Code No: R05320404 **R05** **Set No. 2**

III B.Tech II Semester Examinations,December 2010
MICROPROCESSORS AND INTERFACING
Common to BME, ETM, E.CONT.E, EIE, ECE

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Discuss about DOS and BIOS interrupts. Give necessary examples.
   (b) Explain in general why interrupt priorities are required. Discuss about interrupt priorities of 8259. [8+8]
2. (a) What are the important features of 8251?
   (b) Explain the following control words of 8251. With suitable Examples.
      i. Mode word
      ii. Command word [6+10]
3. (a) Distinguish between Mode set control word and BSR control Word of 8255?
   (b) Write an ALP in 8086 to generate a symmetrical square wave form with 1KHz frequency? Give the necessary circuit setup with a DAC? [8+8]
4. (a) Interface Data memory of 16K x 8 SRAM to 8051 and give memory map. The Starting address of SRAM should be 0000H.
   (b) Give the format of PCON in 8051 and give bit definitions. [10+6]
5. (a) Write an ALP in 8086 to add two 10-byte numbers available in array1 and array 2 store the result in array 3
   (b) Write an ALP in 8086 to find average of two numbers [10+6]
6. (a) Explain how static RAMs are interfaced to 8086. Give necessary interface diagram assuming appropriate signals and memory size
   (b) Explain the need of DMA. Discuss in detail about DMA data transfer method [8+8]
7. (a) Explain in detail about the following units in 8086 Microprocessor
      i. Bus interface unit (BIU)
      ii. Execution unit (EU)
   (b) Describe the function of the following two registers
      i. Instruction pointer
      ii. Stack pointer [8+8]
8. (a) With relevant examples, discuss about arithmetic group of instructions of 8086
   (b) Write a procedure in 8086 ALP, to divide a 16 - bit hexadecimal number by a 8- bit hexa decimal number. [8+8]

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Code No: R05320404 **R05** **Set No. 4**

III B.Tech II Semester Examinations,December 2010
MICROPROCESSORS AND INTERFACING
Common to BME, ETM, E.CONT.E, EIE, ECE

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Distinguish between Mode set control word and BSR control Word of 8255?
   (b) Write an ALP in 8086 to generate a symmetrical square wave form with 1KHz frequency? Give the necessary circuit setup with a DAC? [8+8]
2. (a) Discuss about DOS and BIOS interrupts. Give necessary examples.
   (b) Explain in general why interrupt priorities are required. Discuss about interrupt priorities of 8259. [8+8]
3. (a) With relevant examples, discuss about arithmetic group of instructions of 8086
   (b) Write a procedure in 8086 ALP, to divide a 16 - bit hexadecimal number by a 8- bit hexa decimal number. [8+8]
4. (a) Interface Data memory of 16K x 8 SRAM to 8051 and give memory map. The Starting address of SRAM should be 0000H.
   (b) Give the format of PCON in 8051 and give bit definitions. [10+6]
5. (a) What are the important features of 8251?
   (b) Explain the following control words of 8251. With suitable Examples.
      i. Mode word
      ii. Command word [6+10]
6. (a) Write an ALP in 8086 to add two 10-byte numbers available in array1 and array 2 store the result in array 3
   (b) Write an ALP in 8086 to find average of two numbers [10+6]
7. (a) Explain how static RAMs are interfaced to 8086. Give necessary interface diagram assuming appropriate signals and memory size
   (b) Explain the need of DMA. Discuss in detail about DMA data transfer method [8+8]
8. (a) Explain in detail about the following units in 8086 Microprocessor
      i. Bus interface unit (BIU)
      ii. Execution unit (EU)
   (b) Describe the function of the following two registers
      i. Instruction pointer
      ii. Stack pointer [8+8]

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Code No: R05320404 **R05** **Set No. 1**

III B.Tech II Semester Examinations,December 2010
MICROPROCESSORS AND INTERFACING
Common to BME, ETM, E.CONT.E, EIE, ECE

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) With relevant examples, discuss about arithmetic group of instructions of 8086
   (b) Write a procedure in 8086 ALP, to divide a 16 - bit hexadecimal number by a 8- bit hexa decimal number. [8+8]
2. (a) Distinguish between Mode set control word and BSR control Word of 8255?
   (b) Write an ALP in 8086 to generate a symmetrical square wave form with 1KHz frequency? Give the necessary circuit setup with a DAC? [8+8]
3. (a) Interface Data memory of 16K x 8 SRAM to 8051 and give memory map. The Starting address of SRAM should be 0000H.
   (b) Give the format of PCON in 8051 and give bit definitions. [10+6]
4. (a) What are the important features of 8251?
   (b) Explain the following control words of 8251. With suitable Examples.
      i. Mode word
      ii. Command word [6+10]
5. (a) Discuss about DOS and BIOS interrupts. Give necessary examples.
   (b) Explain in general why interrupt priorities are required. Discuss about interrupt priorities of 8259. [8+8]
6. (a) Explain how static RAMs are interfaced to 8086. Give necessary interface diagram assuming appropriate signals and memory size
   (b) Explain the need of DMA. Discuss in detail about DMA data transfer method [8+8]
7. (a) Write an ALP in 8086 to add two 10-byte numbers available in array1 and array 2 store the result in array 3
   (b) Write an ALP in 8086 to find average of two numbers [10+6]
8. (a) Explain in detail about the following units in 8086 Microprocessor
      i. Bus interface unit (BIU)
      ii. Execution unit (EU)
   (b) Describe the function of the following two registers
      i. Instruction pointer
      ii. Stack pointer [8+8]

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Code No: R05320404 **R05** **Set No. 3**

III B.Tech II Semester Examinations,December 2010
MICROPROCESSORS AND INTERFACING
Common to BME, ETM, E.CONT.E, EIE, ECE

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) With relevant examples, discuss about arithmetic group of instructions of 8086
   (b) Write a procedure in 8086 ALP, to divide a 16 - bit hexadecimal number by a 8- bit hexa decimal number. [8+8]
2. (a) Write an ALP in 8086 to add two 10-byte numbers available in array1 and array 2 store the result in array 3
   (b) Write an ALP in 8086 to find average of two numbers [10+6]
3. (a) Interface Data memory of 16K x 8 SRAM to 8051 and give memory map. The Starting address of SRAM should be 0000H.
   (b) Give the format of PCON in 8051 and give bit definitions. [10+6]
4. (a) Discuss about DOS and BIOS interrupts. Give necessary examples.
   (b) Explain in general why interrupt priorities are required. Discuss about interrupt priorities of 8259. [8+8]
5. (a) Explain how static RAMs are interfaced to 8086. Give necessary interface diagram assuming appropriate signals and memory size
   (b) Explain the need of DMA. Discuss in detail about DMA data transfer method [8+8]
6. (a) Explain in detail about the following units in 8086 Microprocessor
      i. Bus interface unit (BIU)
      ii. Execution unit (EU)
   (b) Describe the function of the following two registers
      i. Instruction pointer
      ii. Stack pointer [8+8]
7. (a) Distinguish between Mode set control word and BSR control Word of 8255?
   (b) Write an ALP in 8086 to generate a symmetrical square wave form with 1KHz frequency? Give the necessary circuit setup with a DAC? [8+8]
8. (a) What are the important features of 8251?
   (b) Explain the following control words of 8251. With suitable Examples.
      i. Mode word
      ii. Command word [6+10]

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