**14CS705B**

**Hall Ticket Number:**

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| **IV/IV B.Tech (Regular/Supplementary) DEGREE EXAMINATION** | | | |
| **Jan/Feb, 2021** | **Computer Science & Engineering** | | |
| **Seventh Semester** | **Distributed Systems** | | |
| **Time:** Three Hours | | **Maximum :** 60 Marks | |
| *Answer* ***All*** *Questions from Part - A.* | | | (1X12 = 12 Marks) |
| *Answer Any FOUR Questions from Part - B.* | | | (4X12=48 Marks) |
| **Part - A** | | | |

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| 1 | Answer all questions | | (1X12=12 Marks) | |
|  | a) | Define distributed system. | |  |
|  | b) | Define RPC. | |  |
|  | c) | What is a socket? | |  |
|  | d) | What is code migration? | |  |
|  | e) | What are the two ways to implement structured name resolution? | |  |
|  | f) | List the properties of identifier. | |  |
|  | g) | List the algorithms used to achieve mutual exclusion. | |  |
|  | h) | Define synchronization. | |  |
|  | i) | What is causal consistency? | |  |
|  | j) | What is Byzantine problem? | |  |
|  | k) | Define fault tolerance? | |  |
|  | l) | Define distributed commit. | |  |
| **Part - B** | | | | |
| 2 | a) | Explain Distributed system goals. | | 6M |
|  | b) | What is transparency? Explain different types of transparencies. | | 6M |
|  | | | | |
| 3 | a) | What is RPC? Describe basic RPC operation. | | 6M |
|  | b) | Explain about Persistence and Synchronicity in communication | | 6M |
|  | | | | |
| 4 | a) | Discuss the design issues of servers. | | 6M |
|  | b) | Explain in detail about X-window system. | | 6M |
|  | | | | |
| 5 |  | Explain the following | |  |
|  |  | i) Forwarding pointer. ii) Home based approaches iii) Hierarchical approaches. | | 12M |
|  | | | | |
| 6 | a) | Why election algorithms are needed? Explain ring algorithm. | | 6M |
|  | b) | Explain client centric consistency models. | | 6M |
|  | | | | |
| 7 | a) | What are the uses of clock synchronization? Discuss about various clock synchronization algorithms. | | 8M |
|  | b) | What is replication? What are the reasons for replication? | | 4M |
|  | | | | |
| 8 |  | Explain in detail about process resilience. | | 12M |
|  |  |  | |  |
|  | | | | |
| 9 | a) | Explain about two phase commit (2PC) protocol. | | 8M |
|  | b) | Explain 3PC protocol. | | 4M |

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| **IV/IV B.Tech (Regular/Supplementary) DEGREE EXAMINATION** | | | |
| **November, 2016** | **Computer Science & Engineering** | | |
| **Seventh Semester** | **Distributed Systems** | | |
| **Time:** Three Hours | | **Maximum :** 60 Marks | |
| *Answer Question No.1 compulsorily.* | | | (1X12 = 12 Marks) |
| *Answer ONE question from each unit.* | | | (4X12=48 Marks) |

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| 1 | Answer all questions | | (1X12=12 Marks) | |
|  | a) | Define distributed system. | |  |
|  | b) | Differentiate RPC with RMI. | |  |
|  | c) | What is a socket? | |  |
|  | d) | What is code migration? | |  |
|  | e) | What are the two ways to implement name resolution? | |  |
|  | f) | What is location service? | |  |
|  | g) | List the algorithms used to achieve mutual exclusion. | |  |
|  | h) | Define synchronization. | |  |
|  | i) | What is casual consistency? | |  |
|  | j) | What is Byzantine problem? | |  |
|  | k) | Define availability. | |  |
|  | l) | What are the advantages of Coda file system | |  |
| **UNIT I** | | | | |
| 2 | a) | Explain client server model. | | 6M |
|  | b) | What is transparency? Explain different types of transparencies. | | 6M |
| **(OR)** | | | | |
| 3 | a) | What is RPC? Describe basic RPC operation. | | 6M |
|  | b) | Explain about Persistence and Synchronicity in communication | | 6M |
| **UNIT II** | | | | |
| 4 | a) | Discuss the design issues of servers. | | 6M |
|  | b) | Describe how to remove unreferenced entities. | | 6M |
| **(OR)** | | | | |
| 5 | a) | Discuss distribution transparency at client side. | | 6M |
|  | b) | Explain the working of DNS. | | 6M |
| **UNIT III** | | | | |
| 6 | a) | Why election algorithms are needed? Explain ring algorithm. | | 6M |
|  | b) | Explain different distribution protocols. | | 6M |
| **(OR)** | | | | |
| 7 | a) | What are the uses of clock synchronization? Discuss about various clock synchronization algorithms. | | 6M |
|  | b) | What is replication? What are the reasons for replication? | | 6M |
| **UNIT IV** | | | | |
| 8 | a) | Explain basic reliable multicasting schemes in group communication. | | 6M |
|  | b) | Explain naming implementation in NFS | | 6M |
| **(OR)** | | | | |
| 9 | a) | Explain RPC semantics in the presence of failures. | | 6M |
|  | b) | Discuss briefly about Coda file system | | 6M |