PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
M.Tech. Winter 2017 - 18 Examination

Semester: 1   Date: 02/01/2018
Subject Code: 03212101   Time: 2:00pm to 4:30pm
Subject Name: Real Time Embedded System Design   Total Marks: 60

Instructions:
1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1	A) What do you mean by embedded system? Discuss the various components of embedded System design.	(05)
	B) Explain Real-Time Operating System and its important functions.	(05)
	C) Describe the principal features of the ARM architecture in detail.	(05)
Q.2	**Answer the following questions**. (Attempt any three) (Each five mark)	(15)
	A) Explain concept of multithread and context switching in OS.	
	B) Discuss various Data types used in C.	
	C) Explain the CAN bus arbitration with Bit timing.	
	D) Classify the embedded system, Give few examples of such systems.	
Q.3	A) Explain with necessary sketch, interfacing of the LED with LPC2148 and write C language program to ON and OFF the LED continuously.	(07)
	B) Draw interfacing and write a C program to read potentiometer connected to ADC0 pin of LPC2148.	(08)
	OR	
	B) Compare cooperative scheduling and preemptive scheduling.	(08)
Q.4	A) Explain the operation of Phase Locked Loop in LPC2148. How can you set the required CPU clock frequency?	(07)
	OR	
	A) Explain the PWM modulator block diagram to generate PWM signal on port pin.	(07)
	B) Discuss the basic block diagram of architectural model of ARM Controller.	(08)