

III B.Tech II Semester Supplementary Examinations, Apr/May 2006
MICROPROCESSOR AND INTERFACING
(Mechatronics)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Explain the components of a Microcomputer.
(b) Explain the following pins of 8085 Microprocessor
 - i. SID, SOD
 - ii. ALE
 - iii. HOLD, HLDA
 - iv. TRAP[8+8]
2. (a) Explain the flag register of 8086.
(b) Explain the concept of memory segmentation.
(c) Explain, when Queue is failing to speed up the execution. [6+6+4]
3. (a) Write a program to check whether the given string is palindrome or not.
(b) Briefly explain about following instructions.
 - i. ADD
 - ii. NEG
 - iii. AAM
 - iv. DIV[8+8]
4. Write a recursive routine to evaluate the following polynomial $Y = A_0 + A_1X + A_2X^2 + A_3X^3 + \dots + A_NX^N$. The coefficients $A_0, A_1, A_2, \dots, A_N$ are to be successive words in memory and all parameter addresses are to be passed via the stack. [16]
5. Explain in detail with flowcharts the operation of programmed I/O interrupt I/O with suitable examples. [16]
6. Give the various control word formats of 8279 KBD controller. [16]
7. (a) With a neat block diagram explain the working principle of floppy disk controller.
(b) Explain how DMA controller is used to interface floppy disk controller. [8+8]
8. (a) List out the differences between a numeric coprocessor and I/O processor.
(b) Give the pin details of 8087 with a neat pin diagram. [8+8]
