Total No. of Questions: 10]	SEAT No.:
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[4859] - 1040 B.E. (ESTC)

## EMBEDDED SYSTEM & RTOS

		(2012 Pattern) (Elective - I)		
Time	Time: 3 Hours] [Max. Mark			
Insti	ructio	ons to the candidates :		
	1) 2) 3)	Neat diagrams must be drawn wherever necessary.  Figures to the right indicate full marks.  Assume suitable data, if necessary.		
<b>Q</b> 1)	a)	Explain the characteristics of embedded system.	[5]	
	b)	Explain the waterfall model.	[5]	
		OR		
<b>Q</b> 2)	a)	Write a program in embedded C to implement scheduler.	[7]	
	b)	Explain the different states of task.	[3]	
Q3)	a)	Explain the classification of embedded system.	[3]	
	b)	Write a program in embedded C to implement semaphore.	[7]	
		OR		
<b>Q4</b> )	a)	Write a program in embedded C to implement mailbox.	[7]	
	b)	Compare MUCOS RTOS with LINUX RTOS.	[3]	
Q5)	a)	Explain the importance of embedded Linux in the development embedded system.	ment of <b>[8]</b>	
	b)	Explain the memory storage considerations for embedded system.	d Linux [8]	
		OR		

*P.T.O.* 

<b>Q6</b> )	a)	Explain the cross development environment used for embedded Linu [8]		
	b)	Explain in detail the steps system development board	to execute any C program on embed (ARM 9)	dded [ <b>8</b> ]
<b>Q7</b> )	a)	Explain the Linux kernel c	onfiguration steps.	[8]
	b)	Explain module utilities us	ed in embedded linux.	[8]
			OR	
<b>Q8</b> ) a) b)		Explain the steps to config	are U-Boot.	[8]
		Explain the following file s	ystem in linux.	[8]
		i) ext2	ii) ext3	
		iii) ext4	iv) JFFS2	
<b>Q9</b> ) a) Exp		Explain the embedded soft	ware development tools.	[8]
	b)	Explain Automatic chocolate vending machine with suitable block diagram and state its hardware requirements. [10]		
			OR	
Q10)	a)	Explain the porting issues platform.	of operating system (os) in an embed	dded [8]
	b)	Explain the lab tools requir	ed for embedded system design.	[10]

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