REV-01
MCA/46/51

2023/12

SET A

MASTER OF COMPUTER APPLICATION
FIRST SEMESTER
OBJECT ORIENTED PROGRAMMING WITH C++
MCA-103

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 1hr. 30 mins. **Full Marks: 35**

Objective

Time: 15 mins. **Marks: 10**

Choose the correct answer from the following: ***1×10=10***

1. Which concept allows you to reuse the written code?
   a. Encapsulation
   b. Abstraction
   c. Inheritance
   d. Polymorphism

2. How many object can be created of a Class in C++?
   a. 1
   b. 5
   c. Unlimited
   d. 256

3. Which of the following is not a type of Constructor?
   a. Friend constructor
   b. Copy constructor
   c. Default constructor
   d. Parameterized constructor

4. Why references are different from pointers?
   a. A reference cannot be made null
   b. A reference cannot be changed once initialized
   c. No extra operator is needed for dereferencing of a reference
   d. All of the mentioned

5. What is the syntax of overloading operator + for class A?
   a. A operator+(argument_list){}
   b. A operator[+](argument_list){}
   c. int +(argument_list){}
   d. int [+](argument_list){}

6. Explanation: Friend function is not a constructor whereas others are a type of constructor used for object initialization.
   Which of the following is correct?
   a. Base class pointer object cannot point to a derived class object
   b. Derived class pointer object cannot point to a base class object
   c. A derived class cannot have pointer objects
   d. A base class cannot have pointer objects

7. Which is used to create a pure virtual function?
   a. $
   b. =0
   c. &
   d. !

8. Pick out the correct statement.
   a. Pure virtual functions and virtual functions are the same
   b. Both Pure virtual function and virtual function have an implementation in the base class
   c. Pure virtual function has no implementation in the base class whereas virtual function may have an implementation in the base class
   d. The base class has no pure virtual function

9. Which interface determines how your class will be used by another program?
   a. Public
   b. Protected
   c. Private
   d. Void

10. Pick out the correct statement about multiple inheritances.
   a. Deriving a class from one direct base class
   b. Deriving a class from more than one direct base class
   c. Deriving a class from more than one direct derived class
   d. Deriving a class from more than one direct derived base class

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Descriptive

Time : 1 hr. 15 mins. **Marks : 25**

[Answer question no.1 & any two (2) from the rest]

1. Write about the five different features of object oriented programming. 5
2. a) Define constructor & destructor in C++. List out characteristics of constructor & destructor. 2+4+4=10
   b) Explain inline function with example.
3. Explain types of inheritance with example. Write a program to explain friend function in C++. 5+5=10
4. Explain the different uses of operator overloading. Write a programme to find difference between two times. (Time format is HH:MM:SS) 2+8=10
5. Write short notes on *any four*: 2×2.5=10
   a) Virtual Base Class
   b) Encapsulation & Data Hidden
   c) Polymorphism
   d) New & delete operator
   e) Pure virtual Function

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