

R09

Code No: D0604, D7703, D6803, D5703

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M.Tech II - Semester Examinations, March/April 2011

EMBEDDED REAL TIME OPERATING SYSTEMS

(DIGITAL SYSTEMS & COMPUTER ELECTRONICS, EMBEDDED SYSTEMS & VLSI DESIGN, VLSI & EMBEDDED SYSTEMS, VLSI SYSTEM DESIGN)

Time: 3hours

Max. Marks: 60

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

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1. Write about File I/O functions: open, create .close, read, write seek? [12]
2. a) Explain Periodic Task Model .
b) Explain Resource Graph with an example. [12]
3. a) Write about weighted round-robin approach for scheduling Real –time systems with an example.
b) What is Effective Release Time and deadline? [8+4]
4. a) What is the problem of sharing data by multiple tasks and routines?
Write the solutions.
b) Differentiate function, ISR and task? [8+4]
5. a) Write the Kernel services in an OS?
b) Write about the semaphox – related functions of MUCOS. [8+4]
6. Write about the embedded system design process for a smart card in detail. [12]
7. a) Write about the basic features of V_x works.
b) Explain Kalman filtering. [12]
8. a) Explain timer and counting devices.
b) Explain watch dog timer and real time clock. [6+6]
