Code :R5320406

R5

III B.Tech II Semester(R05) Supplementary Examinations, April/May 2011
MICROPROCESSORS & INTERFACING
(Electronics & Communication Engineering, Electronics & Instrumentation Engineering,
Electronics & Control Engineering, Biomedical Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions
All questions carry equal marks
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1. (a) Bring out the differences between 8086 and 8085 in respect of architecture, operating frequencies and memory addressing capabilities.

   (b) Explain why segmentation is required in 8086.

2. (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.

3. (a) Write an ALP in 8086 to move a block of N bytes of data from source to destination.

   (b) Write an ALP in 8086 to add 5 bytes of data in an array by making use of procedure.

4. (a) With appropriate pin diagrams explain the minimum and maximum mode operations of 8086.

   (b) Explain the need for DMA in Microprocessor based systems.

5. (a) With a neat internal architectural diagram, explain the features of 8255.

   (b) Explain the interfacing of a stepper motor with 8086 using the ports of 8255.

6. (a) How many Initialization Command words are required for a single 8259 in an 8086 based system? Explain their format?

   (b) Discuss the following interrupts?
      i. Single step Execution
      ii. Interrupt on Overflow.

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. (a) Interface 8255 I/O ports with 8051. The address of port A should be 0000H.

   (b) Explain about the three errors in asynchronous serial transmission.

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