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10TE661

Sixth Semester B.E. Degree Examination, June/July 2015
Programming in C++

Time: 3 hrs. Max. Marks:100

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

PART – A

1 a. What are preprocessor directives? Explain each with an example. **(06 Marks)**

b. Explain how dynamic memory allocation is performed with the help of 'new' and 'delete' operators with an example program. **(06 Marks)**

c. What is an object oriented programming? Explain its advantages and applications. **(08 Marks)**

2 a. Mention few keywords in C++ not present in C. **(04 Marks)**

b. Explain string types and their associated operations with string class, with an example for each. **(10 Marks)**

c. Explain enumeration types with an example program. **(06 Marks)**

3 a. Explain the following :
i) Arithmetic operators
ii) Relational and logical operators. **(08 Marks)**

b. With an example C++ program, differentiate between break and continue statements. **(06 Marks)**

c. Write a C++ program to read 'n' integers from keyboard, store those numbers in an array and perform sum of those numbers, and display the result. **(06 Marks)**

4 a. Write a C++ program to swap the contents of two variables using functions with 'call by value' and 'call by reference' methods. **(08 Marks)**

b. Explain inline functions with an example program. **(06 Marks)**

c. Write a C++ recursive program to find factorial of a given number. **(06 Marks)**

PART – B

5 a. With the help of a C++ program, explain try, throw and catch mechanisms of exception handling. **(10 Marks)**

b. Explain the following :
i) Exception specification
ii) Exceptions and design issues. **(10 Marks)**

6 a. Define class and object. With an example C++ program, explain how data members are declared and accessed? **(10 Marks)**

b. Explain with a C++ program for each :
i) Copy constructor
ii) Destructors. **(10 Marks)**

7 a. What is operator overloading? Write a C++ program to overload '+' to concatenate two strings. **(10 Marks)**

b. Explain how 'new' and 'delete' operators be overloaded with a C++ program. **(10 Marks)**

8 a. Explain the concept of multiple inheritance with a C++ program. **(10 Marks)**

b. Explain public and protected inheritance with suitable example program for each. **(10 Marks)**

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