397 (OOP)

[20-HKPGDEO–M2S(O)21J]

MScIT/PGDCA/MCA 2nd Semester (Old) Exam., 2020

OBJECT ORIENTED PROGRAMMING THROUGH C++

[MScIT/PGDCA/MCA (S2) 07]

Full Marks : 50

Time : 2 hours

The figures in the margin indicate full marks for the questions

1. Answer any *five* of the following questions : 2×5=10

(a) Define header files. Give one example.

(b) Mention the differences between functional programming and OOP.

(c) Write the benefits of using a friend function in a C++ program.

(d) Define copy constructor.

(e) How can data hiding and data encapsulation be achieved in C++?

(f) How is a global variable declared?

2. Answer any *two* of the following questions : 4×2=8

(a) Define operator. Discuss about different operators used in C++.

(b) Write a C++ program to demonstrate the use of static member function.

(c) What is operator overloading? Name the operators which cannot be overloaded. How is a binary operator overloaded?

3. Answer any *two* of the following questions : 6×2=12

(a) Mention the characteristics of a constructor. Write a C++ program to show all three types of constructor.

(b) Define inheritance. Discuss various types of inheritance with examples.

(c) What are inline functions? Show the use of inline function using a C++ program.

4. Answer any *two* of the following questions : 10×2=20

(a) Write a C++ program to find the sum of two matrices.

(b) Write short notes on any *two* of the following : 5×2=10

(i) Polymorphism

(ii) Virtual function

(iii) Typecasting

(c) Define a class 'triangle' with three sides as data member. Write a constructor to initialize objects of the class. Also define a member function to verify whether it is an equilateral triangle or an isosceles triangle.

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