Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 02

Total No. of Questions : 09

M.Sc.(IT) (2015 Onwards)   (Sem.–1)
OBJECT ORIENTED PROGRAMMING IN C++
Subject Code : MSIT-102
Paper ID : [72518]

Time : 3 Hrs.   Max. Marks : 60

INSTRUCTION TO CANDIDATES :
 1. **SECTIONS-A, B, C & D contains TWO questions each carrying TEN marks each and students has to attempt any ONE question from each SECTION.**
 2. **SECTION-E is COMPULSORY consisting of TEN questions carrying TWENTY marks in all.**

SECTION-A

1. a) Explain various looping statements of C++ with suitable examples.   5

   b) What is the use of break, continue and goto statements?   5

2. a) Explain various data types of C++ with examples.   5

   b) Explain characteristics of Object Oriented Programming.   5

SECTION-B

3. a) Explain the storage class specifiers available in C++ with examples.   5

   b) What are pre-processor directives? What is their purpose? How can you use them? Explain.   5

4. a) Write a program using pointers to sort array elements in increasing order.   7

   b) What is enumeration? Discuss with example.   3

SECTION-C

5. a) What do you mean by Multiple Inheritance? Explain with the help of an example.

   b) Explain various types of constructor with examples.

6. a) What is a friend function? Explain its role with an example.

   b) What are static data members? How these are declared and used? Discuss with example.

SECTION-D

7. What is polymorphism? Explain various methods of achieving polymorphic behavior in C++.

8. a) What is an exception? How exceptions are handled in C++? Explain with the help of a suitable example.

   b) How you can open and close a file in C++?

SECTION-E

9. **Write briefly :**

   1) What is a destructor? How it is defined?

   2) How you can declare constants? Give examples.

   3) What is a pure virtual function? What is its use?

   4) How memory is allocated to objects?

   5) What do you mean by a generic class? What is its use?

   6) What is abstraction?

   7) What are default arguments? Give example.

   8) What is Data hiding? How it is achieved in C++? Give example.

   9) Differentiate between Call by value and call by reference.

   10) What is a container class? Why it is used?