

**R09**

**Code No: C5510**

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

**Time: 3hours**

**Max.Marks:60**

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

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- 1.a) Explain the objectives of an Operating System.
- b) What is meant by Memory Hierarchy?
- 2.a) What is Filter? Mention any five filters in UNIX and write about any two.
- b) Differentiate-Shell and Kernel. Mention and brief the various features of Shell Programming.
- 3.a) What is a System call? Give its classification. Write about the system calls for Process creation & termination.
- b) Compare and contrast IPC mechanisms – FIFOs & Message Queues.
4. With a neat sketch write about Remote procedure call (RPC) mechanism.
- 5.a) Elaborate the Lamport's Logical Clock Concept giving its merits and demerits.
- b) Write about Bully algorithm.
6. Compare and contrast the various algorithms for distributed deadlock detection.
7. Mention and brief the various design issues of Distributed Systems.
8. Write short notes:
  - a) ATM Networks
  - b) Atomic Transactions.

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