Code.No: **RR312001**

RR

SET-1

III B.TECH – I SEM EXAMINATIONS, NOVEMBER - 2010
MICROPROCESSORS AND INTERFACING
(MECHANICAL ENGINEERING)
(PRODUCTION)

Time: 3hours   Max.Marks:80

Answer any FIVE questions
All questions carry equal marks
- - -

1.a) Explain the functionality of the following pins of 8085
   i)   SID
   ii) TRAP
   iii) ALE
   iv) $M / \bar{IO}$
 b) Explain how interrupts are handled in 8085. How many hard ware and software interrupts can be handled by 8085?   [8+8]

2.a) Draw the timing diagram of read cycle on 8086 and explain its minimum mode.
 b) Explain the Bus interface unit functionality of 8086.   [8+8]

3.a) Write an assembly language program to 8086 to find the largest number from a list.
 b) Write an assembly language program to 8086 to disassemble a 16 bit number as shown:
   If number is 473F Hex the result should be 04, 07, 03, OF Hex in 4 locations in data
   segment.   [8+8]

4.a) Write a Procedure in assembly language program to compute the cube of a number.
 b) Explain how stack is used in handling procedure calls or interrupt servicing.   [8+8]

5.   Write an assembly language program to 8086 to reverse a string and check for
     palindrome or not.   [16]

6.   Draw the block diagram of 8259 and explain its functioning in handling interrupts.
                                                                                        [16]

7.a) Interface an 8 bit ADC (Successive approximation) type to 8086 through 8255. Use PC7
     and PC0 for ``start conversion'' and ``End of conversion'' signals.
 b) Draw the block diagram of 8255 and explain each of the blocks   [8+8]

8.a) An 8251 is interfaced to 8086 at address OFOH. Draw the hardware connectivity and
     write initialization program in asynchronous mode with even parity 6-data bits, band rate
     factor 16, one start bit and one stop bit.
 b) What are the MODEM control lines? Explain each line   [8+8]

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Code.No: **RR312001**　　　　　　　**RR**　　　　　　　SET-2

III B.TECH – I SEM EXAMINATIONS, NOVEMBER - 2010
MICROPROCESSORS AND INTERFACING
(MECHANICAL ENGINEERING)
(PRODUCTION)

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

Answer any FIVE questions
All questions carry equal marks
- - -

1.a) Write an assembly language program to 8086 to find the largest number from a list.
  b) Write an assembly language program to 8086 to disassemble a 16 bit number as shown:
     If number is 473F Hex the result should be 04, 07, 03, OF Hex in 4 locations in data
     segment.　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　[8+8]

2.a) Write a Procedure in assembly language program to compute the cube of a number.
  b) Explain how stack is used in handling procedure calls or interrupt servicing.　　[8+8]

3.　Write an assembly language program to 8086 to reverse a string and check for
     palindrome or not.　　　　　　　　　　　　　　　　　　　　　　　　　[16]

4.　Draw the block diagram of 8259 and explain its functioning in handling interrupts.
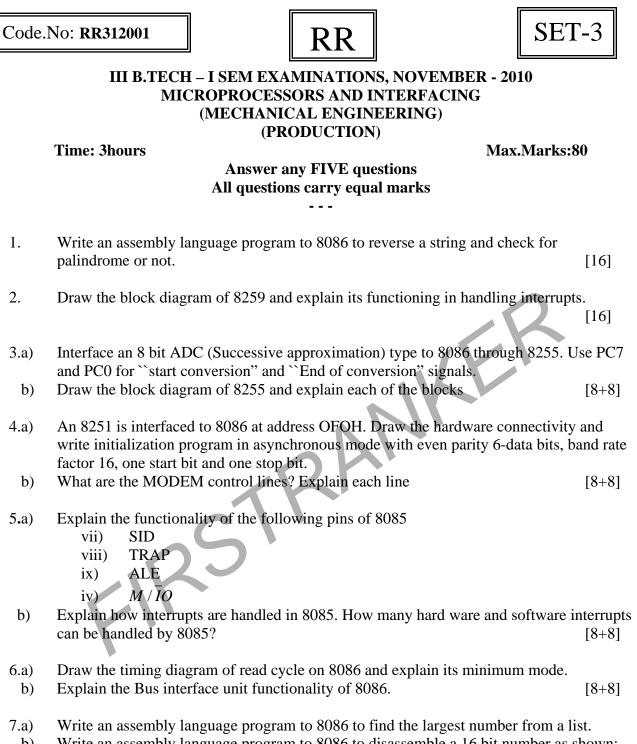　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　[16]

5.a) Interface an 8 bit ADC (Successive approximation) type to 8086 through 8255. Use PC7
     and PC0 for ``start conversion'' and ``End of conversion'' signals.
  b) Draw the block diagram of 8255 and explain each of the blocks　　　　　　　[8+8]

6.a) An 8251 is interfaced to 8086 at address OFOH. Draw the hardware connectivity and
     write initialization program in asynchronous mode with even parity 6-data bits, band rate
     factor 16, one start bit and one stop bit.
  b) What are the MODEM control lines? Explain each line　　　　　　　　　　[8+8]

7.a) Explain the functionality of the following pins of 8085
         iv)　SID
         v)　TRAP
         vi)　ALE
         iv)　$M/\bar{IO}$
  b) Explain how interrupts are handled in 8085. How many hard ware and software interrupts
     can be handled by 8085?　　　　　　　　　　　　　　　　　　　　　　[8+8]

8.a) Draw the timing diagram of read cycle on 8086 and explain its minimum mode.
  b) Explain the Bus interface unit functionality of 8086.　　　　　　　　　　　[8+8]

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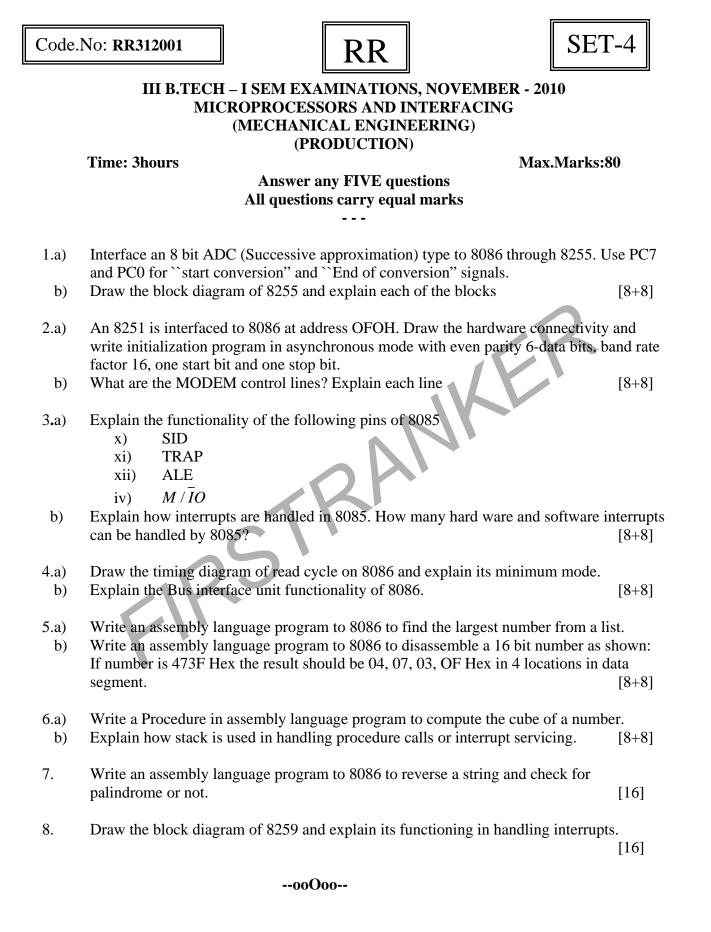
Code.No: **RR312001**   RR   SET-3

III B.TECH – I SEM EXAMINATIONS, NOVEMBER - 2010
MICROPROCESSORS AND INTERFACING
(MECHANICAL ENGINEERING)
(PRODUCTION)

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

Answer any FIVE questions
All questions carry equal marks
- - -

1. Write an assembly language program to 8086 to reverse a string and check for palindrome or not. [16]

2. Draw the block diagram of 8259 and explain its functioning in handling interrupts. [16]

3.a) Interface an 8 bit ADC (Successive approximation) type to 8086 through 8255. Use PC7 and PC0 for ``start conversion" and ``End of conversion" signals.
   b) Draw the block diagram of 8255 and explain each of the blocks [8+8]

4.a) An 8251 is interfaced to 8086 at address OFOH. Draw the hardware connectivity and write initialization program in asynchronous mode with even parity 6-data bits, band rate factor 16, one start bit and one stop bit.
   b) What are the MODEM control lines? Explain each line [8+8]

5.a) Explain the functionality of the following pins of 8085
      vii)   SID
      viii) TRAP
      ix)   ALE
      iv) $M/\overline{IO}$
   b) Explain how interrupts are handled in 8085. How many hard ware and software interrupts can be handled by 8085? [8+8]

6.a) Draw the timing diagram of read cycle on 8086 and explain its minimum mode.
   b) Explain the Bus interface unit functionality of 8086. [8+8]

7.a) Write an assembly language program to 8086 to find the largest number from a list.
   b) Write an assembly language program to 8086 to disassemble a 16 bit number as shown: If number is 473F Hex the result should be 04, 07, 03, OF Hex in 4 locations in data segment. [8+8]

8.a) Write a Procedure in assembly language program to compute the cube of a number.
   b) Explain how stack is used in handling procedure calls or interrupt servicing. [8+8]

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Code.No: **RR312001**

RR

SET-4

III B.TECH – I SEM EXAMINATIONS, NOVEMBER - 2010
MICROPROCESSORS AND INTERFACING
(MECHANICAL ENGINEERING)
(PRODUCTION)

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

Answer any FIVE questions
All questions carry equal marks
- - -

1.a) Interface an 8 bit ADC (Successive approximation) type to 8086 through 8255. Use PC7 and PC0 for ``start conversion" and ``End of conversion" signals.
  b) Draw the block diagram of 8255 and explain each of the blocks   [8+8]

2.a) An 8251 is interfaced to 8086 at address OFOH. Draw the hardware connectivity and write initialization program in asynchronous mode with even parity 6-data bits, band rate factor 16, one start bit and one stop bit.
  b) What are the MODEM control lines? Explain each line   [8+8]

3.a) Explain the functionality of the following pins of 8085
    x)   SID
    xi)   TRAP
    xii) ALE
    iv) $M/\overline{IO}$
  b) Explain how interrupts are handled in 8085. How many hard ware and software interrupts can be handled by 8085?   [8+8]

4.a) Draw the timing diagram of read cycle on 8086 and explain its minimum mode.
  b) Explain the Bus interface unit functionality of 8086.   [8+8]

5.a) Write an assembly language program to 8086 to find the largest number from a list.
  b) Write an assembly language program to 8086 to disassemble a 16 bit number as shown:
     If number is 473F Hex the result should be 04, 07, 03, OF Hex in 4 locations in data segment.   [8+8]

6.a) Write a Procedure in assembly language program to compute the cube of a number.
  b) Explain how stack is used in handling procedure calls or interrupt servicing.   [8+8]

7.   Write an assembly language program to 8086 to reverse a string and check for palindrome or not.   [16]

8.   Draw the block diagram of 8259 and explain its functioning in handling interrupts.
                                                                                       [16]

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