



Branch/ Semester : CSE/Dual Degree Subject Code : CS-212
Subject Name : Microprocessor & Interfacing Duration : 3 Hrs
Date : 24/11/2023 Max. Marks : 50

- Q. 1 Explain the working of Programmable Peripheral (Intel 8255) with suitable diagram. Form a control word for 8255 PPI with A, B port as input and port C as an output in mode 0. (4)
- Q. 2 What is the difference between minimum and maximum modes of 8086? (4)
- Q. 3 With the help of a diagram explain the system timing cycles to read and write data from memory in 8085. (4)
- Q. 4 Is there a minimum pulse width required for the INTR signal and how long can INTR pulse stay high. (3)
- Q. 5 Microprocessors are employed in developing many automatic control processes. Write an ALP for microprocessor-8085 based system for some practical application (e.g. Traffic Light control system). Also draw the schematic block diagram. (5)
- Q. 6 What is wait state of the 8085? Also draw its neat state transition diagram. (5)
- Q. 7 Calculate exact delay of following subroutine according to the frequency of 8085: (5)
MVI B, 10H
LOOP2: MVI C, FFH
LOOP1: DCR C
JNZ LOOP 1
DCR B
JNZ LOOP 2
- Q. 8 Explain DMA controller's interface with 8085, registers, modes with suitable diagrams. Write a program to setup DMA controller to copy 100bytes of data from memory address F000H to an output device with address FFH. (5)

Q. 9 Draw and explain the block diagram of 8251 USART. Explain briefly (5)
the transmitter, receiver and modem section.

Q. 10 Explain the following (2*5=10)

- a. Write the difference between 8085 and 8086
- b. How we done the masking of interrupts in 8085 microprocessor and which instruction is used to know the status of pending interrupts and explain it.
- c. What will be status of flag registers after executing the following instructions and also describe the following instructions with example:
 - i. ORA C
 - ii. CMP B
- d. Simulator and Emulator
- e. Stack pointer and Program Counter