B. P. Poddar Institute of Management & Technology

Department of Electronics & Communication Engineering

Academic Year: 2018-19, Semester: Odd

Laboratory Name: Dr. A.P.J.Abdul Kalam Laboratory   Room No.: B 505

3 CSE 1st Semester

Microprocessor and Microcontroller Laboratory (CS 592)

List of Experiments to be conducted

Sl. No.	Topics	Name of Experiment	CO	PO	PSO
1	8085 basic instruction set	Familiarization with 8085 Trainer kit. Study of prewritten programs on 8085 trainer kit or simulator using the basic Instruction set.	1,2,3	1,2,3,4 ,5,9,10 ,12	1,2
2	8085 basic instruction set	**Assignment-1:**XOR operation with & without XRA command **Assignment-2:** Find Sum & Carry for addition of Hexadecimal numbers. **Assignment-3:** Add two Hexadecimal numbers with & without DAD instruction.	2,3	2,3,4,5 ,9,10,1 2	1,2
3	Subtraction, Copying, Shifting	**Assignment-4:** Subtract two 8 bit numbers with & without SUB instruction. **Assignment-5:** Copy block of data to another block **Assignment-6:** Transfer the block of data to the said memory location.	2,3	1,2,3,4 ,5,9,10 ,12	1,2
4	Look up table, BCD numbers	**Assignment-7:**Look-up table **Assignment-8:**Pack two BCD numbers **Assignment-9:**Unpack two BCD numbers	2,3	1,2,3,4 ,5,9,10 ,12	1,2
5	Code conversion	**Assignment-10:**Add two BCD numbers **Assignment-11.**Convert Hexadecimal number to ASCII. **Assignment-12:**Convert ASCII to Hexadecimal number.	2,3	1,2,3,4 ,5,9,10 ,12	1,2
6	String comparison and multiplication	**Assignment-12:**Compare two strings **Assignment-13:** Multiplication of two unsigned 8-bit data.	2,3	1,2,3,4 ,5,9,10 ,12	1,2
7	8255 PPI	Program using IN/OUT instructions and 8255 PPI on the trainer kit e.g. subroutine for delay, **Assignment-1:**Glowing all the LEDs one by one with particular delay **Assignment-2:** Reading switches state and glowing LEDs accordingly. **Assignment-3:**Read the data and unpack it **Assignment-4:** Read data and display it	1,2,3, 4	1,2,3,4 ,5,9,10 ,12	1,2

		by swapping the nibbles. **Example 1**: Interfacing 8255 PPI			
8	8051-microcontroller basic instruction set.	Familiarization with 8051 Trainer kit, study of sample programs on 8051 Microcontroller Kit using the basic instruction set. **Assignment-1** Subtraction between two 8 bit numbers. **Assignment-2** Multiplication between two 8 bit numbers. **Assignment-3** Division between two 8 bit numbers.	1,2,3	1,2,3,4 ,5,9,10 ,12	1,2
9	8051-microcontroller basic instruction set.	**Assignment-4:** ASCII number to its equivalent Hexadecimal number **Assignment-5:** Hexadecimal number to its equivalent ASCII **Assignment-6:** Add two 16-bit numbers **Assignment-7:** 2's complement of a Hexadecimal number	1,2,3	1,2,3,4 ,5,9,10 ,12	1,2
10	Serial communication	Serial communication between between two trainer Kits	2,3,4	1,2,3,4 ,5,9,10 ,12	1,2
10	Additional Experiment	i). Explore debugger using different commands.	1,2,3	1,2,3,4 ,5,9,10 ,12	1,2