

Total No. of Questions : 5]

SEAT No. :

PD-1443

[Total No. of Pages : 4

[6441]-602

S.Y. B.B.A (CA)

**CA 402 : OBJECT ORIENTED CONCEPTS THROUGH
CPP**

(2019 Pattern) (Semester - IV) (CBCS)

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 TEN).

[8 × 2 = 16]

- a) What is reference variable?
- b) What is the use of extraction operator.
- c) Explain any two manipulators.
- d) Write the use of scope resolution operator.
- e) What is keyword in C++?
- f) Define memory management operator.
- g) What is access specifier?
- h) Define Pure virtual function.
- i) Explain width () and fill ().
- j) What is destructor?

Q2) Attempt any FOUR of the following (Out of FIVE).

[4 × 4 = 16]

- a) Explain memory allocation for objects with non-static data member and static data member.
- b) What is inheritance? Explain any 3 types of inheritance.

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- c) What is constructor? Explain parameterised constructor with the help of example.
- d) What is template? Explain with its types.
- e) Explain polymorphism with its types.

Q3) Attempt any FOUR of the following (Out of FIVE). [4 × 4 = 16]

- a) What is function overloading? Explain with example.
- b) Explain features of C++.
- c) Write a program to accept worker information worker_name, no_of_hours_worked, pay_rate and salary. Write necessary function to calculate calculate and display the salary of workers. (Use default value for pay_rate)
- d) Create a C++ Class Number with integer data member. Write necessary member function to overload unary '--' (decrement) operator.
- e) Write a C++ program to create a class Book which contains data members as B-Id, B-Name, B-Author, B-publication. Write member functions to accept and display Book information also display count of books. (Use static data member to maintain count of books)

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

- a) Explain various stream classes used to perform console input/output (I/o) operations.
- b) Explain friend function with the help of example.
- c) Write a C++ program to find area of circle and triangle (Use function overloading)
- d) Write a program to check maximum and minimum of two integer numbers (use conditional operators).

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

```
#include<iostream.h>
class Basel
{
public :
    Basel ()
    {
        cout << "Basel's constructor called" << endl;
    }
};
class Base2
{
public:
    Base2()
    {
        cout << "Base 2's constructor called" << endl;
    }
};
class Derived: public Basel, public Base2
{
public:
    Derived ()
    {
        cout << "Derived's constructor called" << endl;
    }
};
void main ()
{
    Derived d;
}
```

Q5) Write a short note on Any TWO of the following (Out of THREE)
[2 × 3 = 6]

- a) 'This' pointer
- b) Exception handling
- c) Inline function.

