Nepal College of Information Technology

**Unit Test**

Fall 2013

Program : BE\_IT\_Day Time : 2 hrs

Semester : (VII) 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 classification of computers on the basis of their size and work. 10

b) What is the difference between syntax and semantics. Explain with suitable examples.

2. a) Draw the flowchart to find the octal equivalent when a decimal integer number is given.

Evaluate the following expression (assume all necessary header files): 10

main( )

{

int i =5,j = 4, k = 9;

i = (i+ k) / 3 + k % (j + i) + j + j \* k % i / 2;

printf ( "%d", i ) ;

}

OR

Draw the flowchart to read a 3 digit number and print whether it is a triplet or not. Find the output of the following code snippet (assume all necessary header files):

main( )

{

int I = 1, j = 1 ;

for ( ; ; )

{

if ( I > 5 )

break ;

else

j += I ;

printf ( "\n%d", j ) ;

I += j ;

}

}

3. a) Write a program to find the largest of the three numbers using conditional operator and trace

the output 10

**OR**

Write a program that prints all 3 digit Armstrong numbers and trace the output.

4. a) Write a program to input 25 integers in an array and count the total occurrence of even, odd,

positive and negative numbers. 10

**OR**

Write a program to read in two 3 x 3 matrices and multiply them.

5. Short Notes (any two): 5x2 = 10

a) Sorting array elements (bubble or selection sort)

b) Switch Statement

c) Associativity rule and Precedence rules in C

d) Software Development Life Cycle