

Reg. No.

--	--	--	--	--	--	--	--	--	--

BCACAC 157

**Credit Based Second Semester B.C.A. Degree Examination,
April/May 2013**

(New Syllabus) (2012-13 Batch Onwards)

OBJECT ORIENTED PROGRAMMING USING C++

Time : 3 Hours

Max. Marks : 80

Note : Answer any ten questions from Part A and one full question from Part B.

PART – A

Shri Dharmasthala Manjunathacharya
College of Business Management Library
MANGALORE - 575 003

(10×2=20)

1. a) What are manipulators ? Give example.
- b) Give the syntax of switch statement.
- c) Differentiate break and continue statements in C++.
- d) How do you define member function outside the class ? Give example.
- e) List the operators that can not be overloaded by friend function.
- f) What are constant member functions ? How they are declared ?
- g) Give the general format of new and delete operators.
- h) What is meant by casting operator ? Write the general form of overloaded casting operator.
- i) Give the general form of derived class declaration.
- j) What is compile time polymorphism ?
- k) What are the implications of making a function pure virtual ?

P.T.O.



1) What is the output of the following code ?

```
#include<iostream.h>
```

```
int main()
```

```
{
```

```
    for(int pp=0;pp<3;pp++)
```

```
    {
```

```
        switch(pp)
```

```
        {
```

```
            case 0:cout<<"zero";
```

```
            case 1:cout<<"one ";continue;
```

```
            case 2:cout<<"two ";break;
```

```
        }
```

```
    }
```

```
    return 0;
```

```
}
```

PART – B

UNIT – I

2. a) What advantages of OOP ? Explain.
- b) Explain three classification of data types in C++ with examples.
- c) Explain various forms of if statements in C++ with syntax. **(5+5+5)**
3. a) What is reference variable ? How is it used in program ? Explain.
- b) What is symbolic constant ? Explain the various methods of defining symbolic constant in C++.
- c) Explain any two loop control structures with syntax and example. **(4+6+5)**

UNIT – II

4. a) Explain different ways of defining member functions of a class with an example.
- b) Explain the concept of passing the arguments by value by reference with example.
- c) Write a program to find the sum of two, three and four numbers using concept of function overloading. **(5+6+4)**
5. a) Explain the features of static data members and static member functions. Also illustrate use of static data members with example.
- b) With proper example, explain how to pass and return an object to/from a function.
- c) What do you mean by default argument and constant arguments to the function ? Explain with example. **(5+5+5)**



UNIT – III

6. a) What is copy constructor ? Explain how copy constructor can be used to copy the objects with example.
- b) Create a class 'Bank' which include data members – Acno, Name, Balance and parameterized constructor to initialize the data members and other methods like deposit, withdrawal and display the detail of the customer. While withdrawing minimum balance should be ≥ 1000 .
- c) How do you overload a unary operator using friend function ? Explain with example. (5+6+4)
7. a) How to define conversion function for 'class to basic type' conversion ? Explain with example.
- b) Explain how multiple constructors are defined in a class with example.
- c) Construct a class INTEGER Containing a integer data member and write a program to overload three arithmetic operators (+, -, *) so that they operate on the object of INTEGER. (5+4+6)

UNIT – IV

8. a) Explain public mode of inheritance with example.
- b) Explain how runtime polymorphism is achieved through virtual function with example.
- c) What do you mean by nesting of classes ? Explain with example. (5+5+5)
9. a) Explain hierarchical inheritance with example.
- b) What is 'this' pointer ? Explain its importance in C++ with example.
- c) Write a C++ program using concept of virtual functions to create a class called Person having the name, age, sex, occupation as its data members and getdata() and putdata() as its member functions. Create two new classes called student and employee with person as a base class. Add the suitable members to these two classes. In the base class, declare the member functions as virtual. Display the details of student and employee separately. (5+4+6)