Microprocessor & Interfacing

P. Pages : 2

Time : Three Hours

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0015

NKT/KS/17/7336

Max. Marks : 80

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Notes :
1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Solve Question 9 OR Questions No. 10.
7. Solve Question 11 OR Questions No. 12.
8. Due credit will be given to neatness and adequate dimensions.
9. Assume suitable data whenever necessary.
10. Illustrate your answers whenever necessary with the help of neat sketches.

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1. a) Explain bus organization of microprocessor 8085. Explain why address bus and data bus are multiplexed? Explain with the help of neat diagram how they are demultiplexed? **8**

b) Explain VLSI circuit concept with the help of diagram. **6**

OR

2. a) Explain memory organization of microprocessor system. **6**

b) Define Bits, Bytes, words, long words. Also define their range, accuracy and precision. **8**

3. a) Draw and explain internal architecture of 8085. **7**

b) Draw the timing diagram of CALL 4000H. **6**

OR

4. a) Explain addressing modes of 8085 with one example each. **6**

b) What do you mean by Assemblers and dissemblers. Also explain what do you mean by assembler directives. Explain any three assembler directives. **7**

5. a) Draw and explain structure of program status word of microprocessor. Also explain instructions related to it. **7**

b) Explain following instructions of 8085. **6**

i) DAD B	ii) INX D
ii) CALL 5000H	iv) LDA 2000H.

6. a) Explain the concept of simple and nested subroutines. **6**

b) Write a program to multiply two 8 bit numbers using successive addition method. The two numbers are in D and E registers. Store the result in HL register. **7**

7.	a)	Draw and explain interrupt structure of 8085 microprocessor.	9
	b)	Explain Any 5 advanced instructions available in 8085.	5

OR

8	a)	Explain following instructions.	8

i)   RIM   ii)   SIM

ii)   EI   iv)   DI

	b)	Write a program to count number of zeros and number of one's in a byte stored in memory location at address 4000H. store number of zeros at location 2250H. and number of one's at 2251H.	6

9.	a)	Draw and explain internal architecture of 8253.	7
	b)	Explain timing diagram of IN 03H instruction.	6

OR

10.	a)	Interface 8255 with 8085 from address 2000H. Also find out control word to make port A input and port B and C output in mode 0.	6
	b)	Explain different methods of data transfer.	7

11.	a)	What do you mean by bus contention? How it can be avoided.	6
	b)	Draw and explain interfacing of 4x4 keyboard and one seven segment display with 8086 using 8255.	7

OR

12.	a)	How slow devices interfaced with 8085.	4
	b)	Interface 4KB EPROM from starting address 5000H followed by 8KB RAM.	9

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