Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VII EXAMINATION – WINTER 2015

Subject Code: 170805 **Date: 04/12/2015**

Subject Name: Embedded Systems and Applications

Time: 10:30am to 1:00pm **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 block diagram of Embedded system? Also give the classification of embedded system.	**07**
	(b)	Give and explain advantages of C++.	**07**
Q.2	**(a)**	Write a short note on UART and HDLC	**07**
	(b)	Compare Harvard architecture and Van neumann architecture.	**07**
		OR	
	(b)	Compare RISC and CISC architecture.	**07**
Q.3	**(a)**	What is RTOS? Explain any four features of RTOS?	**07**
	(b)	Explain Macro and Functions in C.	**07**
		OR	
Q.3	**(a)**	Discuss compiler and cross compiler in detail.	**07**
	(b)	Compare Assembly language programming(ALP) and High level programming(C language)	**07**
Q.4	**(a)**	Discuss power constraints for embedded system in detail.	**07**
	(b)	Explain embedded application: Motor Speed Control	**07**
		OR	
Q.4	**(a)**	Explain hardware software partitioning in detail.	**07**
	(b)	Explain embedded application: Process Control	**07**
Q.5	**(a)**	Explain USB bus in details	**07**
	(b)	Explain ISA and PCI buses in detail	**07**
		OR	
Q.5	**(a)**	Explain I2C and CAN buses in detail.	**07**
	(b)	Explain Function Queues and Interrupt Service Routines Queues in pointers.	**07**

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