Date: 14/05/2015

Seat No.:	
No.	

Subject Code: X71105

GUJARAT TECHNOLOGICAL UNIVERSITY PDDC - SEMESTER-VII • EXAMINATION – SUMMER • 2015

Ti	•	et Name: Embedded System 02:30 pm - 05:00 pm	'0
1118	1	1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks.	
Q.1	(a)	What is embedded system? Give classification of embedded system and also list applications of embedded system.	07
	(b)	Explain programming model of the ARM processor.	07
Q.2	(a) (b)	Explain data transfer instructions for ARM processor. Write assembly language program for ARM processor for two 32 bit addition.	07 07
		OR	
	(b)	Write assembly language program for ARM processor for two 32 bit multiplication.	07
Q.3	(a) (b)	Write short note on ARM development tools. Write short note on RTOS.	07 07
		OR	
Q.3	(a) (b)	Explain in short 1) Watch dog timer. 2) Real time clock. List parallel communications buses and explain any two.	07 07
Q.4	(a) (b)	Explain multiple process and thread. What is semaphores? Explain semaphore for synchronization.	07 07
		OR	
Q.4	(a)	Explain inter process communication.	07
	(b)	Explain task coding and task scheduling.	07
Q.5	(a) (b)	Write short note on operating system security issues. Explain RTOS task scheduling models.	07 07
		OR	
Q.5	(a) (b)	Explain memory management in RTOS. Explain interrupt routine in RTOS environment and handling of interrupt service calls.	07 07
