2006 JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY

IV B.TECH II SEMESTER SUPPLEMENTARY EXAMINATIONS
DISTRIBUTED SYSTEMS
(COMPUTER SCIENCE & SYSTEMS ENGINEERING

Apr/May 2006

TIME – 3 HOUR
MARK – 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) What is a Single System Image ? Discuss.

(b) Explain the main guidelines and principles that a distributed operating system designer must follow for good performance of his or her system.

10+6]

2. Describe the functionalities of the different layers of the ATM protocol reference model.   [16]

3. Discuss the strategies used to handle deadlocks and their applicability to distributed systems. [16]

4. (a) Discuss the advantages and disadvantages of workstation system model.

(b) Explain how idle workstations in a distributed system can be effectively utilized.   [8+8]

5. (a) What is the difference between a file service using the upload/download model and one using the remote access model.

(b) Why do some distributed systems use two level naming.   [8+8]

6. (a) Explain how sequential consistency is achieved in page based distributed shared memory.

(b) Differentiate between Release and entry consistency models.   [8+8]

7. Explain the usage of the following in mach process.

(a) Process port

(b) Bootstrap port

(c) Exception port

(d) Registered port

[4×4]

8. (a) Can a DCE client connect to multiple servers ? Explain.

(b) How can a server keep track of multiple clients? (in DCE)

(c) How do you perform asynchronous RPC? (in DCE)

[16]