Code No: 45098 **R07** **Set No - 1**

III B.Tech I Semester Regular Examinations,Nov/Dec 2009
MICROPROCESSORS AND INTERFACING
Common to Information Technology, Instrumentation And Control Engineering, Electronics And Computer Engineering, Computer Science And Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Write a sequence of instructions to communicate to a modem using 8251 at address 080H.
   (b) Draw the flowchart showing how synchronous serial data can be sent from a port line using software routine. [8+8]

2. (a) Draw the block diagram of 8255 and explain each block?
   (b) Explain how to interface 8x8 key board to 8255? Draw the flow chart of key identification and decoding procedure? [8+8]

3. Explain the following terms with reference to 8259.
   (a) END of interrupt
   (b) Automatic rotation
   (c) Poll command
   (d) Read resister command [16]

4. Discuss the following signal descriptions?
   (a) ALE/PROG
   (b) $\overline{EA}$ / V_{PP}
   (c) $\overline{PSEN}$
   (d) RXD
   (e) $\overline{INT_0}$ / $\overline{INT_1}$
   (f) TXD
   (g) T_0 AND T_1
   (h) $\overline{RD}$ [16]

5. (a) Discuss the system bus cycle of 8086 with a neat diagram? What is the use of wait cycles? Compare wait and idle cycles?
   (b) Design an I/O port decoder that generate the following low-bank I/O strobes: 00FEH, 00C8H, 00DEH, 00EEH. [8+8]

6. (a) Explain in detail the coding template for 8086 MOV instruction?

(b) Write briefly about

i. PUBLIC directive

ii. EXTERN directive [8+8]

7. It is necessary to check weather the word stored in location 6000H:6000H is zero or not. Show all possible ways of testing the above condition using different addressing modes and store 0FFH if the condition is satisfied in location A000H:1002H. Otherwise store 00H. [16]

8. (a) How many local descriptors and global descriptors can be defined in 80286 and explain how to access them?

(b) Explain task switching operation in 80286? [8+8]

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