

Nepal College of Information Technology

Balkumari Lalitpur

UNIT TEST 2010

Subject: Programming in C

Program: BE ELX / CE / IT

Year I Sem I

FM: 70

PM: 35

Time: 2 Hrs

Attempt all questions .Students are required to give answers in there own words as far as practicable.

1. Describe various components of a digital computer with a neat labeled diagram. List common examples as part of a digital computer. [10]
2. What are the basic data types in C, explain, mentioning their memory requirement, limitations and with proper example (of declaration, initialization, input and output process) for each of them. [10]
3. Write a program to print the following structure [10]

```
7 8 9 10 11 12 13
6 7 8 9 10 11
5 6 7 8 9
4 5 6 7
3 4 5
2 3
1
```
4. Write a program in C to take 11 numbers as input from the user, then find the minimum, maximum, mean and median value of the series. [10]
5. Write an algorithm to check if the entered number is a prime. Also draw the flow chart for the algorithm [10]
6. What is an array? How is it different from ordinary data type? How are arrays useful in programming? Give examples to show declaration, initialization and use of array. [10]
7. Write a program in C to take a string as input then without using string functions (i.e. library functions from *string.h*), change the string to uppercase and print it. [10]

Hint: Use ASCII value to change case of each character.

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