18227(M)

B. Tech 6th Semester Examination

Distributed Operating Systems (CBS)

CS-602

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 : Attempt total 5 questions, Question no. 9 is compulsory. Select one question from each section.

SECTION - A

1. What is distributed system? Explain advantages and disadvantages of Distributed Systems over Centralized Systems.   (10)

2. How Communication is performed through Remote Procedure Call (RPC). Explain with the help of diagram.   (10)

SECTION - B

3. What is synchronization? List the various clock synchronization algorithm. Explain any one of them.   (10)

4. Why Election Algorithm is needed? Explain Bully algorithms with an example.   (10)

SECTION - C

5. Explain shared variables in distributed shared memory in detail.   (10)

6. (a) What are the advantages offered by page based distributed shared memory?   (5)

   (b) Explain consistency models in detail.   (5)

SECTION - D

7. (a) Differentiate between stateless and stateful servers. (5)

   (b) Explain trends in distributed file system in brief.   (5)

8. Discuss page based distributed shared memory model in detail.   (10)

SECTION - E

9. (a) What is group communication? What is use of it?

   (b) Difference between loosely coupled and tightly coupled operating system.

   (c) What is MIMD? Explain.

   (d) Difference between logical and physical clock.

   (e) What do you mean by an open system?

   (f) Define Inter Process Communication (IPC).

   (g) Explain the term thrashing.

   (h) What do you mean by process migration?

   (i) What is file models?

   (j) What is network operating system?   (10×2=20)