Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER– I (New course)• REMEDIAL EXAMINATION – SUMMER 2015

Subject Code: 3715501 Date:12/05/2015

Subject Name: Advanced Computer Architecture

Time: 10:30 am to 1:00 pm Total Marks: 70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Explain various classes of computer architecture.	**07**
	(b)	Explain Memory Hierarchy.	**07**
Q.2	**(a)**	Compare various platforms in terms of performance and efficiency.	**07**
	(b)	Explain subroutine nesting and the processor stack.	**07**
		OR	
	(b)	Explain handling of multiple devices.	**07**
Q.3	**(a)**	Explain Pipeline Organization in detail.	**07**
	(b)	Explain various addressing modes in instruction set architecture.	**07**
		OR	
Q.3	**(a)**	Compare and contrast RISC v/s CISC.	**07**
	(b)	Explain Cache Coherency.	**07**
Q.4	**(a)**	Explain ARM characteristics and register ARM register structure.	**07**
	(b)	Explain hardware component selection and datasheet analysis.	**07**
		OR	
Q.4	**(a)**	Explain memory organization and register structure of Intel IA-32 architecture.	**07**
	(b)	Explain application of specific processor for microcontrollers.	**07**
Q.5	**(a)**	Explain application of specific processor for multimedia.	**07**
	(b)	Explain virtual memory.	**07**
		OR	
Q.5	**(a)**	Explain asynchronous bus organization.	**07**
	(b)	Explain boot strapping process.	**07**

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