

**MI2-105**

**December-2016**

**B.C.A., Sem.-III**

**CC-203 : Object Oriented Concepts and Programming**

**Time : 3 Hours]**

**[Max. Marks : 70**

1. (a) (1) Give the difference between C and C++. **4**  
(2) Define the terms : Encapsulation, Data Abstraction and Polymorphism. **3**

**OR**

- (1) Explain console input and output operations in C++.  
(2) Explain the concept of 'arrow operator' in C++ with example.

- (b) (1) What is 'inline' function ? Explain with example. **4**  
(2) What is class ? Explain in brief. **3**

**OR**

- (1) Explain function overloading in C++ with example.  
(2) Explain 'bool' data type in C++.

2. (a) (1) What are copy constructors ? Why do we need it ? Explain in brief. **4**  
(2) What are static member functions ? Explain with example. **3**

**OR**

- (1) Explain array of object in detail.  
(2) What is dynamic allocation of memory in C++ ? Explain with example.

- (b) (1) What are constant member functions ? Give the example. **4**  
(2) Give the difference between constructor and destructor. **3**

**OR**

- (1) What is Friend Function ? Explain Friend member function with example.  
(2) What is namespace ? Explain nested namespace with example.

3. (a) (1) Explain inheritance using different access specifiers. **4**  
 (2) What is an abstract class ? Explain in brief. **3**

**OR**

- (1) Discuss virtual base class with famous Diamond problem.  
 (2) What is pure virtual function ? Explain the features of it.

- (b) (1) Define the terms : VTBL and VPTR. **4**  
 (2) Explain Hierarchical inheritance with example. **3**

**OR**

- (1) Give the difference between compile-time polymorphism and run-time polymorphism.  
 (2) Discuss virtual destructor with example.

4. (a) (1) What do you mean by 'overloading of operators' ? What are the operators that can be overloaded ? **4**  
 (2) How do we convert a data of basic type to class type ? Explain with example. **3**

**OR**

- (1) What is function template ? Give the example of function template with multiple parameters.  
 (2) Explain typeid operator in brief.

- (b) (1) Explain dynamic\_cast and static\_cast operator in brief. **4**  
 (2) What is the role of operator function in type conversion ? **3**

**OR**

- (1) What is class template ? Explain nested class template with example.  
 (2) What is the necessity to overload operators using friend function ? Explain with example.

## 5. Do as Directed :

14

- (1) An object is an \_\_\_\_\_ of class.
- (2) The word which has predefined meaning and cannot be used as variable name is known as \_\_\_\_\_.
  - (a) Constants
  - (b) Identifiers
  - (c) Keywords
  - (d) None of these
- (3) The constructor which does not accept any argument is called \_\_\_\_\_ constructor.
- (4) Early binding is also called as \_\_\_\_\_ binding.
- (5) Reusability of the code can be achieved in C++ through \_\_\_\_\_.
- (6) Function template is used to reduce the code size and ease the maintenance of code. (True/False)
- (7) The \_\_\_\_\_ keyword is used to declare the class constructor to be 'explicit constructor'. GujaratStudy.com
- (8) Operator overloading is a runtime polymorphism. (True/False)
- (9) By default the members of structure are public and the members of class are private. (True/False)
- (10) Destructors are used to \_\_\_\_\_ the object.
  - (a) Initialize
  - (b) Increment
  - (c) Destroy
  - (d) None of these
- (11) An entire class can be made a friend of another class. (True/False)
- (12) The \_\_\_\_\_ operator is used to destroy the variable space which has been created dynamically.
  - (a) new
  - (b) delete
  - (c) arrow
  - (d) none of these

(13) A pointer of the base class can hold address of \_\_\_\_\_.

- (a) only base class object
- (b) only derived class object
- (c) base class object as well as derived class objects
- (d) None of these

(14) When one class inherits from the other class, then the original class is called \_\_\_\_\_.

- (a) Base class
- (b) Derived class
- (c) Sub class
- (d) None of these

\_\_\_\_\_

GujaratStudy.com

Whatsapp @ 9300930012

Send your old paper & get 10/-

अपने पुराने पेपर्स भेजे और 10 रुपये पायें,

Paytm or Google Pay से