NR/R09

Code No: A4904, A5403/C4904, C0703, C4203, C5403, C6404

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M.Tech I Semester Examinations, March/April-2011

MICROPROCESSORS AND MICROCONTROLLERS

(COMMON TO ELECTRICAL POWER ENGINEERING, ELECTRICAL POWER SYSTEMS, POWER AND INDUSTRIAL DRIVES, POWER ELECTRONICS AND ELECTRIC DRIVES, POWER ENGINEERING AND ENERGY SYSTEMS)

Time: 3hours **Max. Marks: 60**

Answer any five questions

All questions carry equal marks

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1. a) With a neat sketch explain the architecture of 8086.
   b) Explain the following instruction with suitable example:
   i) XLAT ii) TEST iii) LOCK iv) CWD. [12]

2. a) Write the differences between minimum and maximum mode in 8086.
   b) Explain the timing diagram of 8086 for read cycle when the ready I/P is '0'at the end of T2. [12]

3. a) Write a program to transfer 100H bytes.
   100H bytes are stored in memory location address at 1000:0300H transfer these data bytes to another memory location address starting from 1000:0700H using PUSH & POP instruction.
   b) What are sequence of operation are performed by 8086 when an interrupt occurs? [12]

4. a) Explain the memory organization in 80386.
   b) Explain the special features of Pentium pro micro processors. [12]

5. Design a system with 8086 to read the O/P of sensors and store to the values at the data base 'P' use 8255 and ADC, and write a programme to store the output of a sensor which is connected to port B of 8255. [12]

6. Draw and explain the block diagram of 8254. [12]

7. a) With a neat diagram explain the interfacing of external memory with 8051.
   b) Discuss the functioning of timing and control unit and oscillator block of 8051. [12]

8. a) Explain the following instruction with suitable examples.
   1. DJNZ 2. JMP 3. SWAP 4. XCHD 5. ATMP
   b) Explain the timer operation in 8051. [12]

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