



KINGS

COLLEGE OF ENGINEERING
Punalkulam

DEPARTMENT OF INFORMATION TECHNOLOGY



QUESTION BANK

Subject Code : IT1001

Subject Name : Distributed Systems

Year / Sem : IV / VII

UNIT I

PART – A (2 marks)

1. Define distributed systems.
2. Give examples of distributed systems
3. Write the following
(i)HTTP (ii) HTML
4. What are the uses of web services?
5. Define heterogeneity
6. What are the characteristics of heterogeneity?
7. What is the purpose of heterogeneity mobile code?
8. Why we need openness?
9. How we provide security?
10. Define scalability
11. What are the types of transparencies?

PART – B (16 Marks)

1. Explain the Differences between intranet and internet.
2. Explain the various challenges of distributed systems
3. Write in detail about www.
4. Write in detail about the characteristics of inter process communication.

5. Explain in detail about marshalling.
6. Describe in detail about client – server communication.
7. Write in detail about group communication.

UNIT II
PART – A (2 marks)

1. What is meant by Garbage collection?
2. What is the purpose of dispatcher in RMI?
3. Define Dynamic Invocation.
4. What is the use of RMI registry?
5. Explain the use of Reflection in RMI?
6. What the types are of file System modules?
7. Name any two Characteristics of File Systems.
8. Write any two flat file service operations.
9. Define Name spaces.
10. Define Directory Services

PART – B (16 Marks)

1. Explain Communication between distributed objects.
2. Explain in detail about Remote Procedure call with a case study.
3. Explain in detail about Events and Notifications.
4. Describe java RMI.
5. Explain the characteristics of file systems.
6. Describe File service architecture.
7. Explain Directory Services with an example.
8. Explain Naming services.

UNIT III
PART – A (2 marks)

1. What is meant by concurrent processing?
2. Define Thread.
3. What is address space?

4. What is meant by invocation performance?
5. Difference between monolithic and micro kernels
6. Define clock, event and process states.
7. Define Clock skew and clock drift
8. What is Berkeley algorithm?
9. Define Lamport logical clock
10. What is multicast synchronization?

PART – B (16 Marks)

1. Explain Processes and threads
2. Explain Communication and invocation
3. Describe Operating system architecture
4. Explain synchronizing physical clocks
5. Explain Global States and distributed debugging
6. Explain the algorithms for mutual exclusion
7. Discuss about threads in distributed systems

UNIT IV

PART – A (2 marks)

1. What is transaction?
2. Define ACID properties.
3. Define Concurrency control.
4. What is meant by nested transactions?
5. Define strict two phase locking
6. Define deadlock
7. What are the Differences between validation phase and update phase?
8. Define time stamp ordering.
9. Define two-phase commit protocol
10. Define Edge chasing

PART – B (16 Marks)

1. Explain in detail about concurrency control in transaction.
2. Discuss in detail about deadlock and locking schemes in concurrency control
3. Explain optimistic concurrency control.
4. Explain Time stamp ordering in detail.
5. Explain in detail about comparison of methods of concurrency control.
6. Explain the concurrency control in distributed transactions.
7. Explain about distributed deadlocks.
8. Describe in detail about distributed deadlocks.

UNIT V

PART – A (2 marks)

1. Define threats
2. What are the classifications of security falls?
3. Define the methods of attack
4. What are the uses of cryptography?
5. Define certificates
- 6 Why we need access control ?
7. Define fault tolerance
8. Why we need replication?
9. Define query operations
10. What are the properties of transaction replicated data?
11. What are the functions of replica manager?

PART – B (16 Marks)

1. How we designing the secure systems
- 2 Explain in detail about firewalls
3. Write in detail about cryptographic algorithms
4. What are the characteristics of digital signatures?
5. Explain the case study Kerberos in detail
6. What are the fault tolerant services?
7. Describe in detail about active replication