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10CS36

Third Semester B.E. Degree Examination, Dec.2017/Jan.2018
Object Oriented Programming with C++

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions, selecting
atleast TWO questions from each part.**

PART – A

1.
 - a. Explain basic data types available in C++, briefly with examples. (05 Marks)
 - b. What is inline function? Mention its advantages and also write a program to find cube of a given number. (05 Marks)
 - c. What is function overloading? Write a C++ program to find area of circle, triangle and rectangle by overloading the function area. (05 Marks)
 - d. Explain reference variable in C++. Also write a program to swap values of two given variables using reference variables. (05 Marks)
2.
 - a. Explain how to achieve data hiding and encapsulation in C++, with suitable program. (08 Marks)
 - b. What are constructor and destructor? Can you overload constructor and destructor? Justify with suitable example. (08 Marks)
 - c. Explain static data member of a class. Also write a program to count the number of objects created. (04 Marks)
3.
 - a. What is friend function? Write a program using bridge friend function swap to exchange the values of two variables and also display the result before and after swapping. (10 Marks)
 - b. Write a C++ program to add two complex numbers by overloading the operator + using member function. (05 Marks)
 - c. What is template function? Write a program using template function large to find the largest of three ints and three double numbers. (05 Marks)
4.
 - a. How to achieve reusability in C++? Illustrate with an example. (10 Marks)
 - b. Explain the differences between the three visibility modes, with suitable example. (10 Marks)

PART – B

5.
 - a. Explain how to pass arguments to base class constructors in multiple inheritance, with suitable example. (10 Marks)
 - b. Explain with the suitable diagram and program the virtual base class. (10 Marks)
6.
 - a. What is runtime polymorphism? How to achieve it? Illustrate with an example program. (10 Marks)
 - b. Explain pure virtual function and abstract class with suitable programs. (10 Marks)
7.
 - a. Explain with the neat diagram, the stream class hierarchy. (07 Marks)
 - b. Explain any five manipulators, with example. (06 Marks)
 - c. Explain briefly various file operations. (07 Marks)
8.
 - a. What is exception? Explain briefly exception handling options. (10 Marks)
 - b. What is STL? Explain vector container briefly. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.