



Department of Electrical and Electronic Engineering  
Level-3, Term-II  
Mid-Term Examination, Spring-2023  
Course Code: EEE 317  
Course Title: Microprocessor and Interfacing

Notes:

Time: 1 Hour

a. Each question carries 30 marks.

Full Marks: 60

b. Figure on the right of each question indicates marks for respective question.

Answer any two questions including Question-1

1. a. Apply the assembly language code to add the numbers 45h with 23h cumulatively 07 (25)  
times. Assume that the input is residing at the RAM locations 03010h, 03011h, and  
03012h respectively. Store the result at location 04011h.

b. Compute the number of memory locations the 8086 microprocessor can access with (5)  
20-bit address lines.

2. A data transfer operation is represented by the pseudo-code below. (30)

(03012h) → 04012h

- Judge whether the pseudo-code is correct or not. If not correct it.
- Write the meaning of the pseudo-code.
- Write the ASM code for the pseudo-code.
- Draw the signal flow diagram.

3. The building blocks of a microprocessor-based system are depicted in Figure 3. (30)

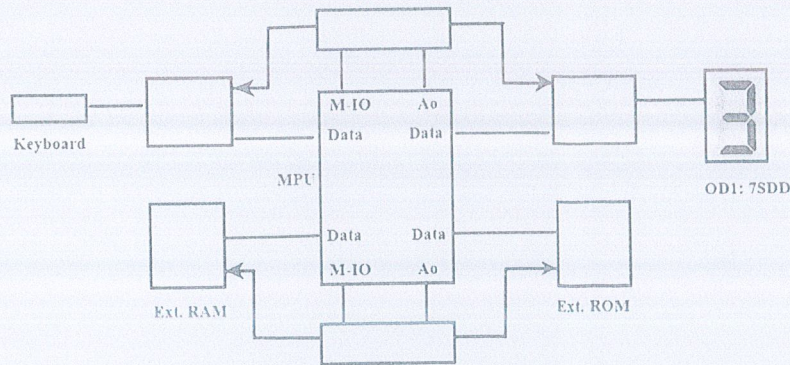


Figure 3. Microprocessor-based system.

Analyze the signal flow when input is given through the keyboard and is displayed to the output ODI:7SDD.

- (i) Redraw the figure and complete the straight lines to arrows to indicate the signal flow. Also identify the blocks which represent the IDIC, ODIC, PMDEC, and PPDEC.
- (ii) Explain the functions of IDIC, ODIC, PMDEC, and PPDEC.