its types. 5+5=10