C 32077

(Pages : 2)

Name.....

Reg. No.....

SIXTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, JUNE 2007

IT/CS 2K 606 B—DISTRIBUTED SYSTEMS

Time : Three Hours

Maximum : 100 Marks

Answer **all** *questions.*

1. (a) What are the advantages of distributed systems over centralised systems ?
   (b) Discuss the interdependencies of DCE components.
   (c) What is meant by Naming transparency ?
   (d) What is Cache consistency ?
   (e) What is DTS ? Discuss the importance of time services in distributed systems.
   (f) Discuss how we can detect deadlocks.
   (g) What is the need for a thread ? How they are organised ?
   (h) List desirable features of a good distributed file system.

(8 × 5 = 40 marks)

2. (a) Differentiate among the following types of operating systems by defining their essential properties :—

   (i) Time sharing.
   (ii) Parallel processing.
   (iii) Network.
   (iv) Distributed.

   (9 marks)

   (b) Mention advantages and disadvantages of distributed systems. (6 marks)

Or

3. (a) What are the key design issues to be dealt with in building a distributed computer system ? (8 marks)

   (b) What is a distributed operating system ? Discuss distributed system architectures.

4. (a) What is the difference between a process and thread ? Discuss different issues in designing a threads package. (7 marks)

   (b) Explain the mechanism for freezing and restarting a process. (8 marks)

Or

5. (a) Explain the desirable features of a good process migration. (7 marks)

   (b) Discuss the motivations of using threads. (8 marks)

Turn over

6. (a) Explain the desirable features of a good naming system. (8 marks)

(b) Discuss consistent ordering and casual ordering. (7 marks)

Or

7. (a) Explain the implementation of RPC in distributed computing. (7 marks)

(b) What are the main reliability issues in designing a message passing system ? Describe a suitable mechanism for handling each of these issues. (8 marks)

8. (a) Compare and contrast dynamic and static scheduling. (7 marks)

(b) Discuss different components of distributed file system design. (8 marks)

Or

9. (a) Explain the implementation of any two consistency models. (8 marks)

(b) Discuss real time scheduling. (7 marks)

[4 × 15 = 60 marks]