14856
MCA 4th Semester Examination
Distributed Operating System
MCA-E41

Time : 3 Hours Max. Marks : 60

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Candidates are required to attempt five questions in all selecting one question from each of the sections A, B, C & D. Section E is compulsory.

SECTION - A

1. What are the main reliability issues in designing a message passing system? Describe a suitable mechanism for handling each of these issues. (12)

2. Explain the different issues in designing distributed operating system. (12)

SECTION - B

3. Discuss in detail different communication protocols for remote procedure call. (12)

4. Explain general architecture of distributed shared memory. (12)

SECTION - C

5. Elaborate different clock synchronization algorithms. (12)
6. Write a short note on the following:
   (i) Task assignment approach
   (ii) Process migration
   (iii) Load sharing approach (3x4=12)

SECTION - D

7. (a) What are the desirable features of a naming system? (6)
   (b) Elaborate object locating mechanism. (6)

8. Discuss different file-caching schemes in detail. (12)

SECTION - E

9. Write a short note on the following:
   (i) Exception handling
   (ii) Group communication
   (iii) Buffering
   (iv) Stub
   (v) Threads
   (vi) Atomic transactions (6x2=12)