

Set No. 1

IV B.Tech II Semester Regular/Supplementary Examinations, April - 2015

DISTRIBUTED SYSTEMS

(Computer Science and Engineering)

Time: 3 hours**Max. Marks: 75**

Answer any FIVE Questions

All Questions carry equal marks

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|---|---|------|
| 1 | State and explain the challenges of distributed systems. | [15] |
| 2 | Explain about Architectural models. | [15] |
| 3 | a) Explain in detail about marshalling. | [8] |
| | b) Describe the various issues relating to datagram communication. | [7] |
| 4 | What is meant by object model? Describe how distributed object are related to distributed system. | [15] |
| 5 | Explain processes and threads. | [15] |
| 6 | a) Distinguish between IP and overlay routing for peer to peer applications. | [8] |
| | b) Discuss about overlay routing. | [7] |
| 7 | a) What are the features required for election algorithms. | [8] |
| | b) What meant by total ordering and where it is used. | [7] |
| 8 | Discuss in detail about distributed deadlock and transaction recovery. | [15] |

Set No. 2

IV B.Tech II Semester Regular/Supplementary Examinations, April - 2015

DISTRIBUTED SYSTEMS

(Computer Science and Engineering)

Time: 3 hours**Max. Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks

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|---|--|------|
| 1 | Explain distributed system with examples. | [15] |
| 2 | a) Describe Software and hardware service layers in distributed systems. | [8] |
| | b) How failures are recovered in distributed system? | [7] |
| 3 | a) Write in detail about the characteristics of interprocess communication. | [8] |
| | b) Differentiate between TCP stream communication and Client Server Communication. | [7] |
| 4 | Briefly explain about the design issues and implementation of RMI. | [15] |
| 5 | Describe Operating system architecture. | [15] |
| 6 | a) Explain and summarize Napster and its legacy with respect to distributed file System. | [8] |
| | b) Describe the non-functional requirements of peer to peer middleware. | [7] |
| 7 | Explain Ricart-Agrawala algorithm for mutual exclusion. How many messages per critical section execution are required? (Assume there are N sites). | [15] |
| 8 | What do you mean by nested transaction? Explain the usage of locks in nested transaction. | [15] |

Code No: **R42051****R10****Set No. 4****IV B.Tech II Semester Regular/Supplementary Examinations, April - 2015****DISTRIBUTED SYSTEMS****(Computer Science and Engineering)****Time: 3 hours****Max. Marks: 75****Answer any FIVE Questions****All Questions carry equal marks**

- 1 a) Define the term distributed system. Explain its features along with its motivation for constructing. [8]
b) Describe the benefits of resource sharing? Explain about its significance. [7]
- 2 a) Explain about peer-to-peer architecture. [8]
b) What are the different communication paradigms? Explain. [7]
- 3 a) Describe remote object references. [8]
b) Distinguish between datagram and stream communication. [7]
- 4 Explain about remote procedure call along with sun RPC. [15]
- 5 Describe Operating system architecture. [15]
- 6 a) Discuss about coordination and agreement in group communication. [8]
b) Discuss about the Distributed File Systems. [7]
- 7 a) What is Election Algorithm? Suppose that two processes detect the demise of the coordinator simultaneously and both decide to hold an election using the bully algorithm. What happens? [10]
b) Write about fault tolerance.. [5]
- 8 Discuss in detail about deadlock and locking schemes in concurrency control. [15]