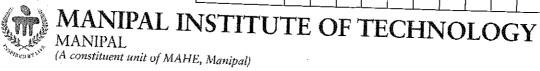
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IV SEMESTER B.TECH. (COMPUTER AND COMMUNICATION ENGINEERING) MAKEUP EXAMINATIONS, JUNE 2018

SUBJECT: EMBEDDED SYSTEM DESIGN [ICT 2253]

REVISED CREDIT SYSTEM 21/06/2018

Time: 3 Hours

MAX. MARKS: 50

	Instructions to Candidates:	
	❖ Answer ALL the questions.	
	Missing data, if any, may be suitably assumed.	
	abouned.	
1 /	A Define d	
	A. Define the term "Addressing mode". Explain various addressing modes of ARM microcontroller with suitable examples.	4
	3. Explain various SFRs available in ARM microcontroller to configure and handle GPIO interrupts.	3
10	C. Given PCLK=3 MHz and PR=0. Determine the value that is be loaded to MR0 to get a square waveform of frequency of 100 Hz on MAT 1.0	•
	square waveform of frequency of 100 Hz on MAT 1.0.	2
2A	. Write an assembly language program to convert a 4-digit BCD number available in the	
		5
	Explain with a neat diagram, how the 3-digit seven segment display is interfaced with ARM microcontroller.	3
2C.	. Bring out the salient features of RISC family of microcontrollers.	
	-y intercontaining.	2
3A.	Explain the following ARM instructions with an example for each:	
	1) 1DV III MISK iii) RGT (w) CMM \ Dany a	5
3B.	Write an embedded C program using DAC to generate a square was 6	
		3
	Differentiate between the software mode and burst mode of operation of an ADC.	2
4.		
4A.	Write an embedded C program using interrupts to generate a square waveform of frequency 200 kHz on POO using TIMER 1 while size the	
	pulses received at EINT2 (P2.12 function-2) on the LEDs	
ΔĐ	(PCLK = 3 MHz) What is 6 Hz	5
4D.	What is fully ascending stack? Explain the role of STM and LDMDB instructions in implementing a fully ascending stack with an appropriate	_
4C.	Explain various SFRs used to set the hand rate for social.	3
	microcontroller.	2
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ICT 2253

5A.	Write an embedded C program to glow an LED connected to P1.23 (PWM1.4, function-2) with 75% intensity level as long as switch connected to P2.12 is pressed and 25% intensity
	level whenever the switch is released.

5B. Explain the mechanism for peripheral clock generation in ARM microcontroller.

5C. Explain the operation of LCD in 4-bit mode.

3 2

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