End Sem(II)-MCA (9)

2013

Time : 3 hours

Full Marks: 70

Group – A

Answer all the questions of this group

1. Select the most appropriate answer: 1 x 10 = 10
   a. Which of these statements is incorrect?
      i. Comments increase the readability of the program.
      ii. Comments are not executable
      iii. C++ supports two comment styles single line comment and multiline comment
      iv. C++ has inherited single line comment (//) from C language.
   b. Which of these functions prototypes is valid?
      i. func(int a, int y);
      ii. int func(int x, y);
      iii. int func(int x, int y);
      iv. func(int, int);
   c. Which of these operators can be overloaded?
      i. Scope resolution
      ii. Size of
      iii. Array subscripting
      iv. Conditional operator
   d. Which of these operators can only be overloaded as friend as function?
      i. ++
      ii. −
      iii. >>
      iv. +
   e. When an array is passed as an argument to a function:
      i. A copy of the first element is passed

  ii. A copy of the array is passed

  iii. A reference of the array is passed

  iv. An array cannot be passed as function arguments

f. Which of these is the default access specifier for the class members?

  i. Private

  ii. Public

  iii. Protected

  iv. None of these

g. Which of these entities are connected by the dot operator?

  i. A class and a class object

  ii. A class and its member

  iii. A class object and a member

  iv. All of these

h. The operator function defined as a friend function of the class is known as:

  i. Friend function

  ii. Friend operator function

  iii. Member function

  iv. All of these

i. If m and n are pointers of type int and x is an int type variable, which of these expressions is valid:

  i. m*n

  ii. m + x

  iii. m + n

  iv. x − n

j. With which of these can a pointer be initialized?

  i. NULL

  ii. Address of another variable

  iii. Both (i) and (ii)

  iv. None of these

2. State **True** and **False** for the following: 1 x 10 = 10

a. The arithmetic operators have a higher precedence than the relational operators.

b. A char type variable can hold the value 302

c. The data members of a class can be initialized within the class definition.

d. Member functions defined inside a class are inline by default

e. In a class, the data members are always private. Whereas, member functions are always public.
f. An object declared as const can invoke only const member functions.
g. A constructor is a friend function of a class.
h. There can be only one default constructor in a class.
i. A class can have any number of destructors.
j. The friend functions of a base class are inherited by the derived class.

Group – B

Answer any five questions of this Group:

3. How did a class related to objects? What is a member function and how can it be defined outside the class? How can a member function of the class be made an inline function?   2+4+4=10
4. What is Copy Constructor? What happen if the copy constructor is not defined in a class? Explain the concept of copy constructor with an example (Write a program).   3+2+5=10
5. Write a program in C++ to read and display the details of the employees under a particular manager. The Employee class contains the members Empno and Name. The Manager class contains the details of two employees working under the manager and rank of the manager. Define suitable member functions for both the classes.   10
6. What is a Virtual Function? Where and why is it required? What is the significance of the pointer?   10
7. What do you mean by Operator Overloading? Explain the concept of overloading unary and binary operators as member functions with the help of suitable example.   10
8. What is Copy Constructor? What happen if the copy constructor is not defined in a class? What is the need of destructor in a class? Explain with an example.   10
9. Explain the various access specifiers? Explain how the access specifier of the base class members can be restored?   10