Seat No.:	E 1 M .
Seat NO:	Enrolment No.
Deat 110	Linonicht NO.

Subject Code:X71105

GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC - SEMESTER-VII EXAMINATION - WINTER 2015

Date:04/12/2015

U			
Subj	ect 1	Name: Embedded Systems	
Time	e: 10	0:30pm to 1:00pm Tot	al Marks: 70
Instru		<u>-</u>	
	1.	Attempt all questions.	
	2.	Make suitable assumptions wherever necessary.	
	3.	Figures to the right indicate full marks.	
0.1			0=
Q.1	(a)	•	n 07
		each block in brief. Give few examples of embedded systems.	
	(b)	·	d 07
		discuss applications of each classification.	
Q.2	(a)	• • • • • • • • • • • • • • • • • • • •	07
	(b)	<u>.</u>	4 07
		architecture, discuss with justification.	
		OR	
	(b)	Describe with block diagram of ARM based software development	it 07
		tools for embedded systems.	
Q.3	(a)	Explain with examples any two of the following ARM instructions	s. 07
		(i) ADC r1,r2,r3 (ii) STMIA r1, {r2-r9} (iii) CMP r0,#()
	(b)	Write an ARM assembly language program to add two numbers of	of 07
		32-bit stored in R4 and R5 and result stored in R6.	
		OR	
Q.3	(a)	Explain with examples any two of the following ARM Thum	b 07
		instructions.	
		i) MVN Rd, Rm ii) ROR Rd, Rs iii) TST Rn, Rm	
	(b)	Write an ARM Thumb instructions assembly language program t	o 07
		add two numbers of 16-bit stored in R4 and R5 and result stored i	n
		R6.	
Q.4	(a)	Discuss the advantages and disadvantages of parallel port Vs seria	d 07
	` ′	port interfacing with appropriate examples.	
	(b)		d 07
	` '	systems, discuss any two in brief.	
		OR	
Q.4	(a)	What is Kernel with respect to Real Time Operating System	s 07
•	()	(RTOS), explain its functionality.	
	(b)		o 07
	(~)	RTOS.	- 0.
Q.5	(a)		s 07
C 2	()	Communication) functions of RTOS.	
	(b)		5, 07
	(6)	explain in short.	., 07
		OR	
Q.5	(a)		er 07
٧.٠	(41)	process communication in RTOS.	
	(b)		5. 07
	(0)	Discuss which different scheduling algorithm for process executio	
		by RTOS.	••
		oy RTOD.	
