

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**
