

Library

T.E. (Elect.) (Sem. VI) (R.)

18/12/07

Microprocessors & systems

Con/4898-07.

(REVISED COURSE)

CD-5526

(3 Hours)

[Total Marks : 100

MASTER

- N.B. : (1) Question No. 1 is compulsory.
 (2) Attempt any four questions out of remaining six questions.
 (3) Assume any suitable data wherever required but justify the same.
 (4) Figures to the right indicate full marks.
 (5) Answer to questions should be grouped and written together.

- Q.1 A. Explain the following states of 8085 microprocessor 5
 i) Fetch iii) Reset
 ii) Execution iv) Hold
 v) Half
- B. Differentiate between I/O mapped and memory mapped I/O. 5
 C. Explain strobed input-output mode operating mode of 8255. 5
 D. A two phase bipolar winding stepper motor is to be interfaced with 8085 microprocessor. 5
 Draw the interfacing diagram.
- Q.2 A. Write a program to add two multibyte numbers. 10
 B. Draw and explain the timing diagram of INR M instruction. 10
- Q.3 A) What are different functional blocks of 8259A chip? Explain the role of IRR, ISR, IMR and priority resolver in processing any interrupt request by 8259A. 10
 B) Design interrupt driven RTC using RST 7.5 interrupt. 10
- Q.4 A. Explain various parameter passing techniques. 10
 B. Write an assembly language program to generate a square-wave of 1 Hz using 8254. Use counter and counter 1 in cascade, show its connections. Assume system clock frequency 5 MHz. 10
- Q.5 A. Design 8085 based temperature control system. Show hardware interface. Write a program to control the temperature. 15
 B. Explain the following terms :- 05
 i) Throughput ii) Interrupt latency
 iii) Task time iv) MIPS
 v) DMA
- Q.6 A. Write a program to generate triangular waveform of peak value 5V using DAC interfaced with 8155. 10
 B. Explain the sequential operation of calculator type display of 8279. 10
- Q.7 A. Write short notes on any two:- 20
 a) Methods of Time delay
 b) 8085 microprocessor based minimum system.