JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year I Semester Examinations, February/March - 2016
MICROPROCESSORS AND INTERFACING
(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 75

Answer any five questions
All questions carry equal marks
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1.a) Explain the Bus Interface Unit and Execution Unit of 8086 processor.
  b) Explain the following addressing modes of 8086: [7+8]
  i) Direct
  ii) Immediate
  iii) Indexed
  iv) Register Relative

2.a) Write an assembly language program in 8086 to exchange a block of N bytes of data between source and destination.
  b) Explain the process control instructions of 8086 processor. [7+8]

3. What are the operating modes of 8086? Explain the minimum mode operation of 8086 processor, listing all minimum mode pins to 8086μP. [15]

4. Describe the three modes of operation for 8255 using relevant diagrams. [15]

5. Explain in detail about the following control word formats of 8259:
   a) Initialization Command Words (ICWs).
   b) Operational Command Words (OCWs). [8+7]

6.a) Briefly discuss about the serial communication standards.
  b) Describe the functions of the DSR, DTR, RTS, CTS, TXD, and RXD signals exchanged between a terminal and a modem. [8+7]

7.a) Explain the RAM organization in 8051 microcontroller.
  b) Write an ALP in 8051 μc to read a string "hello world" serially. [8+7]

8.a) Explain the timer modes in 8051 controller.
  b) Draw the structures of TMOD and TCON registers and explain. [8+7]

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