Nepal College of Information Technology

**Unit Test**

Spring 2013

Program : BE\_IT\_Morning Time : 2 hrs

Semester : (IV) FM : 70

Subject : Microprocessor & ALP 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 in brief about how a microprocessor works. List out the applications. 4+3

b) Draw the internal block diagram of Intel 8086 and explain its execution unit in detail. 8

2. a) Draw and explain the timing diagram of instruction STA 2050H in 8085 microprocessor. 7

b) Define addressing mode. Explain all the addressing modes in 8086 with an example for each. 8

3. a) Write an assembly language program to print the Fibonacci series upto 10 elements. [ 1 2 3 5 8 13 ….] 8

b) Write an assembly language program to print the sum of two numbers. 7

4. a) Define assembler directive. Explain the following assembler directives in brief: The memory model definition, Segment directive, Proc directive, END directive and .startup directive. 8

b) Write an 8085 assembly language program that multiplies two 8-bit data from memory location 2020H and 2030H, and store the result in the memory location starting from 2050H. 7

5) Write short notes on: (Any ***two***) 5 X 2 = 10

a) Special Purpose Registers in 8086

b) Memory segmentation and physical address computation

c) Significance of the program status word

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