

Con. 2274-07.

(REVISED COURSE)

ND-9113

(3 Hours)

[Total Marks : 100]

N.B. : (1) Question No. 1 is compulsory.
 (2) Solve any four from remaining six questions.

1. (a) Interface a interrupt driven matrix keyboard in 2 key lockout mode to 8085 through 8279. Write an assembly language program to read keycode of the pressed key. The external clock frequency is 2 MHz. Use I/O mapped I/O technique. 12
 (b) Explain the interfacing of 8086 with 8087 with clear functioning of RQ/GT pins. 8
2. (a) Explain the use of SID and SOD pins of 8085. 2
 (b) Explain the instructions SIM and RIM. 8
 (c) What are the different functional blocks of 8259 A ? Explain its initialization process. 10
3. (a) Draw and explain the timing diagram for following 8085 instructions : 10
 (i) RSTn (ii) XTHL
 (b) Explain the operation of model of ports of 8255 of I/O mode. 10
4. (a) Explain command words of 8254. 5
 (b) Write a program to generate square wave of 1 KHz assuming that a 2 MHz clock is available and the 8253 registers are mapped on the I/O address space of 8085 at locations A0, A1, A2 and A3. Use BCD counting. 5
 (c) Explain the role of 8288 Bus Controller in maximum mode of 8086. 10
5. (a) Explain the following instructions of 8086 : 4
 (i) AAM (ii) SCAS.
 (b) Explain memory segmentation in 8086 microprocessor. What is logical and physical address ? 8
 (c) Explain flag register of 8086 in detail. 8
6. (a) What do you mean by Mixed Language Programming ? Write a program in 8086 to find 2's complement of a number. 12
 (b) Explain exception handling performed by NDP 8087. 8
7. Write short notes on :- 20
 (a) Architecture of 8087
 (b) Minimum mode of 8086
 (c) Modes of DMA Transfer.