

Roll Number: \_\_\_\_\_

**Thapar Institute of Engineering & Technology, Patiala**

Department of Computer Science and Engineering

**Auxiliary Examination-Feb. 2023**

B. E. (Third Year): Semester-VI

Course Code: UCS617

Course Name: Microprocessor Based  
Systems Design

Feb. 25, 2023

Time: 3 Hours, M. Marks: 100

Name of Faculty: Dr. Anju Bala

**Note: Attempt all questions with proper justification.  
Assume missing data, if any, suitably.**

- Q1(a) What are various types of hardware interrupts in 8085 explain it. (10)
- Q1(b) Differentiate between the following along with example: (10)
- a) One byte, two byte and three byte Instruction in 8085
- b) Based addressing and Based Indexed with Displacement addressing mode in 8086
- Q2(a) Write the function and format of FLAG register in 8086. How the physical address can be generated in 8086 using segment registers? (10)
- Q2(b) Explain DAA instruction with example (10)
- Q3(a) Write a program to find the largest among two no. s in 8085. (10)
- Q3(b) Describe the function of following pins in context of 8085 and 8086: (10)
- a) READY      b) ALE      c) Bus Request      d) TEST
- Q4(a) Draw and explain the timing diagram for the instruction MVI A, 05H and indicate Total number of T-states and Machine cycles required to execute the instruction. (10+5)
- Q4(b) Write the contents of accumulator through program for SIM instruction that will mask RST 7.5, 6.5 and unmask RST 5.5. (5)
- Q5(a) Explain AAA, AAD, AAM instructions with example in 8086 (12)
- Q5(b) How PIC (Program interrupts Controller) can be interfaced with 8086. (8)