

**IV B.Tech I Semester Regular Examinations, November/December 2005**  
**MICROPROCESSORS AND APPLICATIONS**  
**(Mechanical Engineering)**

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

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

\*\*\*\*\*

1. (a) Explain the architecture of 8085 microprocessor along with block diagram. [10]  
(b) Define an instruction. Explain various instruction formats with examples. [6]
2. (a) Distinguish between packed BCD and unpacked BCD [4]  
(b) Explain about branch instructions for 8086 with examples. [12]
3. (a) What is a stack? Explain 8086 instructions for directly pushing and popping the stack [6]  
(b) Give a brief note on macros [4]  
(c) Explain various interrupts of 8086 [6]
4. (a) Explain the following  
i. REP prefix  
ii. XLAT  
iii. IN and OUT instructions. [8]  
(b) Explain about daisy chain priority scheme of interrupt I/O. [8]
5. (a) With a block schematic explain A/D and D/A conversions using 8255 PPI [8]  
(b) Describe DMA controller. Give the possible modes of 8237. [8]
6. (a) Write an ALP to move the contents of a block of memory to another area in the memory. [8]  
(b) Explain the following  
i. Registers of 8086  
ii. 8086's PSW [8]
7. (a) Explain about programmed I/O [8]  
(b) Explain the functions of RS 232C [8]
8. Write ALP for 8086 to do the following sort given list of integer numbers in ascending order. Specify the logic of the sorting method used. [16]

\*\*\*\*\*