Seat No.:	Enrolment No.

## GUJARAT TECHNOLOGICAL UNIVERSITY MCA - SEMESTER - V EXAMINATION - SUMMER - 2017

	U	Code: 2650012 Date: 08/06/20	17	
Time: 02:30 PM to 05:00 PM Instructions:			Total Marks: 70	
	1. 2.	Attempt all questions.  Make suitable assumptions wherever necessary.  Figures to the right indicate full marks.		
Q.1	(a) (b)	What is Embedded System? Discuss design challenges of Embedded System. Write Short note on IC Technology.	07 07	
Q.2	(a)	Draw basic architecture of Application-Specific Processor and Explain Datapath, Control Unit and Memory of it.	07	
	<b>(b)</b>	Explain Top-Down Design approach of Embedded System.  OR	07	
	<b>(b)</b>	Explain Instruction Set and it's Addressing Modes.	07	
Q.3	(a) (b)	Explain Timers and Counters with proper diagrams. Write short note on UART and PWM.	07 07	
		OR		
Q.3	(a)	Draw internal structure of ROM and RAM. List all types of ROM and Explain any two ROMs.	07	
	<b>(b)</b>	What is cache memory? Explain any two cache mapping techniques.	07	
Q.4	(a) (b)	Draw and Explain BUS structure and Explain Strobe and Handshake protocols. What is Arbitration? List all arbitration methods and explain any one arbitration method.	07 07	
		OR		
Q.4	(a) (b)	Write short note on Multi Level Bus Architecture. Explain DMA with proper diagrams.	07 07	
Q.5	(a) (b)	Explain Cross Compiler, Cross Assembler and Linker. What is Host and Target System? Explain PROM Programmers and ROM Emulators.	07 07	
		OR		
Q.5	(a) (b)	Explain Instruction Set Simulator with it's abilities. List all useful laboratory tools and explain any three laboratory tools.	07 07	

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