Code No. 10538/N

FACULTY OF SCIENCE

M.Sc. (I Semester) (Computer Science) Examination, April/May 2005

MICROPROCESSORS AND MICROCONTROLLERS

Paper—1·3

Time : Three Hours] [Maximum Marks : 100

Note :—Answer **ALL** questions.

SECTION—A

(Marks : 8×5=40)

(Short Answer Type)

1. Explain the Basic Logic gates, with logic diagram, logic expression and Truth Table.
2. Explain the De Morgans Theorems.
3. Write the evolution of Microprocessors.
4. Draw the Timing diagrams for Memory, write operation of 8085 and explain.
5. Mention and draw the Register Organisation of 8086.
6. Draw the Program Status Word (PSW) of 8086 and explain.
7. Discuss Special Function Registers of 8051.
8. Write the evolution of Microcontrollers.

SECTION—B

(Marks : 15×4=60)

(Essay Answer Type)

9. (a) Explain S-R, D, J-K and M/S J-K Flip-flops, with logic diagrams, symbols and truth tables.

OR

(b) Mention different types of A/D converters and explain Flash type of A/D converter, with neat circuit diagrams.

10. (a) Draw the block diagram of Intel 8085 microprocessor and explain the important blocks.

OR

(b) Explain the Addressing modes of 8085 with suitable examples.

11. (a) Draw the block diagram of Intel 8086 microprocessor and explain the important blocks.

OR

(b) Mention different groups of instruction set of 8086 and explain Data transfer group of instructions with suitable examples.

12. (a) Write detailed architecture of Microcontroller 8051.

OR

(b) Draw the block diagrams of 16-bit and 32-bit Microcontrollers and compare.