Apparatus

Following apparatus is required to perform the practical of 8085 microprocessor:

1. 8085 Microprocessor Kit
2. Power Supply
3. Instruction Manual
4. Opcode Table

Description of 8085 Microprocessor Kit

The Intel 8085 microprocessor is an NMOS 8-bit device. It has a 16-bit address bus and an 8-bit data bus. The total addressable memory size of 8085 microprocessor is 64 KB. It has a set of registers which contribute to the effective and efficient working of the microprocessor.

To view the overall working of the 8085 microprocessor, a kit has been designed so that the programming on this microprocessor can be best understood by the students.

The kit consists of the following components:

- A 6-byte display screen which is further divided into two parts, one containing 4-byte displaying the address and the remaining 2-bytes which are used to display the data.
- A keypad which is used to operate the kit.
- A 40-pin 8085 microprocessor.
- A 20-pin address latch used to manage the address transfer from the AD bus.
- A memory unit which consists of three 28-pin IC’s which are used to provide memory to the processor.
- A 24-pin timer controller which is used to control the clock frequency.
- A 40-pin I/O Lines which are used to provide input to the microprocessor and to store the output from the microprocessor.
- A 40-pin KB/Display controller used to control the display.

Steps to Execute the Program on 8085 Microprocessor Kit

Follow the steps given below in order to execute the program on 8085 Microprocessor Kit:

1. Enter Program
2. Enter Data
3. Execute Program
4. Check Result

1. **Enter Program**
    - **a.** Press RESET
    - **b.** Press EXAMINE MEMORY (EXMEM)
    - **c.** Enter starting address of the program
    - **d.** Press NEXT
    - **e.** Start entering the opcodes
    - **f.** Press NEXT

2. **Enter Data**
    - **a.** Press RESET
    - **b.** Press EXAMINE MEMORY (EXMEM)
    - **c.** Enter the address of operand
    - **d.** Press NEXT
    - **e.** Enter data
    - **f.** Press FILL

3. **Execute Program**
    - **a.** Press RESET
    - **b.** Press GO
    - **c.** Enter starting address of the program
    - **d.** Press FILL

4. **Check Result**
    - **a.** Press RESET
    - **b.** Press EXAMINE MEMORY (EXMEM)
    - **c.** Enter address of result
    - **d.** Press NEXT