

**R09**

Code No: 55030

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B. Tech III Year I Semester Examinations, March - 2017**

**MICRO PROCESSORS 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) What is meant by Addressing mode? Explain different addressing modes supported by 8086 with suitable examples. [8+7]  
b) Explain the following for 8086 microprocessor.  
i) Bus interface unit  
ii) General purpose registers  
iii) Pointers and index registers
- 2.a) Write an Assembly language program to find the largest of 'N' 8-bit numbers stored from SOURCE. Store the largest number at RESULT. [8+7]  
b) Explain about Branch and Call instructions with suitable examples.
- 3.a) Draw and discuss the Maximum mode 8086 system with relevant read and write cycle timing diagrams. [8+7]  
b) Write an assembly language program to find square root of an 8-bit number.
- 4.a) Interface an 8-bit DAC to port A through 8255. Write a program segment to output a ramp. [8+7]  
b) Explain the mode of operation in 8255 PPI.
- 5.a) Explain the sequence of events that when an interrupt signal is given to 8086 processor. [8+7]  
b) Explain the Fully Nusted and Rotating Priority modes of operation of 8259.
- 6.a) Explain Asynchronous transmission in serial mode. [7+8]  
b) Explain RS232C circuit model and the logic levels of RS232B and C levels.
- 7.a) Explain the I/O port structure of 8051. [8+7]  
b) Explain the format and bit definitions of the following SFRs in 8051.  
i) TMOD    ii) TCON    iii) SCON
- 8.a) Write short notes on DOS and BIOS interrupts in 8051. [7+8]  
b) Explain the Serial communication control in 8051.

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