Code No: R05410405 **R05** **Set No. 2**

IV B.Tech I Semester Examinations, November 2010

MICRO CONTROLLERS AND APPLICATIONS

Common to Bio-Medical Engineering, Electronics And Telematics, Electronics And Communication Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions

All Questions carry equal marks

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1. Explain the RTOs functions in RT × and RT × 51 full. [16]
2. (a) Discuss about interrupt vector table.
   (b) How do you enable and disable 8051 interrupts? [8+8]
3. (a) What are the Thumb version load-store multiple instructions? Explain them with example.
   (b) Explain how Thumb state changes to ARM state and vice verse. [8+8]
4. (a) Explain the working of an optoisolator. Give the interface circuit for isolating a triac in the 220V AC line from a microcontroller (8051) pin port output.
   (b) How can we use the incremental shaft angle encoder to measure the motor speed every second. [8+8]
5. (a) What are the uses of the bits in interupt pending register? How do we use these for the interupt servicing at timer 1 and timer 2 in 80196?
   (b) How do we reset the timer 2 in 80196? [10+6]
6. Set the initial count to ZO when timer 0 as an event counter by using mode2 and display the binary count on P2 continuously. [16]
7. Compare 8051 series micro controllers in expanding the memory. [16]
8. (a) Create a square wave of 60% duty cycle on bit 3of port1.
   (b) Write short notes on bit addressability in 8051 microcontroller. [8+8]

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Code No: R05410405 **R05** **Set No. 4**

IV B.Tech I Semester Examinations, November 2010

MICRO CONTROLLERS AND APPLICATIONS

Common to Bio-Medical Engineering, Electronics And Telematics, Electronics And Communication Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions

All Questions carry equal marks

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1. (a) Discuss about interrupt vector table.
   (b) How do you enable and disable 8051 interrupts? [8+8]
2. (a) Explain the working of an optoisolator. Give the interface circuit for isolating a triac in the 220V AC line from a microcontroller (8051) pin port output.
   (b) How can we use the incremental shaft angle encoder to measure the motor speed every second. [8+8]
3. Compare 8051 series micro controllers in expanding the memory. [16]
4. (a) Create a square wave of 60% duty cycle on bit 3of port1.
   (b) Write short notes on bit addressability in 8051 microcontroller. [8+8]
5. Set the initial count to ZO when timer 0 as an event counter by using mode2 and display the binary count on P2 continuously. [16]
6. (a) What are the Thumb version load-store multiple instructions? Explain them with example.
   (b) Explain how Thumb state changes to ARM state and vice verse. [8+8]
7. Explain the RTOs functions in RT × and RT × 51 full. [16]
8. (a) What are the uses of the bits in interupt pending register? How do we use these for the interupt servicing at timer 1 and timer 2 in 80196?
   (b) How do we reset the timer 2 in 80196? [10+6]

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Code No: R05410405 **R05** **Set No. 1**

IV B.Tech I Semester Examinations, November 2010

MICRO CONTROLLERS AND APPLICATIONS

Common to Bio-Medical Engineering, Electronics And Telematics, Electronics And Communication Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) What are the uses of the bits in interupt pending register? How do we use these for the interupt servicing at timer 1 and timer 2 in 80196?
   (b) How do we reset the timer 2 in 80196? [10+6]
2. (a) What are the Thumb version load-store multiple instructions? Explain them with example.
   (b) Explain how Thumb state changes to ARM state and vice verse. [8+8]
3. (a) Explain the working of an optoisolator. Give the interface circuit for isolating a triac in the 220V AC line from a microcontroller (8051) pin port output.
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5. (a) Create a square wave of 60% duty cycle on bit 3of port1.
   (b) Write short notes on bit addressability in 8051 microcontroller. [8+8]
6. (a) Discuss about interrupt vector table.
   (b) How do you enable and disable 8051 interrupts? [8+8]
7. Set the initial count to ZO when timer 0 as an event counter by using mode2 and display the binary count on P2 continuously. [16]
8. Explain the RTOs functions in RT × and RT × 51 full. [16]

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Code No: R05410405 **R05** **Set No. 3**

IV B.Tech I Semester Examinations, November 2010

MICRO CONTROLLERS AND APPLICATIONS

Common to Bio-Medical Engineering, Electronics And Telematics, Electronics And Communication Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Create a square wave of 60% duty cycle on bit 3of port1.
   (b) Write short notes on bit addressability in 8051 microcontroller. [8+8]
2. Set the initial count to ZO when timer 0 as an event counter by using mode2 and display the binary count on P2 continuously. [16]
3. (a) Discuss about interrupt vector table.
   (b) How do you enable and disable 8051 interrupts? [8+8]
4. Compare 8051 series micro controllers in expanding the memory. [16]
5. (a) What are the uses of the bits in interupt pending register? How do we use these for the interupt servicing at timer 1 and timer 2 in 80196?
   (b) How do we reset the timer 2 in 80196? [10+6]
6. Explain the RTOs functions in RT × and RT × 51 full. [16]
7. (a) Explain the working of an optoisolator. Give the interface circuit for isolating a triac in the 220V AC line from a microcontroller (8051) pin port output.
   (b) How can we use the incremental shaft angle encoder to measure the motor speed every second. [8+8]
8. (a) What are the Thumb version load-store multiple instructions? Explain them with example.
   (b) Explain how Thumb state changes to ARM state and vice verse. [8+8]

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