EC334 MICROCONTROLLER LAB

Batch : **S_6ECA**   *AY:2019-20*

Part - A

Assembly Language Programming Using 8051 Trainer Kit

EXPERIMENT -1   DATA TRANSFER / EXCHANGE

Date of Experiment: 28/01/2020 (Group I), 22/01/2020 (Group II)

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1. Store a data in register R2. Copy the same to the memory location 4505

2. Store data in memory locations 4651 and 4652. Copy them to registers R1 & R2 respectively

3. Store a data in memory location 4502. Copy the same to the memory location 4551

4. Store a data in memory location 4552 and another one in memory location 4562. Swap the data in these registers

5. Store data in a block of memory locations starting from 5202. Copy them to the block of memory locations starting from 4601. The block size of the data to be transferred is stored in the memory location 5201. Take the block size as 10 for this program.

PRE-LAB QUESTIONS

1. What are the interfacing ICs available in the trainer kit provided? Give the functions of each?

2. Give the steps to enter a program in the kit and execute it?

3. How is data be stored in a memory location of the microcontroller using the kit?

4. What is the function of the instructions "a" & "u" in the trainer kit?

5. What is voltage that is required to power the board in the trainer kit?

6. Which are the user addressable registers in 8051? Give their respective lengths.

7. Which are the special function registers in 8051? Give their respective lengths.

8. Which are the bit addressable registers in 8051?

9. List the addressing modes supported in 8051? Use ADD instruction & show how it can be used in different addressing modes?

10. What is DPTR? How is DPTR different from other registers in 8051?

11. What is PSW in 8051?

12. What are register banks in 8051? List their addresses. Is it possible to select a register bank? How?

13. Which is the default register bank in 8051?

14. What is the function of Program Counter in 8051?

15. What is the function of Stack Pointer in 8051?

16. How does the stack function in 8051?

17. What are the sources of interrupt in 8051? How are they used?

18. How can you enable and disable an interrupt in 8051?

19. How can you change the priority of interrupts in 8051?

20. What are the functions of pins PSEN & EA in 8051?