Nepal College of Information Technology

**Unit Test**

Fall 2012

Program : BE Time : 2 hrs

Semester : (I) FM : 70

Subject : Programming in C PM : 35

* *Candidates are requested to give their answer as far as practicable in their own words.*
* *The figure in the margin indicates the full marks*
* ***Attempt ALL question***

1. a) Explain the Block diagram of computer. 7

b) What is an algorithm and flowchart? What are the characteristics of good algorithm? Write an algorithm and flowchart to find maximum of three numbers. 8

2. a) What are Constants, variables and operators? What are the rules for naming variables? List the different types of operators used in C and explain any four of them. 9

b) What will be the final output of the following statements?

i) void main( ) 2

{

int i=2,j=3,k,l;

float a,b;

k=i/j\*j;

l=j/i\*i;

a=i/j\*j;

b=j/i\*i;

printf( “%d\t%d\n%f\t%f ”,k,l,a,b);

getch( );

}

ii) What are the final values of a,b,z and x after execution of following statements? 4

int X=10, A=20, B=30, Z=40

X+ = ++A – B++ ;

X- = ++Z % --B ;

X\*= ++A + B++ \* Z-- ;

3. a) List different types of Decision Control Mechanisms used in C? Differentiate between Entry controlled loop and Exit control loop with example. 7

b) Write a program that displays the following menu: 8

MENU

i) to check maximum of two numbers using conditional operator.

ii) to calculate the factorial of a given number

iii) to check whether the given year is leap year or not.

iv) Exit from the program

and perform tasks as per user’s choice until the user want to exit.

4. a) What do you understand by data types? Explain different data types available in C. Write a program to generate the Fibonacci series upto N terms. 10

b) Write a program to check whether the given number is palindrome or not. 5

5. Write short notes on any two: (5\*2)

a) Escape Sequences

b) Break and Continue

c) Types of programming languages