13CS1202 - SERVICE ORIENTED ARCHITECTURE

Hours /week : 4 Sessional Marks : 40

Credits : 4 End Examination Marks : 60

**UNIT-I**

Software Architecture – Types of IT Architecture – SOA – Evolution – Key components – perspective of SOA – Enterprise-wide SOA – Architecture – Enterprise Applications – Solution Architecture for enterprise application – Software platforms for enterprise Applications – Patterns for SOA – SOA programming models

**UNIT-II**

Service-oriented Analysis and Design – Design of Activity, Data, Client and business process services – Technologies of SOA – SOAP – WSDL – JAX – WS – XML WS for .NET – Service integration with ESB – Scenario – Business case for SOA – stakeholder objectives – benefits of SPA – Cost Savings

**UNIT-III**

SOA implementation and Governance – strategy – SOA development – SOA governance – trends in SOA – event-driven architecture – software as service – SOA technologies – proof-of-concept – process orchestration – SOA best practices

**UNIT-IV**

Meta data management – XML security – XML signature – XML Encryption – SAML – XACML – XKMS – WS-Security – Security in web service framework - advanced messaging

**UNIT–V**

Transaction processing – paradigm – protocols and coordination – transaction specifications – SOA in mobile – research issues

**References :**

1. *Service –Oriented Architecture for Enterprise Applications* by Shankar Kambhampaly, Wiley India Pvt Ltd, 2008.
2. *Understanding SOA with Web Services* by Eric Newcomer, Greg Lomow, Pearson Education.
3. *Web Services Security* by Mark O’ Neill, et al., Tata McGraw-Hill Edition, 2003.