

DEERWALK INSTITUTE OF TECHNOLOGY
School of Computer Science and Information Technology
CSC-153 MICROPROCESSOR
Assignment II

1. Why addressing modes are required in the microprocessor? Discuss different types of addressing modes with suitable examples.
2. Explain the application of flags in the microprocessor. Discuss different types of flags with suitable examples.
3. Explain the operation of 8085-microprocessor using block diagram.
4. Explain different groups of instructions used in 8085-microprocessor in detail.
5. Explain the differences between JUMP and CALL operations in 8085-microprocessor.
6. What do you understand by PUSH and POP operations? Explain the use of push and POP operation in the stack. Write a program to illustrate the use of PUSH and POP operations.

PROGRAMS:

While writing program

- A. Explain all the steps.
- B. Do assumptions if necessary.
- C. Show the memory addresses.
- D. Download an 8085 simulator and run your program to see if it meets the requirement of questions.
- E. Show the output.

1. Write an assembly language program to
 - a. To load 8-bit data into the memory
 - b. To load 16-bit data into the memory
 - c. To exchange the contents of memory location 2000H and 3000H
 - d. To exchange the contents of memory location 2000-2004H and 3000-3004H
2. Write an assembly language program to
 - a. Add 8-bit numbers.
 - b. Subtract 8-bit numbers.
 - c. Add 16-bit numbers.
 - d. Subtract 16-bit numbers.
 - e. Add the content of memory locations 2000H and 2001H and store the result in memory location 2002H.
3. Write a program in 8-bit Microprocessor to store 60H, BAH, 7Ch and 10h in the memory location starting from 2000h. Add these data and store the result in 3000h and carry flag in 3001h. Explain all the steps.
4. Write an assembly language program to add 16-bit number in memory locations 4000H & 4001H to the 16-bit number in memory locations 4002H & 4003H. Assume the most significant bits of the two numbers to be added are on memory locations 4001 and 4003H. Store the result in memory locations 4004H and 4005H.
5. Write a program in 8-bit Microprocessor to store 68 H, B3H, COH, and 11h in the memory location starting from 3000h. Move these data and store in the memory location starting from 3200h.
6. Write an assembly language program to multiply 05h and 06h.
7. Write a program in 8-bit Microprocessor to multiply two 16 bits numbers and store in the memory location starting from 3500h. Save the carry bits in the location starting from 3600h.
8. Write an assembly program to find the number of ones in a number.

9. Write a program to find the highest or lowest reading set from a given list below and store the reading at 500AH.

Memory location	Data
5000	48
5001	32
5002	F2
5003	38
5004	37
5005	40
5006	82

10. A set of current readings is stored in memory location starting at 5000H. The end of the data string is indicated by the data 00H. Add the set of the readings and the result may be larger than FFH. Store the entire sum at memory location 3000H and 3001H.