Mid-West University

Examinations Management Office

End Semester Examinations 2081

Bachelor level/ B.E. Computer/ 4th Semester — Full Marks: 50

Time: 3 hours — Pass Marks: 25

Subject: Microprocessor (EX441/EX504)

- *Attempt all the questions*
- *Figures in the margin indicate full marks.*
- *Assume suitable values, with a stipulation, if necessary.*
- *Candidates are required to answer the questions in their own words as far as possible.*

1. What is Bus? Explain Bus organization of microprocessor with diagram. Differentiate stored program concept and Von Neumann machine. **[5]**

2. **a)** What is flag? Discuss about 8086 associated flags with suitable example. Explain the CMA, RAR, DAA, DAD instructions. **[2+3]**

   b) Write a 8085 program to calculate the sum of series of numbers. The length of the series in memory location 2300H and series itself beings from memory location 2301. Assume the sum to be 8-bit number so you can ignore carries, Store the sum at memory location 2400H. **[5]**

3. **a)** List out addressing mode of 8086. Draw the internal architecture of 8086 microprocessor. Explain each block in detail. **[1+5]**

   b) What are the different types of identifiers? Explain one-pass assembler and two-pass assembler with suitable diagrams. **[2+3]**

4. **a)** What is the significance of Timing Diagram? Draw the labeled timing diagram for the instruction OUT 05H. **[1+4]**

   b) Explain non unique address decoding with suitable diagram. Design an address decoding circuit to interface two RAM chips each of 16KB at starting address 0000H. **[2+3]**

5. Define ISR and explain interrupt processing sequence with suitable diagram. Describe interrupt Pins. **[2+3]**

6. How do you describe Resource allocation and Deadlock? Explain the various interconnection structure of multiprocessing systems. **[2+3]**

7. Write Short notes on (**Any two**): **[2+2]**
   - Differentiate RISC and CISC
   - USRT
   - Synchronous and Asynchronous bus

The End