

Total number of printed pages – 4 MCA  
PES 2001/MCC102

First Semester Examination – 2008

MICROPROCESSOR AND ASSEMBLY  
LANGUAGE PROGRAMMING

Full Marks – 70

Time – 3 Hours

*Answer Question No. 1 which is compulsory  
and any five from the rest.*

*The figures in the right margin indicate full  
marks for the questions.*

1. Answer the following questions : 2 × 10
  - (a) Distinguish between 8085 and 8086 microprocessor.
  - (b) What is the function of 8259A chip ?
  - (c) Distinguish between 8257 and 8237A chips.

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- (d) What is a tristate device ?
- (e) What are the flags affected for executing 8051 instruction ORA ?
- (f) What is min and max mode of 8086 ?
- (g) How much time is required for 8085 microprocessor to execute the instruction MVI A, 08H ?
- (h) Represent decimal negative number i.e., -31.33 in its equivalent hexadecimal form.
- (i) Distinguish among machine cycle, instruction cycle, fetch cycle and execution cycle.
- (j) How can a microprocessor distinguish between an instruction and data ?
2. (a) Explain the timing diagram of *memory read* and *out* instruction of 8085. 6
- (b) Write one ALP for 8085 to multiply two numbers each of one byte length and the result is two bytes length. 4

3. (a) Write an ALP for 8085 to produce a time delay of one millisecond. 6
- (b) Explain the functions of multiplexer, demultiplexer, encoder and decoder. 4
4. With a neat functional block diagram, explain the architecture of Intel 8085 microprocessor. 10
5. Describe the architecture of Intel 8086 microprocessor. 10
6. (a) Describe the addressing modes of 8086 microprocessor. 5
- (b) Explain the pin diagram of 8086 microprocessor. 5
7. (a) Describe the details about principle of operation, function and use of 8251 USART chip. 5
- (b) Explain the function and use of 8255A PPI. 5

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- 8. ✓ (a) Explain various types of flip flops and their uses with their truth tables. 5
- (b) Describe various types of logic gates with their truth tables. 5

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