Seat No.:	Enrolment No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

ME SEMESTER – I EXAMINATION – SUMMER 2017

Subject Code: 3715201			Date: 09/05/2017	
Tin	ne: 2 ructio 1.	Attempt all questions.  Make suitable assumptions wherever necessary.	70	
Q.1	(a) (b)	Explain in brief with necessary diagram classes of computer architecture. Compare RISC v/s CISC.	07 07	
Q.2	(a) (b)	Explain in brief with suitable example need for DSP and Multimedia processors.  Explain throughput, latency, power and cost.	07	
	(b)	OR Explain Intel 8051 architecture.	07	
Q.3	(a) (b)	What is vector processor? Why vector processors are important in Scientific Computing? Write down 4(Four) properties of vector processor and their benefits.  Explain in detail fetch-decode-execute cycle. Discuss the sate of various	07	
Q.3	(a) (b)	registers during each of the steps.  OR  Explain subroutine nesting and the processor stack.  Explain asynchronous bus organization.	07 07	
Q.4	(a) (b)	Explain reset and clocking devices.  Explain PIC microcontroller architecture.  OR	07 07	
Q.4	<ul><li>(a)</li><li>(b)</li></ul>	Define System-on-Chip(SoC) architecture and its properties. Discuss how SoC is different from Multi-Core systems from architecture point of view.  Describe major components of Von-Neumann architecture in detail using block diagram.	07	
Q.5	(a) (b)	Explain Pipeline Organization in detail.  Explain ARM characteristics and register ARM register structure.  OR	07 07	
Q.5	(a) (b)	Explain various addressing modes in instruction set architecture.  Compare various platforms in terms of performance and efficiency.	07 07	

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