

Code No: 55030

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD

B. Tech III Year I Semester Examinations, December - 2014

MICROPROCESSORS AND INTERFACING

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 75

**Answer any five questions
All questions carry equal marks**

- 1.a) Give the comparison between microprocessors and microcontrollers.
- b) Explain in detail the general purpose and special function registers of 8086 microprocessor.
- 2.a) Write an assembly language program in 8086 to count number of positive and negative numbers from an array of 8-bit integers.
- b) Explain the data transfer instructions of 8086 processor.
3. Explain with a block diagram how a stepper motor can be interfaced to 8086 microprocessor and explain its working.
4. Explain the need for DMA controller and its operation in detail.
- 5.a) Discuss about DOS and BIOS interrupts. Give necessary examples.
- b) Give the structure of Interrupt Vector Table of 8086 processor.
6. Discuss the structure of I/O ports in 8051 microcontroller.
7. Write a program to initialize 8251 in asynchronous mode with even parity, 7 bit data character, 2400bd.
8. Draw the structures of the following SFRs of 8051 and explain the bits.
 - a) TMOD
 - b) TCON
 - c) SCON
 - d) IE
 - e) IP
 - f) PCON

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