

Seat No. : _____

DA-108

December-2017

B.C.A., Sem.-III

CC-203 : Object Oriented Concept and Programming

Time : 3 Hours]

[Max. Marks : 70

- Instructions :** (i) Figures to the right indicate marks.
(ii) **All** the questions are compulsory.

1. (A) (1) Differentiate between Object oriented programming and Procedure oriented programming. 4
(2) What is function signature in function overloading ? List all the rules for function overloading. 3
OR
(1) Differentiate between cin and cout. 4
(2) Explain Scope resolution operator with suitable example. 3
(B) (1) List all access specifiers and explain characteristics of Access specifier. 4
(2) Explain "this" pointer with example. 3
OR
(1) How to create class, object and pointer to object ? Explain with example. 4
(2) Explain Default arguments in a function with example. 3
2. (A) (1) What is constructor ? List all characteristics of a constructor. 4
(2) Write short note on Namespace. 3
OR
(1) Explain parameterized constructor with suitable example. 4
(2) Explain new and delete operators with example. 3
(B) (1) Write short note on Nested classes. 4
(2) Write short note on Static member data. 3
OR
(1) How to create Array of objects ? Explain with example. 4
(2) How to make member function inline ? Explain with example. 3
3. (A) (1) What is Inheritance ? Explain Multilevel inheritance with example. 4
(2) Write short note on Function overriding. 3
OR
(1) Explain Hybrid inheritance with example. 4
(2) How to initialize base class member through derived class object ? Explain. 3

- (B) (1) What is Virtual function ? List rules for virtual function. 4
 (2) Write short note on Late binding. 3
- OR**
- (1) What is Polymorphism ? Explain all types of polymorphism in brief. 4
 (2) What is pure virtual function ? List features of pure virtual function. 3
4. (A) Demonstrate the invocation of Constructors and destructors in multiple inheritance with suitable example. 7
- OR**
- Demonstrate overloading of any binary operator with suitable example.
- (B) (1) Explain Function template with suitable example. 4
 (2) List all the rules for operator overloading. 3
- OR**
- (1) How to do type conversion from class type to basic type ? Explain with example. 4
 (2) Explain with example - Class template with multiple template types as parameters. 3
5. Do as directed : 14
- (1) cin and cout are the objects of _____ and _____ classes respectively.
 (2) Friend function does not require :: operator while defining outside the class. (true/false)
- (3) _____ member data are shared by all objects of a class.
 (4) To allocate memory dynamically, _____ operator is used.
 (5) Which is a default access specifier ?
 (a) private (b) public (c) protected (d) None
- (6) Type conversion from class to class can be achieved through
 (a) constructor (b) casting operator
 (c) Both (a) and (b) (d) None of the above
- (7) Function overloading is _____ polymorphism.
 (8) A variable can be declared anywhere in a C++ program. (True/False)
 (9) A process in which more than one parent class are inherited in one child class is known as _____.
 (10) A class having pure virtual function is treated as Abstract class. (True/False)
 (11) An object of _____ class is larger than object of _____ class in Inheritance.
 (12) Function templates can have more than one template type as parameters. (True/False)
 (13) To overload Unary operator, at least 2 arguments are required as parameters in operator function. (True/False)
 (14) A function can be a friend function of more than one class. (True/False)
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