

Register Number:

M.E. DEGREE EXAMINATIONS: JUNE 2012

Second Semester

COMPUTER SCIENCE AND ENGINEERING

CSE507: Advanced Operating Systems

Time: Three Hours

Maximum Marks: 100

Answer All Questions:-

PART A (10 x 2 = 20 Marks)

1. Define distributed operating system.
2. What is the need for clock synchronization?
3. What is a remote Procedure call?
4. What is marshaling?
5. List any two Salient features of DSM.
6. Define thrashing.
7. What is event ordering?
8. Give any three Deadlock Characteristics.
9. What is meant by atomic transaction?
10. Define threads.

PART B (5 x 16 = 80 Marks)

11. a) (i) Discuss distributed operating system design issues. (8)
(ii) Write short notes on message passing. (8)

(OR)

- b) (i) Explain process addressing. (8)
(ii) Write notes on failure handling. (8)

12. a) (i) What is RPC? Compare RPC with ordinary procedure call model. (4)
(ii) Explain RPC handling in detail. (12)

(OR)

- b) What are the main issues in designing a transparent RPC mechanism? Is it possible to achieve complete transparency of an RPC mechanism? If no, explain why? If yes, explain how?

13. a) (i) Explain distributed shared memory. (8)

(ii) Write about consistency models. (8)

(OR)

b) (i) With Neat sketch explain the architecture of DSM systems. (12)

(ii) Briefly discuss about Heterogeneous DSM. (4)

14. a) Discuss task assignment and load balancing in distributed environment.

(OR)

b) Discuss distributed mutual exclusion and the corresponding algorithms.

15. a) Explain the distributed file system design and implementation issued in detail.

(OR)

b) Write notes on File-caching schemes and fault tolerance.
