R09

Code No: C5502
JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.Tech I - Semester Examinations, March/April -2011
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 function of the following:
   i)lseek ii) vfork iii) waitpid iv) pend v) fwrite vi) OSSemPost ( )   [12]

2. a) What is RTOS? Give one practical example where RTOS is used.
   b) Briefly describe the Hard Real Time Systems.   [12]

3. (a) Write about the Periodic Task model?
   (b) Describe the scheduling Hierarchy of Real Time Systems.   [12]

4. (a) Differentiate the weighted Round Robin and Priority driven approaches?
   (b) Explain the inter-process communication of RTOS.   [12]

5. (a) Describe the Hardware and Software interrupt priorities.
   (b) Distinguish between the features of MUCOS and Vx Works RTOS.   [12]

6. (a) List the layers between application and hardware of RTOS.
   (b) Give examples of IO subsystems. Explain the use of asynchronous I/Os.   [12]

7. (a) Explain off line and online scheduling policies.
   (b) Describe Memory allocation related functions of MUCOS.   [12]

8. Explain the case study of an ES design for a Smart Card.   [12]

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