

Code No: R32024

**R10**

**Set No: 1**

III B.Tech. II Semester Regular Examinations, April/May -2013

**MICRO PROCESSORS AND MICRO CONTROLLERS**

(Electrical and Electronics Engineering)

**Time: 3 Hours**

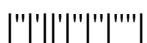
**Max Marks: 75**

Answer any FIVE Questions  
All Questions carry equal marks

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1. With neat schematic diagram explain the internal architecture of 8086 Microprocessor in detail.
2. What do you mean by an addressing mode? Explain in detail various addressing modes of 8086 processor with necessary examples.
3. Give the assembly language implementation of the following:  
(a) WHILE (b) FOR loop (c) REPEAT
4. Interface a typical 12-bit DAC with 8255 and write a program to generate a triangular waveform of period 10ms. The CPU runs at 5 MHz clock frequency.
5. With neat sketch explain the internal architecture of DMA controller 8257. And also explain Interfacing of 8257 with 8086.
6. What are the different sources of Interrupts in 8051? Explain each of them in detail.
7. Explain different Addressing modes of 8051 with examples.
8. With neat diagram explain the Interfacing of 8051 with LED's.

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Set No: 2

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**MICRO PROCESSORS AND MICRO CONTROLLERS**

(Electrical and Electronics Engineering)

Time: 3 Hours

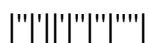
Max Marks: 75

Answer any FIVE Questions  
All Questions carry equal marks

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1. Explain in detail the basic architecture and register organization of 8086 Microprocessors with neat diagrams.
2. Explain minimum mode operation of 8086 processor and also draw its timing diagrams.
3. What is an Assembler directive? Explain in detail various Assembler directives.
4. Discuss in detail Interfacing of Analog to Digital converter with 8086 using 8255.
5. What is a Programmable Interrupt Controller? Explain the various command words and operating modes of 8259.
6. Discuss in detail Memory organization and I/O Interfacing of 8051 Microcontroller.
7. Write an Assembly Language Programming of 8051 to rotate the bytes in registers R0 to R3.
8. What are the Important applications of Microcontroller 8051? Explain any one application with 8051.

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Set No: 3

III B.Tech. II Semester Regular Examinations, April/May -2013

**MICRO PROCESSORS AND MICRO CONTROLLERS**

(Electrical and Electronics Engineering)

Time: 3 Hours

Max Marks: 75

Answer any FIVE Questions  
All Questions carry equal marks

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1. With neat diagrams explain the architecture and memory organization of 8086 Microprocessor.
2. Explain maximum mode operation of 8086 processor and also draw its timing diagrams.
3. What do you mean by a Macro? How do you define a Macro and how do you pass parameters to a Macro? Explain with an example.
4. Draw and discuss typical Stepper motor interface with 8255.
5. With an example discuss the Interfacing of 8259 with an 8086 system. And also write a program to initialize the operation of 8259.
6. Explain in detail various special function register formats of 8051.
7. With an example explain the basic syntax of 8051 programming.
8. Discuss in detail interfacing of 8051 with Seven Segment Display.

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Set No: 4

III B.Tech. II Semester Regular Examinations, April/May -2013

**MICRO PROCESSORS AND MICRO CONTROLLERS**

(Electrical and Electronics Engineering)

Time: 3 Hours

Max Marks: 75

Answer any FIVE Questions  
All Questions carry equal marks

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1. Explain the following in detail:
  - (a) Register organization of 8086 Microprocessor
  - (b) General bus operation of 8086 Microprocessor
2. Explain in detail the basic Instruction set and read, write operations of 8086 Microprocessor.
3. Explain the following structures with examples
  - (a) IF-THEN-ELSE
  - (b) DO WHILE
  - (c) REPEAT
4. With neat diagram explain the Internal architecture and modes of operation of 8255.
5. Explain in detail different modes of operation and status words of Key board/Display controller 8279.
6. With neat diagram explain the architecture of 8051 Microcontroller. And also discuss each block in detail.
7. By using 8051 programming, Show that a set of XCH instructions executes faster than a PUSH and POP when saving the contents of the 'A' register.
8. Explain how can you Interface ADC with 8051.

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