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70 SEP 2002

EASTERN UNIVERSITY, SRI LANKA
FIRST EXAMINATION IN SCIENCE- 2001/2002
FIRST SEMESTER (APRIL-2002)

CC 102 – INTRODUCTION TO PC APPLICATIONS
(REPEAT)

Answer all Questions

Time: 1 Hour

Question 01

Describe with the aid of examples, the concept of algorithm and explain the desirable properties of an algorithm.

- a. Write an algorithm to print the largest and the smallest number along with their position in an array consists of N different numbers. (i.e. the same number does not repeat again in the array)
- b. Write an algorithm to read a word and to print whether it is palindrome or not.

Hint:

You may assume that there is no special character (space or hyphen) in the word. Palindrome is a word or sentence that gives the same meaning in both forward and backward directions.

Examples: MADAM, LEVEL, POP.

Question 02

Discuss the looping constructs in C++

- a. What is the output of this nested loop structure?

```
i=4;
While (i>=1)
{
    j=2;
    while(j>=1)
    {
        cout<<j<<" ";
        j++;
    }
    cout<<i<<endl;
    i--;
}
```

- b. Write a C++ program that inputs an integer larger than 1 and calculates the sum of the squares from 1 to that integer. For example: if the integer equals 4, the sum of the squares is 30(1+4+9+16). The program should repeat this process for several input values. A negative input value signals the end of the data.
- c. Write a C++ program that reads character representing binary (base-2) numbers and translates them to decimal (base-10).