Total No. of Questions :8]

SEAT No. :

P2295

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[5333] - 4002

M.Sc.

COMPUTER SCIENCE

CS - 403 : Embedded System

(2013 Pattern) (Semester - IV)

Time : 3 Hours] ***[Max. Marks :50***

Instructions to the candidates:

1) ***Answer any five Questions***
2) ***Neat diagrams must be drawn wherever necessary***
3) ***Figures to the right indicate full marks***

Q1) a) Write short note one RISC architecture **[4]**

b) What is meant by PCB and TCB? What are the analogies in PCB and TCB? **[4]**

c) Give any four examples of embedded System **[2]**

Q2) a) Describe functional of linker, locator interpreter and assembler **[4]**

b) Explain JTAG and ONCE briefly **[4]**

c) Name some of the hardware parts of embedded systems? **[2]**

Q3) a) How can a real time performance be derived form a non real time system? **[4]**

b) Define buffer? Explain buffer exchange in brief **[4]**

c) What are the goals of RTOS? **[2]**

Q4) a) What is a target system? how does the target system differ from the final embedded system. **[4]**

b) Write short note on paging technique of memory mupping **[4]**

c) Define real time clock (RTC) **[2]**

P.T.O.

5)	a)	Explain content switching?	**[4]**
	b)	Explain the problem of data logging on hard disc? How it can be resolve?	**[4]**
	c)	Define system on chip (SOC) with an example	**[2]**
6)	a)	List various forms of memories used in embedded systems. What are the functions of memories?	**[4]**
	b)	Explain use of multiple semaphores for a task?	**[4]**
	c)	What is interrupt? List different types of interrupts.	**[2]**
7)	a)	Explain the basic design of Real Time operating system (RTOS)	**[5]**
	b)	Explain task level and symbolic debugger	**[5]**
8)	a)	Explain the rate monotonic co-operative scheduling	**[5]**
	b)	Draw a simple parallel I/O port and explain its basic operation	**[5]**