Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – II • EXAMINATION – SUMMER • 2013

Subject code: 725204 **Date: 05-06-2013**

Subject Name: Protocols and Interfaces

Time: 10.30 am – 01.00 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 the basic two kinds of parallelism in applications. How computer hardware exploit these two kinds of parallelism?	**07**
	(b)	What is signal conditioning? What steps does signal conditioning and timing function conditioning include?	**07**
Q.2	**(a)**	Which five implementation technologies should be considered to plan for evolution of computers?	**07**
	(b)	Is SRAM faster than DRAM? Where SRAM is used and where DRAM is used? Explain SRAM memory interface.	**07**
		OR	
	(b)	Give example applications of FLASH memory. Explain how FLASH memory stores information.	**07**
Q.3	**(a)**	Explain with example arithmetic and logical data processing in microcontroller.	**07**
	(b)	What are the advantages of using SATA? Define three distinct protocol layers specified by SATA specifications.	**07**
		OR	
Q.3	**(a)**	Explain with example branching and bit (Boolean) operation instructions in microcontroller.	**07**
	(b)	Write uses of RDRAM. Compare the size and performance of RDRAM with other available RAMs.	**07**
Q.4	**(a)**	(i) For what purpose 802.11x standards are developed? Explain different standards.	**04**
		(ii) What is the IEEE 1394 interface? For what purpose it is used?	**03**
	(b)	Explain how interrupt service routine works and also describe context saving architectures.	**07**
		OR	
Q.4	**(a)**	(i) Explain the architecture of PCI express.	**04**
		(ii) Explain the concept of priorities and arbitration.	**03**
Q.4	**(b)**	Explain in detail storage area networks.	**07**
Q.5	**(a)**	What kind of Software support of A/D and D/A Converters is provided in microcontroller?	**07**
	(b)	Explain in brief the elements of computer system.	**07**
		OR	
Q.5	**(a)**	Explain the operation of EPROM.	**07**
	(b)	(i) What is the purpose of IDE?	**04**
		(ii) Is CAM faster than RAM? What is the disadvantage of CAM?	**03**

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