

29/5/07

B.E. (Elect-2 VI (old))

29/5/07

VT May 02 12

MP Application

Con/2884-07.

(OLD COURSE)

ND-875

Microprocessor & System (3 Hours) Total Marks : 100

MASTER

- N.B. : (1) Question No. 1 is compulsory.
 (2) Attempt any four questions out of remaining six questions.

1. Explain the architecture of 8085 microprocessor with a functional block diagram. 20
2. (a) Explain various addressing modes of 8085 with suitable examples. 10
 (b) Draw a logic schematic to generate four control signal, using the 8085 $\overline{IO/\overline{M}}$, \overline{RD} and \overline{WR} signals : 10
 - (i) \overline{MEMR}
 - (ii) \overline{MEMW}
 - (iii) \overline{IOR}
 - (iv) \overline{IOW} .

Explain the function of these control signals.
3. (a) Explain the function and the difference between the four instructions, RLC, RAL, RRC and RAR. 8
 (b) Draw the timing diagram of following instructions : 12
 - (i) MVI A, 3EH
 - (ii) STA 2000H
 - (iii) OUT 83H.
4. (a) Explain the interrupt structure of 8085 microprocessor. Show priorities, input triggering, masking, vector locations etc. 15
 (b) What is the use of SID and SOD pin in 8085 ? 5
5. Explain the working of microprocessor based schemes for – 20
 - (i) D. C. motor speed control
 - (ii) Temperature control

Draw interface diagram and flow chart and program.
6. (a) Draw the block diagram of 8255 PPI and explain its various operating modes. 10
 (b) Differentiate I/O mapped I/O with memory mapped I/O. 10
7. (a) Discuss the organisation and operation of IC 8279 keyboard and display controller. 10
 Explain the term –
 - (i) 2 key lockout
 - (ii) N key rollover.
 (b) Discuss the various modes of operation of DMA controller 8237. 10
