MIDDLEWARE TECHNOLOGIES
(ELECTIVE-II)

Course code: 13CS2115 **L P C**
4 0 3

Course Outcomes:

At the end of the course, a student will be able to:

CO1: Explain the design principles of distributed computing systems like client-server and CORBA and Java RMI

CO2: Describe and apply XML technology and distributed computing technologies like SOAP(service oriented application protocol), RPC(Remote Procedure call) HTTP

CO3: Describe XML name spaces and DTD presentation techniques.

CO4: Define and explain about the Agent oriented programming, Agent Based Framework of Interoperability and Open Agent Architecture

CO5: Apply the design principles of agent architecture

UNIT-I

Introduction to client server computing: Evolution of corporate computing models from centralized to distributed computing, client server models. Benefits of client server computing, pitfalls of client server programming. **CORBA with Java:** Distributed programming with Java RMI; Overview of CORBA, CORBA IDL, Client/server programming with CORBA & Java.

UNIT-II

XML TECHNOLOGY AND SOAP : XML Technology XML – Name Spaces – Structuring With Schemas and DTD – Presentation Techniques – Transformation – XML Infrastructure. SOAP: Overview of SOAP – HTTP – XML-RPC – SOAP: Protocol – Message Structure – Intermediaries – Actors – Design Patterns And Faults – SOAP With Attachments.

UNIT-III

WEBSERVICES OVERVIEW : XML Technology XML – Name Spaces – Structuring With Schemas and DTD – Presentation Techniques – Transformation – XML Infrastructure.SOAP: Overview of SOAP – HTTP – XML-RPC – SOAP: Protocol – Message Structure – Intermediaries – Actors – Design Patterns And Faults – SOAP With Attachments.

UNIT-IV

AGENT COMMUNICATION AND COLLABORATION : Agent Communication and Collaboration: Overview of Agent Oriented Programming - Agent Communication Language - Agent Based Framework of Interoperability - Agents for Information Gathering - Open Agent Architecture - Communicative Action for Artificial Agent

UNIT-V

AGENT ARCHITECTURE

Agent Architecture: Agents for Information Gathering - Open Agent Architecture – Communicative Action for Artificial Agent

Text Books:

1. Frank. P. Coyle , "XML, Web Services and The Data Revolution", 1st Edition, Pearson Education, 2002.

2. Jeffrey M. Bradshaw , "Software Agents", 1st Edition, PHI, 2010.

References:

1. M.L.Liu , "Distributed Computing, Principles and applications", 1st Edition, Pearson Education, 2008.

2. Ramesh Nagappan, Robert Skoczylas and Rima Patel Sriganesh , "Developing Java Web Services" , 1st Edition, Willey Publishing , 2004.