CBCS SCHEME

USN		21CS43
178		

Fourth Semester B.E. Degree Examination, Dec.2023/Jan.2024 Microcontroller and Embedded Systems

	- U (6) - 121,210	200 200	Microcontroller and Embedded Systems			
	T	ime: :	3 hrs. Max. M	Iarks: 100		
	Note: Answer any FIVE full questions, choosing ONE full question from each module.					
ice.		11		rune.		
as malpractice			Module-1			
nalp	1	a		(10 Marks)		
		b.	Define RISC architecture. Compare with CISC processors.	(10 Marks)		
ated			OR			
s. tre	2	a.	Define pipelining? Explain how it helps the program execution.	(10 Marks)		
age II be	_	b.	Explain the major design rules related to RISC philosophy implementation.	(10 Marks)		
g blank pages. = 50, will be treated			3			
5 bla = 50			Module-2			
ning 2+8	3	a.	Write a program to find sum of first 20 integer numbers.	(10 Marks)		
mai g, 42		b.	Explain about load store instructions in ARM with example.	(10 Marks)		
ne re			A OR	- 25(15)3		
on th vritte	4	0	Write a program to find the factorial of a number.	(10 Marks)		
nes on	7	a. b.	Write a program to find largest and smallest number in an array of 16 numbers.			
ss lii aatio		0.	write a program to find largest and smallest number in an array of 10 numbers.	(10 Marks)		
cro			Module-3			
ona d/o	5	a.	Write a program to arrange a series of 32 bit numbers in ascending/descending of			
; your answers, compulsorily draw diagonal cross lines on the remaining blank pages of identification, appeal to evaluator and /or equations written eg, $42+8=50$, will be		h	What are the different toward for an arranged and in Emphadded arcatem degion?	(10 Marks)		
raw		b.	What are the different types of memories used in Embedded system design?	(10 Marks)		
ily d eva			OR			
lsor al to	6	a.	Write a program to count the number of ones and zeros in two consecutions	ve memory		
mbn			locations.	(10 Marks)		
, col		b.	Write a program to display 'Microcontroller' message using Internal UART.	(10 Marks)		
wers						
ans	_		Module-4			
our ide	1		Explain classification of embedded systems. Write a program and explain about interface of DC motor.	(10 Marks)		
g of		U.	write a program and explain about interface of DC motor.	(10 Marks)		
pleti			OR	Trip states)		
reve	8	a.	Explain the characteristics of embedded systems.	(10 Marks)		
On completing your answers, Any revealing of identification		b.	Write a program to demonstrate the use of external interrupt to toggle an LED or	off.		
1. 2.				(10 Marks)		
ote			Module-5	- 410 61 60 5 41 3		
z	9	a.	With neat diagram, explain operating system architecture.	(10 Marks)		
orta		b.	Explain steps involved in selecting RTOS.	(10 Marks)		
Important Note: 1.		T was				
	17	0 0	OR Explain the concept of dead lock with example.	(10 Marks)		
	. 10	b.	Explain the concept of dead lock with example. Explain types of operating systems with example.	(10 Marks) (10 Marks)		
		U.	Explaint types of operating systems with example.	(TO LIMETED)		