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10EE664

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

Time: 3 hrs. Max. Marks:100

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

PART – A

1 a. Distinguish between procedure oriented programming and object oriented programming. **(06 Marks)**

b. Discuss the use of extraction and insertion operators with manipulators in object oriented programs. **(08 Marks)**

c. Explain the following terms :
i) Encapsulation ii) Data hiding iii) inheritance. **(06 Marks)**

2 a. Explain with syntax and flow chart the looping constructs in C++. **(08 Marks)**

b. What are enumerations? Explain with a suitable illustrations. **(06 Marks)**

c. Write a note on new and delete operations. **(06 Marks)**

3 a. What is function overloading? Explain function overloading with a suitable program. **(06 Marks)**

b. What is recursion? Write a program to find the factorial of a number using recursion. **(06 Marks)**

c. What are the different techniques of passing arguments to a function? Explain with a suitable program. **(08 Marks)**

4 a. Develop a C++ program to justify the returning of objects from function. show the corresponding output. **(08 Marks)**

b. Explain the concept of static data members and static member function in C++. **(06 Marks)**

c. What is friend function? Explain how friend function is used with suitable example. **(06 Marks)**

PART – B

5 a. Define constructors. What are the special characteristics and rules to write constructor. **(06 Marks)**

b. Explain the concept of constructors with default arguments with suitable example. **(06 Marks)**

c. What is parameterized constructors? Explain with a suitable program example. **(08 Marks)**

6 a. What are the different rules for overloading operators? List the operators which cannot be overloaded. **(06 Marks)**

b. Write a program to overload operator for both prefix and postfix versions. **(08 Marks)**

c. Write a C++ program to find the sum of two complex numbers and display the output using overloading operator '+'. **(06 Marks)**

7 a. With suitable diagrams, discuss the different access specifiers with inheritance. **(10 Marks)**

b. What is class inheritance? Write a C++ program to illustrate multiple inheritances. **(10 Marks)**

8 a. Write a note on this pointer. **(04 Marks)**

b. Sketch the stream class hierarchy of C++ and explain briefly. **(08 Marks)**

c. What is pure virtual function? Explain with a suitable C++ program. **(08 Marks)**

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