

**F 3664**

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Reg. No.....

Name.....

**B.TECH. DEGREE EXAMINATION, NOVEMBER 2014**

**Fifth Semester**

Branch : Applied Electronics and Instrumentation/ Electronics and Instrumentation/Instrumentation and Control Engineering

AI 010 506/EI 010 506/IC 010 506—MICROPROCESSORS AND MICROCONTROLLERS  
(AI, EI, IC)

(New Scheme—2010 Admission onwards)

[Regular/Improvement/Supplementary]

Time : Three Hours

Maximum : 100 Marks

**Part A**

*Answer all questions.  
Each question carries 3 marks.*

1. Define: memory banks.
2. What is program memory ?
3. What is instruction set ?
4. What are the I/O ports ?
5. What is interrupt priority ?

(5 × 3 = 15 marks)

**Part B**

*Answer all questions.  
Each question carries 5 marks.*

6. Write the 8086 memory organization.
7. Write the instruction sets of 8086.
8. State the power control register.
9. Write the importance of the microcontroller.
10. Explain the RISC processors.

(5 × 5 = 25 marks)

**Part C**

*Answer all questions.  
Each question carries 12 marks.*

11. (a) Explain in detail about the 8086 microprocessor architecture with neat sketch.

Or

- (b) Write the programmable interrupt controller in detail.

**Turn over**

12. (a) Explain in detail about the addressing modes of 8086 and its types.

Or

(b) Write in detail about the instruction set for 8086 microprocessor.

13. (a) Explain the AT89C51 microcontroller in detail with neat sketch.

Or

(b) Briefly explain the I/O port timings and operation.

14. (a) Explain in detail about the features of 8051 microcontroller and draw the pin diagram of it.

Or

(b) Write in detail about the addressing modes of 8051 microcontroller and its types.

15. (a) Explain the features of PIC16F873 processor in detail.

Or

(b) Explain the serial interface techniques in detail.

(5 × 12 = 60 marks)