Model Question Paper-2 with effect from 2022-23 (CBCS Scheme)

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Fourth Semester B.E. Degree Examination
Microcontroller and Application

TIME: 03Hours   Max. Marks: 100

Note: 01.Answer any FIVE full questions, choosing at least ONE question from each MODULE.

		Module -1	COs	*Bloom's Taxonomy Level	Marks
Q.01	a	Elucidate the Architecture of 8051 in detail	CO1	BL1	10
	b	Explain program status word register and special function register	CO1	BL1	10
		OR			
Q.02	a	Explain memory organization of 8051	CO1	BL1	10
	b	Explain the difference in Von - Neuman and Harvard architecture, RICS and CISC architecture	CO1	BL1	10
		Module-2			
Q.03	a	Explain any 5 addressing modes of 8051 with examples	CO1	BL1	10
	b	Explain logical and rotate instruction in 8051 with examples	CO1	BL1	10
		OR			
Q.04	a	Explain the working of branch instruction in detail	CO1	BL1	10
	b	Explain the working of subroutine call and RET instruction with example	CO1	BL1	10
		Module-3			
Q.05	a	Write a Program to subtract the values of locations 51H from 50H and store the results in location 52H. If the result is positive, store 00H, else store 01H in 53H.	CO2	BL2	10
	b	Write a program to add two BCD numbers stored at locations 60H and 61H and store the result in BCD at memory locations 52H and 53H. Assume that least significant byte of the result is stored in low address.	CO2	BL2	10
		OR			
Q.06	a	Write a program to divide contents of 70H from contents of 71H (assume contents of 70H is greater or 71H), and store the remainder at the quotient at memory equal to contents of memory location53H location 52H.	CO2	BL2	10
	b	Write a program to find the cube of an 8 bit number	CO2	BL2	10

		Module-4			
Q.07	a	Explain types of serial communication	CO3	BL3	10
	b	Write a program for the 8051 to transfer letter 'A' serially at 4800- baud rate, 8 bit data,1 stop bit continuously	CO3	BL3	10
		OR			
Q.08	a	With diagram explain different steps to program timer 0 in mode 1	CO3	BL3	10
	b	Explain bit pattern of SCON register in 8051 microcontroller	CO3	BL3	10
		Module-5			
Q.09	a	Explain stepper motor interface to 8051 microcontroller	CO4	BL4	10
	b	Explain different LCD memories interfaced with 8051 microcontroller	CO4	BL4	10
		OR			
Q.10	a	Explain LCD interface to 8051 microcontroller	CO4	BL4	10
	b	Explain ADC interface with 8051 microcontroller	CO4	BL4	10