

Code: R7411310

R07

B.Tech IV Year I Semester (R07) Supplementary Examinations, May 2013

**EMBEDDED AND REAL TIME SYSTEMS**

(Electronics and Control Engineering)

Time: 3 hours

Max. Marks: 80

Answer any FIVE questions  
All questions carry equal marks

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- 1 With a neat diagram, explain application specific instruction set processors (ASIP) based architecture of an embedded system.
- 2 With the help of neat sketch, explain RS422/RS485 in detail.
- 3 (a) What is timer? Write the applications of timer.  
(b) Is priority inheritance an important feature? Discuss.
- 4 (a) Explain RMA with suitable example.  
(b) Explain test-and-set operations.
- 5 (a) Define hardware/software co-design.  
(b) What is system synthesis?  
(c) Write the advantages of simulations.
- 6 (a) Illustrate how program and data memory fetches can be overlapped in Harvard architecture.  
(b) Explain the basic architecture of general purpose processor.
- 7 (a) What is the difference between semaphore and mutex?  
(b) Explain task management function calls.  
(c) Explain context switching.
- 8 (a) Is priority inheritance an important feature? Discuss.  
(b) Write the function calls for memory managements.

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