MC-116

March-2019

BCA, Sem.-III

CC-203 : Object Oriented Concepts and Programming
(New Course) (Repeater)

Time : 2:30 Hours]   **[Max. Marks : 70**

1. (A) Write the following :

    (i) Differentiate POP and OOP approaches used in programming world.   **7**

    (ii) Explain the use of default arguments in function declaration and its rules.   **7**

<div align="center">OR</div>

    (i) Discuss in detail use of scope resolution operator in C++.   **7**

    (ii) What is function overloading ? How it is implemented ?   **7**

  (B) Do as Directed : (Any **Four** out of **Six**)   **4**

    (i) Boolean data type includes _____.

       (A) true   (B) false

       (C) both (A) and (B)   (D) None of the above

    (ii) Object is the _____ of class.

       (A) instance   (B) format

       (C) design   (D) overview

    (iii) Structure in C++ has _____.

       (A) members only   (B) functions only

       (C) member and functions both (D) No member and no function

    (iv) class member function can be defined outside class using _____ symbol

       (A) :   (B) ::

       (C) #   (D) $\rightarrow$

    (v) _____ is the multiline comment.

       (A) /*.....*/   (B) Inline

       (C) //   (D) **

    (vi) It is _____ to declare private section before public section in a class design.

       (A) not compulsory   (B) compulsory

       (C) may be compulsory   (D) None of the above

2. (A) Write the following :
   (i) Explain with code: how to make non-member function as friend of class. **7**
   (ii) Explain the use of new and delete operator in C++. **7**

   OR

   (i) Explain array of objects with suitable example.
   (ii) List types of constructor and explain copy constructor with an example.

   (B) Do as Directed : (Any **Four** out of **Six**) **4**
   (i) Destructor _____ declared in public section.
      (A) must be   (B) maybe
      (C) should be   (D) None of the above
   (ii) A class having another class is called _____.
      (A) Embedding class   (B) Embedded class
      (C) nested class   (D) special class
   (iii) constructor has _____ return type.
      (A) no   (B) any type as
      (C) multiple   (D) None of the above
   (iv) Same variable names can be declared in different _____.
      (A) classes   (B) functions
      (C) namespaces   (D) All of the above
   (v) class objects can be used as _____ with functions.
      (A) argument only   (B) return value only
      (C) both (A) and (B)   (D) None of the above
   (vi) Allocation of memory is done using _____ keyword.
      (A) new   (B) allocate
      (C) assign   (D) None of the above

3. (A) Write the following :
   (i) Explain types of inheritance between classes. **7**
   (ii) What is the use of pure virtual function ? How it is defined ? Explain. **7**

   OR

   (i) Explain function overriding with suitable example.
   (ii) What is virtual function ? What are the rules of it ? Explain

   (B) Do as Directed : (Any **Three** out of **Five**) **3**
   (i) Parent class inherited by child class which is parent to another class is __ inheritance.
      (A) simple   (B) multiple
      (C) multilevel   (D) hierarchical
   (ii) Early binding is also called as _____.
      (A) static binding   (B) dynamic binding
      (C) default binding (D) late binding

(iii) Function declared with 0 assignment can said to be _____.

    (A)   Nested class   (B)   Parent class

    (C)   Abstract class   (D)   Virtual class

(iv) Base class pointer _____ refer to Derived class object.

    (A)   can   (B)   cannot

    (C)   may   (D)   must not

(v) class members are available to anywhere through _____ access specifier.

    (A)   public   (B)   private

    (C)   protected   (D)   None of the above

4.   (A) Write the following :

    (i)   Explain operator overloading types and give an example of any one type.   **7**

    (ii)   List all type conversion methods and explain any one in detail.   **7**

<div align="center">

OR

</div>

    (i)   What is the use of template in C++ ? Explain with an example.   **7**

    (ii)   How text mode output to file is performed using insertion (<<) operator ?   **7**

  (B) Do as Directed : (Any **Three** out of **Five**)   **3**

    (i)   _____ operator cannot be overloaded.

       (A)   +   (B)   =

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

    (ii)   ifstream and ofstream classes are available under _____ class.

       (A)   iostream   (B)   stream

       (C)   fstream   (D)   ifstream

    (iii) template declared inside another template is called _____.

       (A)   nested   (B)   inner

       (C)   Both (A) and (B)   (D)   None of the above

    (iv) The function to read a line from file is _____.

       (A)   get()   (B)   getline()

       (C)   read()   (D)   readline()

    (v)   Finding sum through different functions with different data types can be achieved by _____.

       (A)   function template   (B)   class template

       (C)   nested function template   (D)   nested class template

<div align="center">

_____

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March-2019

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CC-203 : Object Oriented Concepts and Programming
(Old Course)

Time : 2:30 Hours]   **[Max. Marks : 70**

1.   (A)   Write the following :
    (i)   What is OOP ? Explain its features in detail.   **7**
    (ii)   Explain function overloading in C++ with proper example.   **7**
               OR
    (i)   Discuss in detail Procedure Oriented approach of programming and its limitations.
    (ii)   What is the use of Arrow operator with 'this' pointer in class & its objects.

  (B)   Do as Directed : (Any **Four** out of **Six**)   **4**
    (i)   _____ is the instance of class.
      (A)   Object   (B)   Design
      (C)   Abstract   (D)   None of the above
    (ii)   _____ function is pasted at the place of calling it.
      (A)   Static   (B)   Inline
      (C)   Member   (D)   Non-Member
    (iii)   Structure in C++ has _____
      (A)   members only   (B)   functions only
      (C)   member and functions both   (D)   No member and no function
    (iv)   class member function can be defined outside class using _____ symbol
      (A)   :   (B)   ::
      (C)   #   (D)   →
    (v)   _____ data type has two values: true or false.
      (A)   bool   (B)   boolean
      (C)   Boolean   (D)   Bool
    (vi)   It is _____ to declare private section before public section in a class design.
      (A)   not compulsory   (B)   compulsory
      (C)   may be compulsory   (D)   None of the above

2. (A) Write the following :

    (i) How class objects can be grouped under array ? Explain with example.   **7**

    (ii) Explain Dynamic memory allocation and deallocation in detail.   **7**

<center>**OR**</center>

    (i) In how many ways, friendship can be granted for a class ? – Explain.

    (ii) What are the various ways constructor can be declared and implement ?

(B) Do as Directed : (Any **Four** out of **Six**)   **4**

    (i) A class embedded within another class is called _____.

        (A) Embed class   (B) Nested class

        (C) multiple class   (D) special class

    (ii) Destructor should be declared in _____ section.

        (A) private   (B) public

        (C) protected   (D) default

    (iii) constructor has _____ name as the class name.

        (A) another   (B) same

        (C) 'this'   (D) reserved

    (iv) Same class names can be declared in different _____.

        (A) locations   (B) regions

        (C) namespaces   (D) headers

    (v) Class objects can be used with functions as _____.

        (A) argument only   (B) return value only

        (C) both (A) and (B)   (D) None of the above

    (vi) Deallocation of memory is done using _____ keyword

        (A) Deallocate   (B) No_allocate

        (C) remove   (D) None of the above

3. (A) Write the following :

    (i) What is inheritance of classes ? Which are the types of it in C++ ?   **7**

    (ii) What is virtual function ? What are the rules of it ?   **7**

<center>**OR**</center>

    (i) How function overriding is different than function overloading ? Explain.

    (ii) What is the use of pure virtual function ? How it is defined ? Explain.

(B) Do as Directed : (Any **Three** out of **Five**)   **3**

    (i) One class inherited by many classes is the example of _____ inheritance.

      (A) simple   (B) basic

      (C) nested   (D) hierarchical

    (ii) class shape having { virtual void show() = 0; } declaration can said to be _____.

      (A) Nested class   (B) Parent class

      (C) Abstract class   (D) Virtual class

    (iii) Early binding is also called as _____.

      (A) Static binding   (B) Dynamic binding

      (C) default binding   (D) late binding

    (iv) Base class pointer _____ refer to Derived class object.

      (A) can   (B) cannot

      (C) may   (D) must not

    (v) class members are available only to its succeeding class through _____ access specifier.

      (A) public   (B) private

      (C) protected   (D) None of the above

4. (A) Write the following :

    (i) How operator overloading shows polymorphism ? Explain with an example. **7**

    (ii) How text mode input from file is performed using extraction (>>) operator ? **7**

<div align="center">OR</div>

    (i) What is the use of template in C++ ? Explain with an example.

    (ii) List all type conversion methods and explain any one in detail.

(B) Do as Directed : (Any **Three** out of **Five**)   **3**

    (i) istream and ostream classes are available under _____ class.

      (A) iostream   (B) stream

      (C) fstream   (D) ifstream

    (ii) template declared inside another template is called _____.

      (A) nested   (B) inner

      (C) Both (A) and (B)   (D) None of the above

(iii) _____ operator cannot be overloaded.

      (A)   new   (B)   +=

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

(iv) The function of insertion (<<) operator is same as _____ function.

      (A)   put   (B)   putline

      (C)   writefile   (D)   None of the above

(v) Same function logic with different data type can be implemented with _____.

      (A)   function template   (B)   class template

      (C)   nested function template   (D)   nested class template

_____