

III B.Tech I Semester Supplementary Examinations, November 2006
MICROPROCESSORS AND ITS APPLICATIONS
(Production Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Explain various interrupt of 8085 Microprocessor and their priorities.
(b) Explain the
 - i. SID
 - ii. SOD
 - iii. $S_0, S_1,$
 - iv. \overline{INTA} pins of 8085 Microprocessor[8+8]
2. (a) Explain the various parts of BIU in 8086.
(b) Explain the following instruction Formats with examples.
 - i. One byte instruction, register mode.
 - ii. Register to / from memory with no displacement.[8+4+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. (a) What is the necessity of relocation? Explain the support provided by 8086 for relocation capability
(b) Give the address map of interrupt vector address table? Explain with illustration how Int 20H is executed?
(c) Explain different ways of passing parameters to subroutine? [8+4+4]
5. (a) What is a recursive procedure? Write a recursive procedure to calculate the factorial of number N, where N is a two-digit Hex number?
(b) What are the loop instructions of 8086? Explain the use of DF flag in the execution of string instructions. [8+8]
6. (a) Draw the block diagram of 8259 and explain each block?
(b) Explain how IRET instruction is executed? [8+8]
7. Explain how to interface a stepper motor with 4-step input sequence to 8086 based system with the help of hard ware design? Write the instruction sequence to move the stepper motor 10 steps in clockwise and 12 steps in anti-clockwise direction.

[16]

8. (a) Draw the command register and mode register format of 8237 and explain each bit?
- (b) Show how 8237s are cascaded to provide more number of DRQs and explain the operation?
- (c) Explain how memory to memory transfer is performed with 8237? [6+5+5]

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