REG.NO.:

VIT
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

SCHOOL OF ELECTRONICS ENGINEERING
CONTINUOUS ASSESSMENT TEST - II
WINTER SEMESTER 2024-2025

SLOT: F2

Programme Name & Branch	**:Integrated M Tech MIC, MID**
Course Code and Course Name	**: CSI2006 Microprocessor and Interfacing Techniques**
Faculty Name(s)	**:Dr.S.Rajalakshmi, Dr. N.Rajesh, Dr, C.M Vidhyapathi, Dr.Sagar Pareshkumar ,Dr.Arunkumar Chandrasekhar**
Class Number(s)	**:VL2024250504203,4207,4186,4209,4196**
Date of Examination	**: 11/04/25**
Exam Duration	**:90 minutes** **Maximum Marks:50**

General instruction(s):

Q.No	Question	M	CO	BL
1.	a. Explain the sequence of steps performed by 8086 Microprocessor to handle interrupts. Also highlight the use of Stack in interrupt handling. b. Show the status of general-purpose register in 8086, stack memory and stack pointer after execution of each instruction of following 8086 ALP using Stack Memory bank diagram. **[5M]** **MOV AX, 5000H** **MOV SS, AX** **MOV SP, 2000H** **MOV CX,4563H** **MOV BX,8796H** **MOV AX,5674H** **PUSH CX** **PUSH BX** **POP AX** **POP BX** **PUSH AX** **POP CX** **PUSH AX** **HLT**	[5+5]	3	3
2.	Calculate the delay generated by the following delay subroutine of an 8086 Microprocessor which is operated with 8 MHz clock. **DELAY:** **MOV BX,40000** **OUTLOOP:MOV CX,0FFABH**	10	3	3

	INLOOP:NOP **NOP** **DEC CX** **JNZ INLOOP** **NOP** **NOP** **DEC BX** **JNZ OUTLOOP** **END**			
3.	Interface an 8255(Programmable input output port) with 8086 Microprocessor to work as I/O port. Initialize port A as Input Port, Port B as Output port. Write a program to sense switch positions SW0 to SW7 connected at PORT A. The sensed pattern should be inverted (ON means OFF) and displayed on PORT B in which eight LEDs are connected. Also, the PORT C upper should display the number of OFF switches out of the total eight switches.	10	4	3
4.	Design an interface between 8086 CPU and two chips of 64K × 8 ROM and two chips of 32K × 8 RAM. Select the starting address of ROM suitably. The RAM address must start at 00000H.	10	4	4
5.	Interface DAC0800 8-bit Digital to Analog Converter with 8086 Microprocessor. Write 8086 Assembly Language Program to a) Generate a Sawtooth waveform. b) Generate a Triangular waveform.	10	4	2

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