

Total No. of printed pages = 6

END SEMESTER EXAMINATION, NOVEMBER- 2018

Semester – 5th

Subject Code : Co-506

**OBJECT ORIENTED METHODOLOGY,**

Full Marks – 70

Time – Three hours

The figures in the margin indicate full marks for the questions.

**Instructions :**

1. All questions of PART-A are compulsory.
2. Answer any *five* questions from PART-B.

**PART – A**

Marks – 25

1. Fill in the blanks :

1×10=10

(a) \_\_\_\_\_ statement violates the rules of structured programming.

(b) Function that calls itself is known as a \_\_\_\_\_ function.

(c) The elements of an array are stored in \_\_\_\_\_ memory location.

[Turn over

- (d) << is called \_\_\_\_\_.
- (e) Allocating memory at run time is known as \_\_\_\_\_.
- (f) The effect of endl is same as \_\_\_\_\_.
- (g) An object is an \_\_\_\_\_ of a class.
- (h) Name of the destructor is preceded by the \_\_\_\_\_ symbol.
- (i) Operator overloading is also a form of \_\_\_\_\_ polymorphism.
- (j) Pure virtual function has \_\_\_\_\_.

2. Write true or false :  $1 \times 10 = 10$

- (a) A C++ function can return only one value.
- (b) By default members of a structure are private.
- (c) We can have a class with all private members.
- (d) A constructor can be called explicitly.
- (e) The reusability is advantage of inheritance.
- (f) When operators are overloaded, we cannot have more than one operator in an expression.

99/Co-506/OOM (2)

- (g) Private members are never inherited.
- (h) A pointer is a variable.
- (i) Class and object are main features for structured programming.
- (j) This pointer is not a part of the object itself.

3. Choose the correct answer :  $1 \times 5 = 5$

- (a) With which function can a friend function be declared ?
  - (i) Public
  - (ii) Private
  - (iii) Protected
  - (iv) Any of these
- (b) A constructor can be
  - (i) virtual
  - (ii) static
  - (iii) volatile
  - (iv) None of these
- (c) Out of following which operator cannot overload ?
  - (i) + =
  - (ii) = =
  - (iii) \*
  - (iv) ::

99/Co-506/OOM (3) [Turn over



(d) In multi level inheritance, the middle class acts as

(i) Base class

(ii) Derived class

(iii) Both of these

(iv) None of these

(e) If a class A uses features of class B, then A is called the \_\_\_\_\_ class and B is called the \_\_\_\_\_ class.

(i) base, derived

(ii) derived, base

(iii) base, base

(iv) derived, derived

#### PART - B

Marks - 45

4. (a) What is object oriented programming? How is it different from procedure-oriented programming? 5

(b) What is the difference between structure and class? 2

(c) What do you mean by pure virtual function? 2

99/Co-506/OOM

(4)

310(B)

5. (a) What are the basic concepts of OOP? 4

(b) Differentiate between the while loops and do-while loops with respect to the number of times the loop executed. 2

(c) Explain some key features of a constructor. 3

6. (a) Write a program in C++ to find the greatest number between two numbers. (use class and object concept) 5

(b) Make a class triangle. Enter its three sides and calculate its area. 4

7. (a) What is a parameterized constructor? 2

(b) Why a constructor is called a special member function? 2

(c) Write a program to demonstrate the use of a copy constructor. 5

8. (a) Differentiate between formal parameters and actual parameters. 2

(b) What is function overloading? Give an example. 3

(c) What are characteristics of friend function? 4

99/Co-506/OOM

(5)

[Turn over

9. (a) Write a C++ program to add two times. (use  
object as function argument) 5
- (b) What is this pointer ? 2
- (c) Explain Run time Polymorphism. 2
10. (a) What are the properties of static data member  
and static member functions in C++ ? 4
- (b) What do you mean by dynamic initialization  
of variable ? Give an example. 3
- (c) Give the syntax of overloaded operator  
function defined as a class member function. 2
11. (a) Write a C++ program to overload + operator. 5
- (b) Explain private, protected and public visibility  
specifier in brief. 4
12. (a) What happens when a protected member is  
inherited in private mode and public mode ? 4
- (b) Explain the different types of inheritance. 5