

B. Tech Degree V Semester (Supplementary) Examination July 2010

CS 503 MICROPROCESSORS (2002 Scheme)

Time : 3 Hours

Maximum Marks : 100

- I. (a) Sketch the block schematic of the 8085 microprocessor and explain. (12)
(b) Explain the function of \overline{RD} , \overline{WR} and IO/\overline{M} signals. (8)
- OR**
- II. (a) Explain how the signal ALE can be used to demultiplex the lines $AD_0 - AD_7$. (10)
(b) Explain the flags associated with 8085 microprocessor. (10)
- III. (a) Describe the classification of the instruction set of 8085 with examples. (10)
(b) Write an assembly language program for 8085 microprocessor to arrange ten numbers in ascending order. (10)
- OR**
- IV. (a) Write an assembly language program for 8085 to divide a 16 bit number by an 8 bit number. (10)
(b) What are the different ways by which an I/O device can be interfaced with the microprocessor? Explain. (10)
- V. (a) Draw the block diagram of 8259 (Programmable Interrupt Controller) and explain. (12)
(b) Briefly explain the interrupt facility of Intel 8085. (8)
- OR**
- VI. (a) Draw a block diagram of 8257 (DMA controller) and explain. (12)
(b) Explain the use of the multiplexer in the input of ADC 0808/0809. (8)
- VII. (a) Describe the various modes of operation of 8255 chip. Give the significance of each bit of the control word format. (12)
(b) Explain the working principles of RS 232 interface. (8)
- OR**
- VIII. (a) Explain the different modes of operation of 8253 (Programmable Timer). Which mode generates the square wave? (12)
(b) What is the difference between 2-key lock out and n-key roll over modes in 8279? (8)
- IX. (a) What do you mean by addressing modes? What are the different addressing modes supported by 8051? (10)
(b) Explain with an example the function of AC flag. (6)
(c) Explain the difference between MOVX and MOV instructions. (4)
- OR**
- X. (a) Draw and explain the architecture of 8051. (12)
(b) Explain the meaning of an Interrupt vector. What are the Interrupt vectors available in 8051? (8)