Time : $2\frac{1}{2}$ Hours]                                    [Total Marks : **70**

1   Attempt the following multiple choice questions:            **15**

(A)   _____ is a special member function that will invoked aiways first while the object is created.

(A)   Constructor          (B)   Destructor

(C)   Virtual function     (D)   None of these

(2)   Which of the following is true ?

(A)   Destructor can be overloaded

(B)   Destructor can have argument

(C)   Destructor can be declare in private access specifier

(D)   None of these

(3)   Which of the following indicates a function with default argument ?

(A)   void test(int a, int b=20)

(B)   void test(int a,...)

(C)   (A) and (B) both

(D)   None of these

(4)   Which of the following indicates a function with variable number arguments

(A)   void test(int a, int b=20)

(B)   void test(int a,...)

(C)   (A) and (B) both

(D)   None of these

(5) Which of the following is valid type casting ?

(A) float(expression)     (B) (float)Expression

(C) (A) and (B) both     (D) None of these

(6) Which of the following is a string constant ?

(A) 'a'                   (B) "a"

(C) (A) and (B) both     (D) None of these

(7) Which of the following is true hierarchy to evaluate an expression

(A) &&, &, +=            (B) +=, &, &&

(C) &, &&, +=            (D) All of the above

(8) Which of the following is not an operator

(A) sizeof()             (B) new

(C) delete               (D) None of these

(9) Which of the following is true ?

(A) Constructor can return a value

(B) Destructor take input parameter

(C) Destructor invokes automatically

(D) All the above

(10) Which of the following is true ?

(A) Syntax of the overloaded operator can be changed

(B) Semantic of the overloaded operator can be changed

(C) Operator member function must be define in public section

(D) None of these

(11) Which of the following operator can not be overloaded ?

(A) new                  (B) delete

(C) ?:                   (D) All of the above

(12) A base class can also be known as

    (A) Parent          (B) Ancestor

    (C) Super           (D) All of the above

(13) Which of the following is true

    (A) Only base class have constructor

    (B) Only derived class have constructor

    (C) Both the derived and base class can have constructor

    (D) All of the above

(14) Constructors are invoked from base class to the derived class, The statement is

    (A) True            (B) False

    (C) Can not say     (D) None of these

(15) Which of the following is not object

    (A) cin             (B) cout

    (C) endl           (D) None of these


**2**     Attempt **any five** of the following:                  **15**

    (1) What is dereferencing object?

    (2) Briefly explain the order of constructor and destructor of an object.

    (3) Differentiate: Constructor Vs Destructor

    (4) What is template function? Explain in brief.

    (5) Explain the need of virtual function.

    (6) Define: class, object, operator overloading

3    Attempt **any three** of the following:                         15

  (1)   Explain how memory allocation failure can be handled
        in C++?,

  (2)   What is copy constructor? Explain it with suitable
        example.

  (3)   What is abstract class? Explain the role of abstract class
        while building the class hierarchy.

  (4)   What is access specifier? List and explain the different
        access specifier supported by C++.


4    Attempt **any two** of the following:                           15

  (1)   What is inheritance? List the different inheritance
        supported by the C++. Explain each of them with
        suitable example.

  (2)   Write a C++ program that will perform the completer
        conversion between the two user define objects of meter
        and cm class. (Do not use the friend function)

  (3)   Write a C++ program that will take three integers i.e.
        date, month and year respectively. Your program will
        print the next valid date.


5    Attempt **any one** of the following:                           10

  (1)   Write a C++ program that will create, insert and print
        a linked linear list. Take "list" as the class. Take the
        data member and member function as per your desire
        and requirements.

  (B)   Write a C++ program that will read two matrices of size
        mxn. And perform the addition of two matrices and store
        the result in the third matrix. Overload the "+" operator
        to the addition of two matrices. Take the matrix as a
        pointers to pointer.