Uka Tarsadia University (Diwaliba Polytechnic)
Diploma in Computer Engineering /Information Technology
Assignment (MPI)

Unit 1 Introduction to Microprocessor 8085

1. What is a microprocessor? What is the difference between a microprocessor and a CPU?
2. Explain the difference between a microprocessor and a microcomputer.
3. Explain these terms: SSI, MSI, LSI
4. Explain the difference between the machine language and the assembly language of the 8085 microprocessor.
5. Explain the difference between a compiler and an interpreter.
6. Explain the need to demultiplex the bus AD_7-AD_0

Unit 2 Introduction to 8085 Instructions and Programming Techniques

1. Write instructions to load the hexadecimal number 65H in register C, and 92H in the accumulator A. Display the number 65H at PORT0 and 92H at PORT 1.
2. Write a program to
   a. Clear the accumulator.
   b. Add 47H
   c. Subtract 92H
3. What operation can be performed by using the instruction XRA A ?
4. Specify the memory location and its contents after the following instructions are executed.

```
MVI B,F7H
MOV A,B
STA XX75H
HLT
```

5. Identify the register contents and the flag status as the following instructions are executed.

```
          A   S   Z   CY
LXI H,2070H
MVI M,64H
MVI A,8FH
CMP M
```

Unit 3 The 8085 Memory Interfacing

1.List the sequence of events that occurs when the 8085 MPU reads from memory.

2.In the Opcode Fetch cycle, what are the control and status signals asserted by the 8085 to enable the memory buffer?

3.Explain the types of Address Decoding.

4.Difference between Memory Mapped IO and IO Mapped IO.

5.Explain types of Parallel Interface.

Unit 4 Counters and Time Delays

1. Write a program generate a square Wave with period of 400 μs. Use bit D_0 to output the square wave.
2. What are Counters and Time Delays?
3. Explain the techniques to design Time Delay.
4. Difference between CALL and RET and PUSH and POP.
5. Write a 20 ms time delay subroutine using register pair BC.

Unit 5 The 8085 Interrupts

1. Explain Classification of Interrupts in 8085.
2. Explain Maskable and Non-maskable Interrupts.
3. Explain Maskable interrupt process.
4. Differenciate Software interrupt and Hardware interrupt.

Unit 6 Interfacing Data Converters

1. Explain the types of Data Converters.
2. What is Digital to analog converter?
3. Explain the working of DAC.
4. Explain the working of R-2R Ladder Circuit and advantages of the same.
5. Explain Analog to Digital Converter Process.