

**IV B.Tech I Semester Supplementary Examinations, April/May 2005**  
**MICROPROCESSORS AND INTERFACING**  
**( Common to Electronics & Instrumentation Engineering, Bio-Medical**  
**Engineering and Mechatronics)**

**Time: 3 hours**

**Max Marks: 70**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. (a) Differentiate microprocessor and microcomputer.  
(b) With a neat pin diagram of 8085 explain the functions of various pins.
2. (a) With suitable examples and diagrams discuss about various addressing modes of 8086.  
(b) Explain the following with reference to 8086
  - (a) W-bit
  - (b) D-bit
  - (c) V-bit
  - (d) Z-bit.
3. (a) Write an assembly language program sequence that will reverse the contents of the bytes PLACE through PLACE+N-1 where N is the contents of NUM.  
(b) Briefly explain the shift instructions also give the examples.
4. Write a procedure SOLUTION that will use the arithmetic operators procedures to evaluate the expression  $((A-B)*C) / D$ .
5. (a) List out different instructions involved with string operations.  
(b) Write an assembly language program segment to compare two strings stored at two different locations LOC1 and LOC2.
6. During block input byte transfer what changes occur as the datum is sent from the interface to the memory. Explain with a neat diagram.
7. Design an output port with the address FFH to interface the 1408 D/A. converter that is calibrated for a 0 to 10V range. Also draw the diagram.
8. Write short notes on:
  - (a) USART
  - (b) 8255.

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