

Reg. No.: 

Name :



VIT[®]


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

Continuous Assessment Test II – March 2023

Programme	: B. Tech. (CSE)	Semester	: WS 2022-23
Course	: Microprocessors and Microcontrollers	Code	: BECE 204L
Faculty	: Dr. Dheeren Ku Mahapatra	Class Nbr	: CH2022235001403
Time	: 90 Minutes	Slot	: G2+TG2
		Max. Marks	: 50

Answer ALL the questions

Q.No.	Sub. Sec.	Questions	Marks
1.		<p>Consider three 8-bit numbers X, NUM1 and NUM2 are stored in internal data RAM locations 20H, 21H and 22H respectively.</p> <p>Write an 8051-assembly language program to compute the following</p> <p>if X is equal to 0; then LSB of NUM1 (AND) LSB of NUM2</p> <p>if X is equal to 1; then MSB of NUM1 (OR) MSB of NUM2</p> <p>if X is equal to 2; then complement MSB of NUM1</p> <p>else do nothing</p> <p>store the bit results in RES, where RES is MSB of 23 H locations.</p>	10
2.		<p>Explain the types of addressing modes and type of instruction set used in the following 8051 assembly language instructions with its brief explanation</p> <pre> MOV P0, #0FFH MOV 0E5H, @R0 MOV @R1, 80H MOVC A, @A+DPTR MOV TMOD, #0ADH MOV IE, #88H SETB TR1 XRL A, P1 ANL C, P1.0 SJMP HERE </pre>	10
3.		<p>Write an 8051-assembly language program to generate a square wave with pulse width of 1 Sec on P2.3. What value do we need to load the timer's register if we want to have a time delay of 1 Sec? Assume that XTAL = 11.0592 MHz.</p>	10
4.		<p>Write an 8051-assembly language program to transfer "8051" serially at 9600 baud, 8-bit data, 1 stop bit, do this continuously. Assume appropriate mode of serial</p>	10

		communication. Discuss in detail about values to be loaded in serial communication related registers.	
		Write an 8051-assembly language program with timer 0 to turn on an LED connected to P0.5 for one second, turn it off for 500ms repeatedly. If an external interrupt from INT 0 is provided, turn on an LED connected to P0.6 for one second and then turn it off. Assume XTAL=11.0592MHz.	10

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