

06/10/2017

VCD-

NOTE: 1. Figure should be Neat and labeled.  
2. All Questions are compulsory.  
3. Right side indicates marks.

**Q.1 Answer any 2 from following.**

(10)

1. Explain Tristate devices with examples.
2. List and explain types of memories.
3. Explain the concept of memory organization with control lines.
4. Explain the function of buffers, encoder, decoder, latches.

**Q.2 Answer any 2 from following.**

(10)

1. Draw the functional block diagram of 8085 microprocessor.
2. Explain the working of following units of 8085:
  - a. ALU
  - b. Temporary register
  - c. Program counter
  - d. Instruction register
  - e. Data/ address register
3. Explain the concept of multiplexed address/data bus in 8085.
4. Draw and explain the functions of ALU of 8085 microprocessor.

**Q.3 Answer any 2 from following.**

(10)

1. Explain the working of following instructions of 8085:
  - a. STC
  - b. ADD
  - c. DAA
  - d. XRA r
  - e. CMP r
2. Flag register contain data 3CH interprets its meaning.
3. Write a microprocessor program to multiply two 8-bit numbers store at memory location C200H and C201H, store the result at memory location C300H.
4. Write a microprocessor program to transfer a block of data in reverse order which is store at memory location C200H to C209H store the resultant block at C300H to C309H.

**Q.4 Answer any 2 from following.**

(10)

1. Explain the features of PCI bus.
2. Explain the benefits of RAID.
3. Write a short note on cache memory.
4. Explain the concept of structure and function.

**Q. 5 Answer any 2 from following.**

(10)

1. Draw pin diagram of 8051.
2. Give features of 8051.
3. Explain the functions of port3 pins of 8051 IC.
4. Define microcontroller and state advantages of microcontroller over microprocessor.

(10)

**Q.6 Answer any 2 from following.**

1. List and explain any two addressing modes of 8051 microcontroller.
2. Explain the function of following instructions of 8051:
  - a. XRL <desti>, <source>
  - b. MUL AB
  - c. ADDC A, <source>
  - d. INC<source>
  - e. SWAP A
3. Write a microcontroller program to check whether given number is divisible by 8.
4. Write a microcontroller program to multiply two 8-bit numbers.

(15)

**Q.7 Answer any 3 from following.**

1. Flag register contain data 95H interprets its meaning.
2. Draw and explain the organization of ALU of 8085 microprocessor.
3. Give applications of microcontroller.
4. Draw the pin diagram of 8085 microprocessor.
5. Write a microprocessor program to add two 8-bit BCD numbers which are store at memory location C200H and C201H, store the result at C300H .
6. Write a microcontroller Program to find the zeros in reg. R2.