Seat No.:	Enrolment No.

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

Subject code: 715102 Date: 26-12-2013 Subject Name: Advanced Operating System and Management **Total Marks: 70** Time: 10.30 am - 01.00 pm**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 **07** related to transparency? **Q.3** (a) What is the difference between stateful and stateless file servers? What is the **07** most important problem with each approach? What is the best solution to both problems? (b) Sketch what is involved in converting the UNIX file system software to a **07** distributed file system. You should deal with both file naming and file access. OR (a) To implement time stamping across a network, every communicating process Q.307 maintains a local clock. How are the clocks synchronized? (b) In the Two-Phase Commit Protocol, what must happen before the transaction 07 coordinator send a COMMIT message to the participating sites? In the Two-Phase Commit Protocol, what is the purpose of logging? 0.4 (a) What is thread? Explain multithreading with example. 07 **(b)** Describe zoned page frame allocator in detail. 07 OR 0.4 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 Q.5 07** (a) Explain different communication protocol used for RPCs (b) What are the issues in client server binding? Explain how these issues handled **07** in RPC
