

R09

Code No: 09A50506

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD

B. Tech III Year I Semester Examinations, May/June – 2013

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 architecture of 8085 microprocessor with a neat structure.
- b) Discuss the following addressing modes of 8086 microprocessor:  
i) Indexed                      ii) Register Relative                      iii) Register.                      [9+6]
2. Write in detail about the following instructions with examples:  
a) CMPSB                      b) LODS                      c) MOVSW  
d) REPZ                      e) SUBB.                      [15]
3. Explain the working of DMA controller with a neat block diagram.                      [15]
4. Write an assembly language program to interface keyboard to 8086 processor using 8255. Do the necessary initializations.                      [15]
- 5.a) Explain the sequence of events that happen when an interrupt signal is given to 8086 processor.
- b) Draw the interrupt vector table structure and explain.                      [15]
- 6.a) Explain the difference between 20mA current loop and RS232-C standard.
- b) Explain the registers of 8251 USART.                      [15]
- 7.a) Explain the internal RAM organization of 8051 controller.
- b) Discuss in detail the following instructions of 8051:  
i) SWAP                      ii) DEC  
iii) CJNE                      iv) DJNZ.                      [15]
- 8.a) Differentiate between the timer and counter operations of 8051 controller.
- b) Explain the level triggered and edge triggered interrupts of 8051 and the necessary pins.                      [15]

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