



**Department Of Computer Science And Engineering**

**SUB.CODE / NAME: CS1402- Middleware Technologies**  
**YEAR / SEM: IV / VII**

**UNIT – I CLIENT /SERVER CONCEPTS**

**Part-A**

1. What is Client?
2. What is Server?
3. What are the characteristics of Client/Server?
4. What are the different types of Servers?
5. Define RPC.
6. What is meant by peer-to-peer communication?
7. What is the protocol implemented in Object Servers?
8. Define ORB.
9. Define Socket.
10. What is the protocol developed by Sun for distributed computing?
11. What is meant by middleware?
12. What are the two types of pipes?
13. What is meant by platforms?
14. List some of the characteristics of client/Server System
15. compare 2-tier and 3-tier Architecture

**Part-B**

1. Explain the characteristics of client/server.
2. a. Explain the different types of server.  
b. Explain the building blocks of client/server.
3. Discuss briefly about RPC.
4. Discuss briefly about peer-to-peer communication.
5. Explain briefly about message Queueing.
6. Discuss about file server, web server and object server in detail

**Unit II EJB ARCHITECTURE**

**Part-A**

1. What are the components of EJB architecture?
2. What are the six modes of transaction management?
3. What are the methods available for implementing the 3 tier architecture?
4. Mention the 6 roles of EJB.
5. How we can access the bean's method?
6. Mention the roles in EJB.

7. What are the functions available in the SessionDescriptor class ?
8. What is the difference between the RMI clients and the CORBA clients?
9. Define Naming Service.
10. What are the functions available in the SessionBean interface?
11. What are the functions available in the EntityBean interface?
12. How an interface is differentiated as Home and Remote interface in EJB?
13. What is ACL? Where it is used?
14. Define Optimized Method Invocation.
15. Define Persistence.
16. What is the role of assembler
17. What is the use of JAR file

### **Part-B**

1. Explain the roles of EJB server.
2. Explain the various supports given by EJB Containers.
3. Explain the 2 tier and 3 tier architecture in detail with the various methods of implementing the 3 tier architecture.
4. Explain the roles of EJB Container.
5. Write a program to display “Hello World“ using session bean.
6. Discuss about high level view conversation on EJB indeatil
7. List and explain the various modes of transaction supported by EJB container
8. compaer session bean and entity bean

## **Unit III EJB APPLICATIONS**

### **Part-A**

1. What is meant by session bean?
2. What is meant by entity bean?
3. What are the two different types of session bean?
4. What are the two different types of entity bean?
5. What is the difference between stateful session bean and stateless session bean?
6. What is the difference between CMP & BMP?
7. What are the features of entity bean?
8. What are the roles of EJB server?
9. What are the roles EJB containers?
10. Define home interface in EJB.
11. Define remote interface in EJB.
12. What are the deployment steps in session bean?
13. What are the deployment steps in entity bean?
14. What are the functions in stateful session bean?
15. What are the functions in stateless session bean?
16. What are the functions in entity bean?
17. What are the methods in stateful session bean life cycle?
18. What are the methods in stateless session bean life cycle?
19. What are the methods in entity bean life cycle?
20. What is the difference between Java Bean & Enterprise Java Bean?

21. Define EJB server.
22. Write short notes on EJB interfaces
23. What is the role of primary key in EJB?

### **Part-B**

1. Explain the life cycle of stateful session bean.
2. Explain the life cycle of stateless session bean.
3. Explain the life cycle of entity bean.
4. Explain the features of entity bean.
5. Explain the deployment process of session bean.
6. Explain the deployment process of entity bean.
7. Write a program for banking operations using entity bean.
8. Explain the Bean managed Persistence using a Example Program.
9. Explain how an EJB program can act as Client.
10. Write a EJB client using CORBA and Servlets.
11. Write an EJB application for a basic operation of calculator
12. Discuss about various types of session bean and its lifecycle in detail

### **Unit IV CORBA**

#### **Part-A**

1. Define an interface.
2. What is meant by Directory services?
3. What are the CORBA alternatives?
4. Define Socket Programming.
5. Define RPC.
6. Differentiate RMI and CORBA.
7. Define ORB.
8. Define IDL.
9. What does IIOP stand for and what is its significance?
10. What is the relationship between CORBA, OMA and OMG?
11. What is a client stub?
12. What is an object reference?
13. What is marshalling and unmarshalling?
14. What is meant by On-the-wire format?
15. What are the duties of ORB?
16. Define inter-ORB protocols.
17. What are the server activation policies?
18. Define BOA.
19. What is a Server Skeleton?
20. What are the data types in IDL?
21. What are the roles of skeleton and a stub in CORBA?
22. Define IIOP

### **Part-B**

1. Explain the architecture of CORBA.
2. Explain the concept of Networking Model.
3. Explain the concept of Object Model.
4. Briefly discuss about IDL.
5. What are the alternatives of CORBA? Explain.
6. Explain the concept of Communication Model in CORBA.
7. Write a program to display "Hello World" using CORBA.
8. write a corba application to convert the centigrade to Fahrenheit and implement using java

### **Unit V COM**

#### **Part-A**

1. What are the features of .NET?
2. What are the constituents of .NET framework?
3. Define CLR.
4. What is .NET class framework?
5. What is marshalling in .NET?
6. What is Remoting in .NET?
7. What are the two types of remotable objects?
8. Define COM.
9. What are the features of COM?
10. Define Interface pointer in COM.
11. Define Interface in COM.
12. What is stub in COM?
13. What is skeleton in COM?
14. How integers are represented in COM?
15. What do you mean by IDispatch?
16. what do you mean by Unmanageable code?

#### **Part-B**

1. Explain the architecture of .NET framework.
2. Explain remoting and marshalling in .NET.
3. Briefly discuss about interface pointers in COM.
4. Explain how a component is created, invoked and destructed using COM.
5. Explain the communication model in COM.
6. Explain marshalling in COM.
7. Differentiate between DCOM and CORBA.
8. Compare COM and CORBA in detail
9. Write note on Object creation and object destruction in COM