



SCHOOL OF ELECTRICAL ENGINEERING
CONTINUOUS ASSESSMENT TEST - I
WINTER SEMESTER 2024-2025

SLOT: C1+TC1

Programme Name & Branch : B.Tech -BEL, BEE
Course Code and Course Name : BEEE204L & Microprocessors and Microcontrollers
Faculty Name(s) : Vijaya Priya R.
Class Number(s) : VL2024250500996
Date of Examination : 29.01.2025(FN)
Exam Duration : 90 minutes

Maximum Marks: 50

General instruction(s):

- Answer All Questions
- M - Max mark; CO - Course Outcome; BL - Blooms Taxonomy Level (1 - Remember, 2 - Understand, 3 - Apply, 4 - Analyse, 5 - Evaluate, 6 - Create)
- Course Outcomes
CO1 - Understand architecture of 8051 microcontroller and its instruction set.
CO2 - Comprehend and develop programs for various blocks of 8051.

Q. No	Question	M	CO	BL
1.	a) Briefly explain the byte and bit operation with examples. Also, specify any five SFR which are both byte and bit addressable.	5	C01	2
	b) Specify the address range of Register Banks, Bit-addressable RAM, Scratch Pad RAM and SFRs.			
2.	a) Give any seven bit operable instructions. b) If the crystal oscillator frequency is 30 MHz, calculate one machine cycle time period.	5	C01	2
	a) Give the value of A, B and PSW registers after executing the following program SETB PSW.3 CLR PSW.4 MOV A, # 20H MOV B, # ABH SUBB A, B END			
	b) Determine the number of times the loop "LOOP1" executed in the following program with the necessary steps. MOV R7, # 09H MOV R6, # 20H LOOP2:NOP LOOP1:DJNZ R6, LOOP1 DJNZ R7, LOOP2 END	4	C01	3



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

REG.NO.:

SCHOOL OF ELECTRICAL ENGINEERING
CONTINUOUS ASSESSMENT TEST - I
WINTER SEMESTER 2024-2025

SLOT: C1+TC1

	c) Calculate the delay created by the following program with the necessary steps. Consider the oscillator frequency to be 11.0592 MHz. SETB P1.7 NOP NOP NOP NOP NOP CLR P1.7	2		
3.	Write a program to generate the pulse with the time period of 100 μ s. Consider the oscillator frequency of 11.0592 MHz. Note: Include the necessary interfacing diagram and the time delay calculation.	10	C02	2
4.	Write a program to find the largest number of the three inputs numbers given in a memory location and store the result (largest number) in register R4. Assume the starting address of the memory location to be 60H.	10	C02	3
5.	Write a program to add three BCD numbers and store the result in BCD in register R2. Also, include the manual calculation of the BCD addition.	10	C02	3
