Code No: R05320202 **R05** **Set No. 2**

III B.Tech II Semester Examinations,December 2010
MICROPROCESSOR AND MICRO CONTROLLERS
Electrical And Electronics Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Explain the bus structure of 8086 system
   (b) Explain the fundamental concepts of DRAM controller. [8+8]
2. (a) Explain about the programmed I / O.
   (b) Explain about the interrupt driven I / O. [8+8]
3. (a) What are assembler Directives? Explain 4 assembler directives in detail?
   (b) Write an ALP to find the multiplication of two 16-bit Hex numbers? [10+6]
4. (a) Describe the functions of the following pins of 8086
      i. NMI
      ii. ALE
      iii. S2, S1, S0
      iv. $\overline{Test}$
      v. READY
   (b) Discuss about any three arithmetic instructions of 8086. [10+6]
5. (a) Give the pin diagram of CD4511 7-segment display and explain how you can interface to 8051 microcontroller with a diagram.
   (b) Write an 8051 subroutine to control the 7-segment display operation. [8+8]
6. (a) Explain why serial data transfer is mostly preferred over parallel data transfer. Give reasons.
   (b) Distinguish between data formats used for Synchronous and Asynchronous serial data transfer modes. [8+8]
7. (a) How does the timer overflow interrupt differ from the real-time clock interrupts? Give four applications of the real-time clocked interrupt.
   (b) Describe the concept of intrrupt intervals. [10+6]
8. (a) Explain the logical instructions of 8051 with examples
   (b) Write 8051 program to multiply the unsigned number in register R2 by the unsigned number on port 2 and put the result in external RAM locations 1000H (MSB) and 1001H (LSB). [8+8]

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Code No: R05320202 **R05** **Set No. 4**

III B.Tech II Semester Examinations,December 2010
MICROPROCESSOR AND MICRO CONTROLLERS
Electrical And Electronics Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) How does the timer overflow interrupt differ from the real-time clock interrupts? Give four applications of the real-time clocked interrupt.
   (b) Describe the concept of intrrupt intervals. [10+6]
2. (a) Explain the logical instructions of 8051 with examples
   (b) Write 8051 program to multiply the unsigned number in register R2 by the unsigned number on port 2 and put the result in external RAM locations 1000H (MSB) and 1001H (LSB). [8+8]
3. (a) Explain the bus structure of 8086 system
   (b) Explain the fundamental concepts of DRAM controller. [8+8]
4. (a) Give the pin diagram of CD4511 7-segment display and explain how you can interface to 8051 microcontroller with a diagram.
   (b) Write an 8051 subroutine to control the 7-segment display operation. [8+8]
5. (a) Explain about the programmed I / O.
   (b) Explain about the interrupt driven I / O. [8+8]
6. (a) What are assembler Directives? Explain 4 assembler directives in detail?
   (b) Write an ALP to find the multiplication of two 16-bit Hex numbers? [10+6]
7. (a) Explain why serial data transfer is mostly preferred over parallel data transfer. Give reasons.
   (b) Distinguish between data formats used for Synchronous and Asynchronous serial data transfer modes. [8+8]
8. (a) Describe the functions of the following pins of 8086
      i. NMI
      ii. ALE
      iii. S2, S1, S0
      iv. $\overline{Test}$
      v. READY
   (b) Discuss about any three arithmetic instructions of 8086. [10+6]

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Code No: R05320202 **R05** **Set No. 1**

III B.Tech II Semester Examinations,December 2010
MICROPROCESSOR AND MICRO CONTROLLERS
Electrical And Electronics Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Describe the functions of the following pins of 8086
   i. NMI
   ii. ALE
   iii. S2, S1, S0
   iv. $\overline{Test}$
   v. READY
   (b) Discuss about any three arithmetic instructions of 8086. [10+6]
2. (a) Explain the bus structure of 8086 system
   (b) Explain the fundamental concepts of DRAM controller. [8+8]
3. (a) Explain why serial data transfer is mostly preferred over parallel data transfer. Give reasons.
   (b) Distinguish between data formats used for Synchronous and Asynchronous serial data transfer modes. [8+8]
4. (a) Explain about the programmed I / O.
   (b) Explain about the interrupt driven I / O. [8+8]
5. (a) Explain the logical instructions of 8051 with examples
   (b) Write 8051 program to multiply the unsigned number in register R2 by the unsigned number on port 2 and put the result in external RAM locations 1000H (MSB) and 1001H (LSB). [8+8]
6. (a) How does the timer overflow interrupt differ from the real-time clock interrupts? Give four applications of the real-time clocked interrupt.
   (b) Describe the concept of intrrupt intervals. [10+6]
7. (a) Give the pin diagram of CD4511 7-segment display and explain how you can interface to 8051 microcontroller with a diagram.
   (b) Write an 8051 subroutine to control the 7-segment display operation. [8+8]
8. (a) What are assembler Directives? Explain 4 assembler directives in detail?
   (b) Write an ALP to find the multiplication of two 16-bit Hex numbers? [10+6]

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Code No: R05320202 **R05** **Set No. 3**

III B.Tech II Semester Examinations,December 2010
MICROPROCESSOR AND MICRO CONTROLLERS
Electrical And Electronics Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Explain the bus structure of 8086 system
   (b) Explain the fundamental concepts of DRAM controller. [8+8]
2. (a) Describe the functions of the following pins of 8086
      i. NMI
      ii. ALE
      iii. S2, S1, S0
      iv. $\overline{Test}$
      v. READY
   (b) Discuss about any three arithmetic instructions of 8086. [10+6]
3. (a) How does the timer overflow interrupt differ from the real-time clock interrupts? Give four applications of the real-time clocked interrupt.
   (b) Describe the concept of intrrupt intervals. [10+6]
4. (a) Explain about the programmed I / O.
   (b) Explain about the interrupt driven I / O. [8+8]
5. (a) Explain why serial data transfer is mostly preferred over parallel data transfer. Give reasons.
   (b) Distinguish between data formats used for Synchronous and Asynchronous serial data transfer modes. [8+8]
6. (a) Give the pin diagram of CD4511 7-segment display and explain how you can interface to 8051 microcontroller with a diagram.
   (b) Write an 8051 subroutine to control the 7-segment display operation. [8+8]
7. (a) What are assembler Directives? Explain 4 assembler directives in detail?
   (b) Write an ALP to find the multiplication of two 16-bit Hex numbers? [10+6]
8. (a) Explain the logical instructions of 8051 with examples
   (b) Write 8051 program to multiply the unsigned number in register R2 by the unsigned number on port 2 and put the result in external RAM locations 1000H (MSB) and 1001H (LSB). [8+8]

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