

--	--	--	--	--	--	--	--	--	--

Sixth Semester B.E. Degree Examination, December 2010
Object Oriented Programming using C++

Time: 3 hrs.

Max. Marks:100

Note: 1. Answer any FIVE full questions selecting at least TWO questions from each part.
 2. Provide C++ program segments wherever required.

PART - A

- 1 a. Compare and contrast object oriented programming with procedure oriented programming. (06 Marks)
- b. How does C++ support the major and minor components of object model? (10 Marks)
- c. How does typed languages differ from untyped languages? What is the nature of typing in C++? (04 Marks)
- 2 a. How does C++ differ from C on the following :
 - i) Placement of variable declaration. (06 Marks)
 - ii) Scope resolution operator. (06 Marks)
 - iii) Passing a variable to a function. (08 Marks)
 - iv) Comment formats.
- b. What are inline functions? Explain. Provide a suitable illustration.
- c. What are enumerations? Explain with a suitable illustration.
- 3 a. What are classes and objects? Explain. (06 Marks)
- b. List the drawbacks of classes with all public data members. (06 Marks)
- c. How is access control established for members and external users in object oriented languages in general and C++ in particular? (08 Marks)
- 4 a. What are constructors? What are the differences between member functions and constructors? (06 Marks)
- b. What is function overloading? What is the selection criteria for overloaded functions to determine which function to call? (06 Marks)
- c. Provide an example for class with multiple constructions. (04 Marks)
- d. What are new and delete operators? What are their advantages? (04 Marks)

PART - B

- 5 a. What is a friend function? What are its advantages? (08 Marks)
- b. Explain multiple inheritances, with a suitable example in C++ code. (08 Marks)
- c. What is the constructor rule for inheritance? Explain. (04 Marks)
- 6 a. What is operator overloading? List the rules. (10 Marks)
- b. Distinguish copy construction v/s assignment operator. List the access rules for copy constructor and assignment operator. (10 Marks)
- 7 a. What are abstract classes and pure virtual functions? (06 Marks)
- b. What are increment and decrement operators? Provide a suitable illustration. (06 Marks)
- c. What are simple and composite control constructs in C++? Show how a composite one can be split into simple control constructs. Provide syntax and program segment for illustration. (08 Marks)
- 8 Write explanatory notes on :
 - a. Array in C++
 - b. Programming paradigms.
 - c. Concept of code reuse using C++
 - d. Polymorphism. (20 Marks)

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.

