# SERVICES ORIENTED ARCHITECTURE

**Subject Code : 10CS844**    **IA Marks : 25**
**Hours/Week : 4**    **Exam Marks : 100**
**Total Hours: 52 Exam Hours: 3**

## PART – A

**UNIT – 1**    **7 Hours**
**Introduction o SOA, Evolution of SOA:** Fundamental SOA; Common Characteristics of contemporary SOA; Common tangible benefits of SOA;An SOA timeline (from XML to Web services to SOA); The continuing evolution of SOA (Standards organizations and Contributing vendors); The roots of SOA (comparing SOA to Past architectures).

**UNIT – 2**    **6 Hours**
**Web Services and Primitive SOA :** The Web services framework; Services (as Web services); Service descriptions (with WSDL); Messaging (with SOAP).

**UNIT – 3**    **6 Hours**
**Web Services and Contemporary SOA – 1:** Message exchange patterns; Service activity; Coordination; Atomic Transactions; Business activities; Orchestration; Choreography

**UNIT – 4**    **7 Hours**
**Web Services and Contemporary SOA – 2:** Addressing; Reliable messaging; Correlation; Polices; Metadata exchange; Security; Notification and eventing

## PART – B

**UNIT – 5**    **7 Hours**
**Principles of Service – Orientation:** Services-orientation and the enterprise; Anatomy of a service-oriented architecture; Common Principles of Serviceorientation; How service orientation principles inter-relate; Serviceorientation and object-orientation; Native Web service support for serviceorientation principles.

**UNIT – 6**    **6 Hours**
**Service Layers:** Service-orientation and contemporary SOA; Service layer abstraction; Application service layer, Business service layer, Orchestration service layer; Agnostic services; Service layer configuration scenarios

**UNIT – 7**    **7 Hours**
**Business Process Design:** WS-BPEL language basics; WS-Coordination overview; Service-oriented business process design; WS-addressing language basics; WS-Reliable Messaging language basics

**UNIT – 8**    **6 Hours**
**SOA Platforms:** SOA platform basics; SOA support in J2EE; SOA support in .NET; Integration considerations

**Text Books:**
1.  Thomas Erl: Service-Oriented Architecture – Concepts, Technology, and Design, Pearson Education, 2005.

**Reference Books:**
1.  Eric Newcomer, Greg Lomow: Understanding SOA with Web Services, Pearson Education, 2005.