

GUJARAT TECHNOLOGICAL UNIVERSITY
M. E. - SEMESTER – I • EXAMINATION – WINTER • 2013

Subject code: 715102**Date: 26-12-2013****Subject Name: Advanced Operating System and Management****Time: 10.30 am – 01.00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Explain different Distributed Computing models **07**
(b) What are various design considerations with distributed operating system **07**
- Q.2** (a) What is a distributed operating system? Give the specific meaning **07**
(b) List some advantages of a distributed operating system **07**
- OR**
- (b) What does naming mean in the context of distributed file systems? How is it related to transparency? **07**
- Q.3** (a) What is the difference between stateful and stateless file servers? What is the most important problem with each approach? What is the best solution to both problems? **07**
(b) Sketch what is involved in converting the UNIX file system software to a distributed file system. You should deal with both file naming and file access. **07**
- OR**
- Q.3** (a) To implement time stamping across a network, every communicating process maintains a local clock. How are the clocks synchronized? **07**
(b) In the Two-Phase Commit Protocol, what must happen before the transaction coordinator send a COMMIT message to the participating sites? In the Two-Phase Commit Protocol, what is the purpose of logging? **07**
- Q.4** (a) What is thread? Explain multithreading with example. **07**
(b) Describe zoned page frame allocator in detail. **07**
- OR**
- Q.4** (a) Explain consistency model used in a distributed shared memory **07**
(b) Explain how Mutual Exclusion is implemented in distributed systems **07**
- Q.5** (a) Explain the Deadlock modeling **07**
(b) Explain the implementation of RPC in a distributed system **07**
- OR**
- Q.5** (a) Explain different communication protocol used for RPCs **07**
(b) What are the issues in client server binding? Explain how these issues handled in RPC **07**
