B.E. Sixth Semester (Electronics & Telecommunication., Electronics Engineering) (CGS)

10622 : Introduction to Microprocessors : 6 XT 03

P. Pages : 2 | AU - 2776

Time : Three Hours | Max. Marks : 80

* 0 8 3 7 *

Notes : 1. Due credit will be given to neatness and adequate dimensions.
2. Assume suitable data wherever necessary.
3. Illustrate your answer necessary with the help of neat sketches.

SECTION – A

1. a) Explain different addressing modes of 8085 μp with example. **6**

b) Explain the following Instruction **8**
i) PUSH PSW ii) LDAX rp
iii) RRC iv) RAL

OR

2. a) What is flag? Explain the flag structure of 8085 with 1 example each. **7**

b) What is the role of W & Z register in 8085 μp? **7**

3. a) Write an ALP to find the smallest number of two numbers. **7**
The first no. is 84 H
The second no. is 98 H
84 H is stored in memory location 2501 H
98 H is stored in memory location 2502 H
Store the result in 2503 H.

b) What is the role of subroutine, stack, address space partitioning in 8085 μp system? **6**

OR

4. a) What is Assembler? Explain the types of Assembler and give advantages of two pass Assembler. **7**

b) Differentiate between memory mapped I/O and I/O mapped I/O. **6**

5. a) Draw & explain the block diagram of 8251 USART? What are the various application of 8251 USART? **7**

b) Give the format for SID & SOD operation & explain. **6**

OR

6. a) Explain the following data transfer techniques in μp 8085. **6**
i) Status check polling. ii) Interrupt driven.

b) Explain mode 1 & mode 2 of 8255 PPI. Also explain the advantage of mode 2. **7**

SECTION – B

7. a) Explain in detail the functional block diagram of 8255 PPI. 7

   b) Discuss the format of following registers in 8237 DMA. 7
   i) Mode register.
   ii) Command register.
   iii) Request register.

OR

8. a) Explain the operation of 8254 & explain following modes of 8254 with suitable w/f (s). 8
   1) mode 1
   2) mode 2
   3) mode 5

   b) Explain the following terms. 6
   i) Handshaking
   ii) Polling
   iii) Vector Interrupt.

9. a) Draw & explain the internal architecture of 8086 µp in detail. 6

   b) List different functions of segment registers. Give the rules for memory segmentation & discuss its advantages. 7

OR

10. a) Explain the functioning of following bits used in instruction format of 8086. 7
   i) W bit ii) D bit
   iii) S bit iv) V bit
   v) Z bit

   b) Draw and discuss typical minimum mode of 8086 µp system. 6

11. a) Explain flag manipulation and process control instruction of 8086 µp. 6

   b) Explain the following instruction in detail. 7
   i) CALL ADDR 16 ii) CBW
   iii) CMP AX, BX iv) CWD

OR

12. a) What are the different types of conditional jump instructions in detail? 6

   b) Explain the execution of following unconditional branch instructions in 8086 µp. 7
   i) CALL
   ii) INTN
   iii) JMP

****