Code: R7411310

R7

IV B.Tech I Semester (R07) Supplementary Examinations, May 2012
EMBEDDED AND REAL TIME SYSTEMS
(Electronics & Control Engineering)

Time: 3 hours Max Marks: 80

Answer any FIVE questions
All questions carry equal marks

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1. Discuss various steps involved in the development of an embedded system with an example.

2. (a) Draw and explain neatly the difference between Princeton and Harvard memory architectures?
   (b) Explain about PC parallel post signals and associated registers.

3. Explain the following:
   (a) FSMD.
   (b) PSM.

4. (a) Explain the need for communication interfaces?
   (b) With a neat sketch describe the working of UART.

5. (a) Explain task state diagram.
   (b) Discuss how semaphores solve shared data problem.

6. (a) Explain how mailbox provides inter-task synchronization.
   (b) With suitable examples explain how to:
   (i) Flush a message queue. (ii) Broadcast a queue.

7. (a) Explain different times management function calls.
   (b) Write about handheld operating systems.

8. (a) Give the standard definition of synthesis and explain about the synthesis process.
   (b) Explain how a behavioral synthesis process is different from structural synthesis process.

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