

Model Question Paper-1 with effect from 2023-24 (CBCS Scheme)

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Fourth Semester B.E. Degree Examination

MICROCONTROLLER

TIME: 03 Hours

Max. Marks: 100

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

Module – 1			Marks	L	C
Q.1	(a)	Write the differences between microcontroller and Microprocessor	10	L1	CO1
	(b)	Draw the block diagram of 8051 microcontroller and write its applications.	10	L2	CO1
OR					
Q.2	(a)	Draw the pin diagram of 8051 microcontroller and explain	10	L2	CO1
	(b)	Draw the internal memory organization of 8051 microcontroller and explain.	10	L2	CO1
Module – 2					
Q.3	(a)	With example explain about the Addressing modes ?	10	L2	CO2
	(b)	Write an ALP program to exchange two blocks of data bytes using 8051.	10	L2	CO2
OR					
Q.4	(a)	With example explain about Data Transfer instructions, Arithmetic instructions, Logical instructions.	10	L3	CO2
	(b)	Write an ALP program to find square and cube of a 8 bit number	10	L2	CO2
Module – 3					
Q.5	(a)	Explain about the stack memory with an example	10	L2	CO3

	(b)	Write an ALP to arrange the 8-bit number in ascending order and descending order	10	L3	CO3
OR					
Q.6	(a)	Write an ALP to find largest and smallest of element in an array using 8051	10	L2	CO3
	(b)	Explain the working of MUL, ADD, SUBB and DIV in 8051 Microcontroller.	10	L2	CO3
Module – 4					
Q.7	(a)	Explain About the RS- 232.	10	L2	CO4
	(b)	Explain about the TMOD and TCON register with block diagram	10	L2	CO4
OR					
Q.8	(a)	Write a program to generate a square wave of frequency 10KHz ON P1.4 use Timer 0 in mode 2 with crystal frequency of 20MHz	10	L3	CO4
	(b)	Explain about the serial communication in 8051	10	L2	CO4
Module – 5					
Q.9	(a)	Write an ALP to interface a stepper motor to 8051 to rotate the motor in clock and Anti clockwise direction.	10	L3	CO5
	(b)	Explain the interrupts in 8051 Microcontroller	10	L3	CO5
OR					
Q.10	(a)	Draw and briefly explain about the Interfacing of 8051 to ADC 0804,	10	L2	CO5
	(b)	Write an ALP to interface an LCD display and to display message on it	10	L2	CO5
OR					