

N26-109

December-2014

B.C.A., (Sem.-III)

CC-203 : Object Oriented Concepts and Programming

Time : 3 Hours]

[Max. Marks : 70

- Instructions :**
- (1) Draw diagrams wherever necessary.
 - (2) State new question on new page.

1. (A) Answer the following :

- (1) Explain : procedure oriented programming. 4
- (2) Write short note on function overloading. 3

OR

- (1) Define OOP. Explain its important features.
- (2) What is the use of default arguments ?

(B) Answer the following :

- (1) Write short note on cin and cout. 4
- (2) Explain : this pointer in C++. 3

OR

- (1) Explain private and public member access specifiers.
- (2) What is the use of arrow (->) operator ?

2. (A) Answer the following :

- (1) Explain constant member functions with example. 4
- (2) Write a short note on friend class. 3

OR

- (1) Explain mutable data members with example.
- (2) Write a short note on array of class objects.

(B) Answer the following :

- (1) Explain static member functions with example. 4
- (2) What is the use of delete keyword in C++ ? 3

OR

- (1) Write a short note on constructors in C++.
- (2) Explain : set_new_handler() function.

3. (A) Answer the following :
- (1) Explain function overriding with example. 4
 - (2) What is the use of virtual base class ? Explain 3
- OR**
- (1) Explain with example: multi-level inheritance.
 - (2) Can we initialize base class member through derived class object ? If yes, How ?
- (B) Answer the following :
- (1) Why we need virtual functions ? Explain with example. 4
 - (2) Write a short note on virtual destructor. 3
- OR**
- (1) Explain pure virtual function with example.
 - (2) What is the use of virtual table and virtual pointer ?
4. (A) Answer the following :
- (1) What is operator overloading ? What are the rules of operator overloading ? 4
 - (2) Explain function template with example. 3
- OR**
- (1) Write a short note on nested class templates.
 - (2) If constructor and destructor is present in both base class and derived class, what is the order of invocation ? Explain with example.
- (B) Explain with example : overloading the insertion (<<) and extraction (>>) operators. 7
- OR**
- Explain class to class and class to basic conversion.
5. Do as directed : 14
- (1) An _____ is an instance of a class.
 - (2) In basic to class type conversion, _____ is used.
 - (3) _____ operator is used to allocate memory dynamically during run-time from free-store.
 - (4) A process in which a parent class can be inherited by more than one child class is known as _____.
 - (5) A member function call embedded within another member function is called _____.
 - (6) _____ data members are shared by all objects of a class.
 - (7) A class embedded within another class is called a _____.
 - (8) A base class pointer can point to derived class object. (True/False)

- (9) Function templates can have more than one template parameters. (True/False)
 - (10) Default arguments cannot be assigned to more than one argument. (True/False)
 - (11) Scope resolution operator (::) can only be overloaded using friend function. (True/False)
 - (12) A destructor should be declared in public section. (True/False)
 - (13) The variables can be declared and defined anywhere in a C++ program. (True/False)
 - (14) Function overloading is an example of Run-time polymorphism. (True/False)
-