

GUJARAT TECHNOLOGICAL UNIVERSITY
M. E. - SEMESTER – I • EXAMINATION – WINTER • 2014

Subject code: 3715102**Date: 07-01-2015****Subject Name: Advanced Operating System and Management****Time: 02:30 pm - 05:00 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 the Design issues of Distributed Operating System **07**
(b) What is Termination Detection in Distributed Systems ? Write algorithm for identifying Termination of Distributed Operating System **07**
- Q.2** (a) Explain the General System Model for Distributed Mutual Exclusion **07**
(b) Write Lamports Algorithm for Distributed Mutual Exclusion **07**
- OR**
- (b) Explain Raymonds Algorithm with an example for Distributed Mutual Exclusion **07**
- Q.3** (a) What are the different strategies of Distributed Deadlock handling? **07**
(b) Explain the working Hierarchy Deadlock Detection with a diagram **07**
- OR**
- Q.3** (a) Write Ho-Rammoorthys 2-Phase Centralized algorithm for Distributed Deadlock **07**
(b) Explain the working of Diffusion Computation Distributed algorithm for Deadlock **07**
- Q.4** (a) Classify Load Distributing algorithms **07**
(b) Explain the Components of a Load Distributing Algorithm **07**
- OR**
- Q.4** (a) Explain the working of Receiver-Initiated Algorithm of Distributed Scheduling with a neat diagram **07**
(b) What are the requirements for Load Distributing? **07**
- Q.5** (a) Explain any 4 ways of Performance Tuning of Operating System **07**
(b) Write a program that demonstrates Ricart-Agrawala's Algorithm for DME **07**
- OR**
- Q.5** (a) What are the design principles of Security? **07**
(b) Explain how Unix provides Security **07**
