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S.Y.B.B.A. (Computer Application)
CA - 402 : OBJECT ORIENTED CONCEPTS THROUGH CPP
(2019 Pattern) (Semester - IV)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:
1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q1) Attempt any Eight of the following : (Out of 10)   [8×2=16]

a) Explain tellg() and tellp() with syntax.

b) Explain any two manipulators.

c) What is destructor?

d) What are the visibility lables used in C++.

e) What is extraction and insertion operator?

f) What is abstraction and Encapsulation?

g) What is default argument in function?

h) Write any two uses of scope resolution operator.

i) What is static Polymorphism.

j) Explain structure of C++ program.

P.T.O.

Q2) Attempt any four of the following: (Out of 5)   [4×4=16]

   a)   Explain operator overloading in C++ with an example.

   b)   Explain memory allocation for objects with non-static data member and static data member.

   c)   What is pure virtual function and explain with the help of example program.

   d)   Explain Dynamic constructor with suitable example.

   e)   What is inheritance and explain the hierarchical inheritance.

Q3) Attempt any four of the following : (Out of 5)   [4×4=16]

   a)   Write a C++ program to create a class which contains two data members. Write member functions to accept, display and swap two entered numbers using call by reference.

   b)   Write a C++ program to create a class customer which contains data members as C_id, C_name, C_Salary. Write member functions to accept and display customer information, also display information of customer having maximum salary.

   c)   Write a C++ program to calculate factorial of integer number by using inline function.

   d)   Design C++ class which contains function count(). Write a program to count number of time count() is called. (Use static data member.)

   e)   Write a C++ program to copy the contents of a text file into another text file.

Q4) Attempt any four of the following. (Out of 5)   [4×4=16]

   a)   Explain object as function arguments? Explain with the help of an example program.

   b)   Explain different characteristics of friend function.

   c)   What is class Template? Explain syntax of class template with suitable example.

   d)   Write a program to overload binary + operator to add two strings.

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e) Trace the output of the following program and explain it. Assume there is no syntax error.

```
# include < iostream.h >
Class point {
Private :
    int x ;
    int y ;
Public :
    Point (int i, int j); // constructor
};
Point : : Point (int i = 0; int j = 0) {
x = i;
y = j;
cout << "constructor called" ;
}
int main ()
{
    point + 1, * t2;
    return 0;
}
```

Q5) Write a short note on any two of the following : (Out of three)   **[2×3=6]**

a)   This pointer

b)   function overriding

c)   Exception handling.

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