(2064)

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   (3×4=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   (6×2=12)