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Sixth Semester B.E. Degree Examination, June/July 2013
Programming in C++

Time: 3 hrs.

Max. Marks: 100

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

PART – A

- 1 a. Bring out the salient features of structural programming and object oriented programming. (08 Marks)
- b. Explain volatile and constant qualifiers. (04 Marks)
- c. How strings are handled in C++? Discuss with appropriate examples. (08 Marks)
- 2 a. How do you classify operators in C++? (05 Marks)
- b. Where do you use comma operator? Give an example. (05 Marks)
- c. Explain nested if statement, break statements and loop statements, with examples. (10 Marks)
- 3 a. Discuss the following, with an example :
 - i) Function prototype
 - ii) Recursive function
 - iii) Actual and formal parameters
 - iv) Inline function. (12 Marks)
- b. Write a program to find nCr using recursion. (08 Marks)
- 4 a. Explain the exception handling mechanism, in detail. (10 Marks)
- b. What are exception specifications and explain in detail. Discuss the exception specification to functions. (10 Marks)

PART – B

- 5 a. Define class and name the components of a class and explain them, with example. (05 Marks)
- b. What is the 'this' pointer? Illustrate the use of this pointer in accessing the data members of an object, with example. (07 Marks)
- c. Write a program to display persons information such as roll number, name, percentage and date of birth. Use nested classes. (08 Marks)
- 6 a. What are friends in C++? When do you really need a friend operator function? Illustrate with an example. (10 Marks)
- b. Can any operator in C++ be overloaded and write a program that overloads the increment operator. (10 Marks)
- 7 a. What is inheritance? Discuss the different types of inheritance. (10 Marks)
- b. What is runtime polymorphism? How virtual function, can be used to implement the runtime polymorphism? Explain with an example. (10 Marks)
- 8 Write a short note on :
 - a. Data types of C++
 - b. New and delete operator
 - c. Static members
 - d. Argument passing. (20 Marks)