Seat No.:	Enrolment No
CHIADATTE	CHNOLOGICAL INIVEDSITY

## GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER- II (Old course) • REMEDIAL EXAMINATION - SUMMER 2015 Subject Code: 1720107 Date: 15/05/2015 Subject Name: Embedded System Time: 02:30 pm to 5:00 pm **Total Marks: 70 Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. 0.1 (a) Explain all types of IC technology with respect to embedded system evolution. 07 **(b)** Write a short note on simple Digital Camera and its requirement specifications. 07 **Q.2** Write a note on all types of advanced RAMs. 07 (a) What are the advantages and disadvantages of writing embedded software in C 07 language compared to assembly language? What are the situation in which programming in assembly language is necessary or appropriate. OR **(b)** Draw and explain functional block diagram of Multilevel Bus Architectures. 07 Q.3 (a) Explain Application-Specific Instruction-Set Processor (ASIPs) with its block **07** diagram? (b) Write a note on all types of RT-level combinational and RT-level sequential 07 components. OR (a) 1. Differentiate between single purpose and general purpose processors. **Q.3** 04 2. Explain reaction timer with application 03 **(b)** Explain pulse-width modulators and its applications? 07 **Q.4** Compare serial protocols and parallel protocols with example? 07 (a) What are the uses of watchdog timer? Give example of ATM time out using **07** watchdog timer? Explain how an interrupt finds its way to the interrupt service routine to execute 07 0.4 it when the interrupt occurs. (b) Describe with necessary diagram how memory write and read function is 07 operated. 0.5 What is requirement specification? How to perform requirement specification **07** explain any one technique for requirement specification in embedded system. **(b)** Describe method of I/O addressing? 07 **Q.5** (a) Discusses challenges and issues related with embedded software development. 07 **(b)** Answer the following question. 1. Explain 8051 flag bits and PSW register. 04 2. Write a note on Fire Wire. 03

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