B.E. Instrumentation Engineering Fifth Semester **IN504 - Microprocessors and Interfacing**

P. P Tim	Pages : ne : Thi	2 ree Hours $* 1 2 9 3 *$	GUG/W/18/1644 Max. Marks : 80	
	Note	 es: 1. All questions carry marks as indicated. 2. Assume suitable data wherever necessary. 3. Retain the construction lines. 4. Illustrate your answers wherever necessary with the help of neat set. 	ketches.	
1.	a)	Sketch the memory write timing diagram with all the necessary control sig	nals. 8	
	b)	Examine the various advantages of semi conductor memory. Give in own application of ROM.	words the 8	
		OR		
2.	a)	Draw and explain the various blocks of a digital computer.	8	
	b)	Workout on different languages of instructions of micro computer systems	. 8	
3.	a)	Predict the sequence of operation of fetching the opcode from interfac execution of Fetched instruction.	ed memory and 6	
	b)	Construct the timing diagram for the execution of instruction SHLD6000H	10	
		OR		
4.	a)	Describe the function of following pins.i) ALEii) RESETiii) I/\overline{M} iv) Hold	8	
	b)	Defend that the address bus is unidirectional and data bus is bidirectional i	n 8085. 8	
5.	a)	Develop the program to add two 016 bit numbers C392H & B5A1H. Store memory location 6000H. and onwards.	the result in to 8	
	b)	Write a program to reset 3MSB's of accumulator without changing other b	its. 4	
	c)	Write a program to exchange 16bit no. of register pairs BC & DE using s The last memory address is 5FFFH.	tack instruction. 4	
		OR		
6.		Represent the following instructions in relation with addressing mode, maderequired, type of instructions, operation and type of flag it affects.ORIRALSTAXLXICMARLCSHLDDAD	chine cycle 16	

7.	a)	Generate SIM instruction format to perform following tasks: Enable RST 6.5 & disable RST 7.5 & 5.5 Enable RST 6.5 & transfer logic 1 on SOD pin.	6			
	b)	Interface following memory IC'S with 8085 using Full decoding technique. 1KB EPROM - 2IC'S 2KB RAM - 2IC'S	10			
	OR					
8.	a)	Draw the control word format of 8255PPI and write a set of instructions to initialize. Port A as a output in mode 1 Port B as input in mode 0 Port C lower as output And 8 bit CWR address is 03H	8			
	b)	Draw the block diagram of 8259 PIC and enlist its important features.	8			
9.	a)	Write short note on. Serial communication standards.	8			
	b)	Suggest a single instruction for each addressing modes of 8086 microprocessor.	8			
10.	a)	OR Write short note on: Memory organization of 8086.	8			
	b)	Draw & State the features of 8253/8254 PIT.	8			
