Question Bank
Distributed System

Class: IV CSE

UNIT-I

1. Write about the following:
a. No Global Clock b. Independent Failures c. Mobile Ubiquitous Computing
2. (a) Define distributed systems and its goals? 5 M
(b) List and describe the challenges of distributed systems? 5M
3. (a) State differences between distributed and centralized system? 5M
(b)Explain the types of network in distributed system? 5M
4. .Explain Resource sharing and the Web in Distributed Systems? 10M
5. a) Explain about Architectural models? 5M
b) Describe Software and hardware service layers in distributed systems? 5M
6. . Explain the following: a)Interaction model b)Failure Model c)Security Model
7. . a) What are different system model of distributed system? 5M
b) What is the purpose of fundamental model? Explain? 5M
8. Explain Interface and Objects for Distributed Architecture? 5M
b) Describe Software layers in distributed systems? 5M

UNITII

1. .(a) Give an account an internet protocols? 5M
(b) What is the importance of Client- Server communication in Distributed systems. What are the main operations of the request- reply protocol? 5M
2. .(a) Discuss about internet protocols in distributed system? 5M
(b) Explain in detail about client-server, communication? 5M
3. . (a) Give an account an external data representation and marshalling? 5M
(b) Discuss the general characteristics of inter process communication? 5M
4. .(a) Give a detailed note on group communication? 5M
(b) What meant by marshalling? Differentiate between TCP stream communication and Client Server Communication? 5M
5. . (a) Briefly explain group communication? 5M
(b) Explain how inter process communication is handled in UNIX? 5M
6. . For IPC, (a) explain client-server communication? 5M
(b)Explain internal data representation in IPC? 5M
7. .(a)Write a short note on IPC in UNIX? 5M
(b). Describe the various issues relating to datagram communication? 5M

UNIT-III

1. (a) Explain about client server model and object based model? 5M

(b) In Remote Procedure Calls, what are the roles of the Client and Server Stub Procedures? 5M

2. Briefly explain about Java RMI with an example? 10M

3. Explain the following:

(a)Remote procedure call 5M (b)RMI with neat diagram 5M
4. Give a short notes on:
(i) Workstation model 5M (ii) Processor pool model 5M
5. (a) Write a short note on RPC protocol. 5M (b)Define communication between distributed objects. 5M **6**.(a) What is meant by object model? Describe how distributed object are related to distributed system?5M (b).Differentiate between RMI and Remote procedure call.Summarize about implementation
7. write a case study w.r.t JAV RMI

UNIT-IV

1.(a) Explain about various Remote Procedure Call Semantics? 5M
(b)Compare between the microkernel based operating System and the monolithic operating system design? 5M
2. (a) What is protection in operating system support? 5M
(b) Write a short note on operating system architecture ? 5M 3.
(a) Explain processes and threads? 5M
(b)Explain the operating system layer? 5M
4.(a) What is meant by shared memory multiprocessor? Explain? 5M
(a) Explain how operating system layer support common middle ware? 5M 5.
(a) Explain architecture of server threads. Give its applications? 5M
(b) Write about invocation and address space of a thread? 5M
6.(a) Describe the architecture of a Kernel suitable for a distributed system? 5M
(b) Explain the creation of a new process and threads? 5M

UNIT-V

1. (a) What are the various requirements of Distributed File Systems? 5M
(b) Explain and summarize apster and its legacy with respect to distributed file system? 5M
2. (a) Write a short notes on file service architecture? 5M
(b)Discuss about the Andrew file system? 5M
3. (a) What is file-server architecture in DFS? 5M
(b)Differentiate between Sun network file system and Andrew file system? 5M
4.(a) What is time stamp ordering? 5M
(b)Explain logical and physical clock? 5M
5. (a) Explain about Architectural models? 5M
(b) Write a short note on distributed file system? 5M
6..(a) Distinguish between IP and overlay routing for peer to peer applications? 5M
(b) Discuss about overlay routing ? 5M

UNIT-VI

1. (a) Explain about consistency models. 5M
(b) Give an account on chorus. 5M
2. (a) What are distributed deadlocks? 5M
(b)Explain atomic commit protocols and concurrency control in distributed system? 5M
3.a)Write rules for connecting of nested transaction? 5M
b)Write about locking in distributed systems? 5M
4.a) Explain about locking in strict two phase locking? 5M
b)Write about distributed deadlocks. How to prevent deadlocks in distributed systems? 5M
5.(a) Explain about coordination and agreement in group communication What meant by total ordering and where it is used? 5M
(b). Discuss in detail about distributed deadlock and transaction recovery? 5M
6. Give a detailed note on group communication? 10 M