

Code No: C5502

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.TECH I - SEMESTER EXAMINATIONS, APRIL/MAY-2012
EMBEDDED REAL TIME OPERATING SYSTEMS
(EMBEDDED SYSTEMS)**

Time: 3hours**Max. Marks: 60**

**Answer any five questions
All questions carry equal marks**

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- 1.a) Write the syntax and usage of fork, waitpid, fopen and fclose.
b) Explain how the shared memory resolves the issues in interprocess communication.
- 2.a) What is hard and soft real time systems? Give one practical example and draw the reference model.
b) Define resources and processors. Give one example and write the resource parameters of jobs.
- 3.a) Write the usage of scheduling algorithms for real time systems.
b) Illustrate the Weighted round robin scheduling algorithm with suitable example.
- 4.a) What is embedded system. Give example of embedded systems and its components and explain?
b) Discuss the interrupt service mechanism in RTOS environment.
- 5.a) Describe the Hardware and Software interrupt priorities?
b) Differentiate the features of pre-emptive priority mechanism in Vx Works RTOS.
- 6.a) Write the Unix commands and its usage to create, remove and copy a directory in home directory.
b) Define task, data dependency and task model.
- 7.a) Discuss the Release time jitters of Aperiodic tasks in time services.
b) Write the different states of thread and explain the Thread control block in detail.
8. Explain the case study of an ES design for Automatic Chocolate winding machine.

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