Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

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

Subject Code: 3715201 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)**	What are Classes of Computer architecture	**07**
	(b)	Explain about Processor vs. System architecture	**07**
Q.2	**(a)**	Explain Data Hazard in detail.	**07**
	(b)	Explain the below mentioned concepts and differentiate them. 1.RISC and CISC 2. Big-endian and Little-endian.	**07**
		OR	
	(b)	Describe in brief Interrupt Controller MPCore processors	**07**
Q.3	**(a)**	Explain 3 stage pipeline in ARM architecture	**07**
	(b)	Explain Host Interface for GPU	**07**
		OR	
Q.3	**(a)**	Draw block diagram of Unified instruction and data cache	**07**
	(b)	Explain SIMD instructions in brief.	**07**
Q.4	**(a)**	Draw block diagram of Harvard architecture based data and instruction caches	**07**
	(b)	List advantages & disadvantages of Onchip RAM	**07**
		OR	
Q.4	**(a)**	Explain Paging memory management to MMU	**07**
	(b)	Explain memory Segmentation in brief	**07**
Q.5	**(a)**	Explain vertex processing in GPU	**07**
	(b)	Describe a typical Typical TLB Format	**07**
		OR	
Q.5	**(a)**	What are Implications for Compilers design in VLIW.	**07**
	(b)	What are essential components of a toolchain and explain each.	**07**

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