

Con. 3267-08.

CO-2524

(REVISED COURSE)

(3 Hours)

[Total Marks : 100]

N.B. (1) Question No. 1 is **compulsory**.(2) Attempt any **four** questions out of remaining **six** questions.(3) Illustrate answers with **sketches** wherever **necessary**.(4) Assume **suitable** data.

1. Design an 8085 based system for following specifications : 20
 - (a) 8 KB EPROM using 4 KB × 8 devices
 - (b) 8 KB RAM using 4 KB × 8 devices.
 - (c) One 8259 A PIC in I/o mapped I/o.
 - (d) One 8255 in I/o mapped I/o.

Draw a neat schematic diagram, explain the connections of various devices in brief and give addresses of I/o ports.
2. (a) What are subroutines ? What is re-entrant and recursive subroutine ? 10
- (b) Explain the interrupt structure of 8085 microprocessors. 10
3. (a) Draw the functional block diagram of 8155. Interface 8155 to 8085 10
microprocessor. Show the decoding for memory of 8155 at starting address 2000H. Explain timer section of 8155.
- (b) Explain in brief the various techniques of producing software delay in an 8085 10
based system.
4. (a) What are the functional blocks of 8259A PIC ? Explain what are ICW's and 10
OCW's.
- (b) Show the 8085-8259A interface for a single PIC. 10
5. (a) Explain the importance of stack in micro-processor based systems and highlight 10
all the instructions that involve stack operation.
- (b) Give the architecture and organisation of 8255 PPI. Explain control word of 10
8255.
6. (a) What do you understand by programming model of 8085 microprocessor ? 10
Explain in detail.
- (b) Explain the instructions EI, DI, RIM and SIM. 10
7. Write short notes (any two) :— 20
 - (a) Bus contention
 - (b) Opcode fetch machine cycle in 8085
 - (c) I/o mapped I/o and memory mapped I/o.