NAME_____ ROLL NO_____

2008 ANNA UNIVERSITY

B.E/B.TECH DEGREE EXAMINATION

EMBEDDED SYSTEM DISIGN

(INFORMATION TECHNOLOGY)

DECE-2008

TIME-3HOUR
MARKS-100

ANSWER ALL QUESTIONS

PART - A [10X2=20]

1. What do you mean by 'real time'and'real time clock'?

2. Why does a processor system always need an 'Interrupts Controller'?

3. write the features of CISC architecture?

4. How does memory map help in designing a locator program?

5. List the uses of timer device?

6. write two super speed versions of PCI.

7. How PCI supports for interrupt handling mechanism

8. how to assign the priority to a task.

9. What are the OS units at an RTOS kernal?

10.What are the various component of emulator ?

PART - B [5X16=80]

11.a(!) Explain use of each control bit of I2C bus.

(!!)Why are devices drivers important routines in a system?

12.a(!)What are the essential stuctural units in (1)MICROPROCESSOR (2)EMBEDDED PROCESSOR

(3)MICRO CONTROLLER (4)DSP (5)ASSP (6)ASIP ?.List and explain each of these

(OR)

b.An automobile cruise control system is to be designed in a project.What will be skills needed in the term of hardware and software engineers (Explain in detail)

13.a.(!)What are the advantages of Harvard Architecture?

(!!)Justify that Micro controller powerPC or ARM7 can be the best choice for developing a"Fast Network Switching System"

(OR)

b.(!)Draw the circuit for interfacing processor,memory and I/O devices through DMA.

(!!)Design memory the devices needed for a low resolution uncoloured digital camera system.

14.a(!)List the mechanism available to solve the shared data problem?

(!!)Compare:Preemptive and Non-Preemptive context Switching

(OR)

(b) Prove that data transfer rate is low for interrupt driven I/O mechanism

15.a(!)When is an RTOS necessary and when is it not necessary in the embedded System?

(!!) What is the action plan to follow while designing an embedded System
?

(OR)

b.With an example,show the scheduling of task for the following cases

(1)Round Robin Scheduling

(2)Priority based preemption scheduling.

(Time constrained tasks