

Sem-V microprocessor - I Biom

P4-Exam.-Oct-09-212

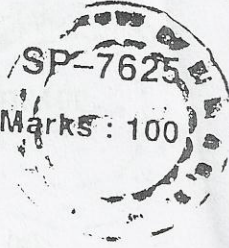
11/12/09

Con. 5230-09.

(OLD COURSE)

(3 Hours)

[Total Marks: 100]



- N.B. : (1) Question No. 1 is compulsory.  
(2) Attempt any four from remaining six question.  
(3) Draw neat labelled diagrams whenever necessary.

1. Design 8085 based system with following specification :-

- (a) 8085 working at 3 MHz
- (b) 16 KB EPROM using 27128
- (c) 32 KB RAM using 62256
- (d) One 8 bit ADC and one 8 bit DAC need to be connected in the system for which provide necessary ports using 8255

20

Show memory and IO Map. Use absolute decoding.

- 2. (a) Explain flag register of 8085 in detail. 10
- (b) Explain any two instruction in which 8085 uses W & Z temp. registers. 5
- (c) Explain how signals like  $\overline{\text{MEMR}}$ ,  $\overline{\text{MEMW}}$ ,  $\overline{\text{IOR}}$  and  $\overline{\text{IOW}}$  are generated in 8085 system. 5

- 3. (a) Explain BSR mode of 8255. Write an ALP to blink LED on PC5 of 8255. 10
- (b) Draw timing diagram of :- 10
  - (i) OUT 80H
  - (ii) INR M.

- 4. (a) Write a program to find largest 8 bit number in an array of 20 bytes. Starting at an address 8000H and store largest no. at 4000H. 10
- (b) Explain different Parameter Passing techniques. 10

- 5. (a) What is DMA ? Explain different modes of data transfer of 8237 DMA controller. 10
- (b) Explain RBC of 8254 PIT. Write a program to read 16 bit count and status byte of counter 0 and counter 2 of 8254 PIT using RBC. 10

- 6. (a) Differentiate between Memory mapped IO and IO mapped IO. 5
- (b) Explain different addressing modes of 8085 with suitable examples. 5
- (c) Explain the output handshake mode 1 of 8255 PPI with timing diagram. 10

- 7. (a) Draw neat diagram of interrupt structure of 8085. 10
- (b) Explain following instruction - 10
  - (i) LXI SP, 2000H
  - (ii) DAD B
  - (iii) LDAX D
  - (iv) XTHL
  - (v) OUT 80H.