May 2006
Microprocessor & Assembly Language Programming
CS-208
(B-Tech. Sem. - 4th, 2056)

Time. 3Hrs.

M.M: 60

Note: - Section A is compulsory. Attempt any four questions from Section B and any two questions from Section C.

Section A   (2 × 10 = 20)

Q1. (a) Distinguish between PROM and ROM.
     (b) What are Volatile and Non-Volatile Memory?
     (c) Why the Instruction OUT 1234H, AL fails to compile?
     (d) Distinguish between synchronous and Asynchronous buses.
     (e) How the internal RAM of 8051 is organized?
     (f) Write about the move instruction of 8085
     (g) Discuss how pipelining improve performance.
     (h) Discuss the interrupt handling of 68000.
     (i) Give an example of a single 68000-assembly instruction involving an immediate addressing mode and an absolute address mode.
     (j) What is the basic difference between branch and call subroutine instruction?

Section B   (4 × 5 = 20)

Q2. Explain the following instructions:
     a) SHLD 2040h
     b) JMP
     c) DAA

Q3. Discuss various addressing modes of 8085. Explain with examples.

Q4. Write an assembly language program to calculate the 2's complement of a 16 bit no.

Q5. Explain why the PTR attribute is sometimes necessary in 8086.

Q6. Differentiate between microprocessor and microcontroller.

Section C   (2 × 10 = 20)

Q7. What do you understand by DMA? Draw and explain the block diagram of 8257

Q8. Describe the traffic light system, stepper motor interface.

Q9. (a) What do you mean by SIMULATION and EMULATION? In what way do these help in the development of a microprocessor-based system?

(b) Explain Microprocessor Development System.