

MAY 2016

**P/ID 17457/RCG/  
PCAD**

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Time : Three hours

Maximum : 75 marks

PART A — (5 × 5 = 25 marks)

Answer ALL questions.

1. (a) Explain any five assembler directives with examples.

Or

- (b) Describe the use of an emulator.

2. (a) Explain the call instructions of 8086.

Or

- (b) Discuss on various instructions used for handling unpacked BCD numbers.

3. (a) Explain the 8086 bus activities during a write machine cycle.

Or

- (b) Describe the Type 0 interrupt of 8086.

4. (a) Explain the operating modes of 8255 PPI.

Or

- (b) Describe any two types of temperature sensors.

5. (a) Discuss on the two techniques that are used to reduce the number of wait states needed with DRAMs.

Or

- (b) Explain the real address mode operation of 80286.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

6. Explain the different standard program structures with suitable illustrations.
7. Describe the various string instructions of 8086 with examples.
8. Write an assembly language program to find the factorial of a given number.
9. Discuss on the various hardware interrupt applications.

10. Explain the internal architecture of 8254 programmable interval timer.
  11. Discuss how a microprocessor is interfaced to keyboards.
  12. With a neat diagram, explain how a DMA controller operates in a microcomputer, system.
  13. Describe the internal architecture of 80486 microprocessor.
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