

Code: 9A05802

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B. Tech IV Year II Semester (R09) Regular Examinations, March/April 2013

SERVICE ORIENTED ARCHITECTURE

(Common to CSE & CSSE)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Compare and contrast between SOA and client server architecture.
(b) What is the role of SOAP in hybrid web service architecture? Explain it in detail.
- 2 (a) How business services ideally controls the composite services that execute their business logic.
(b) Give brief description about the services as autonomous and composable.
- 3 (a) What are intermediaries? Explain the different types of intermediaries with suitable example.
(b) What is the role of central directories and registries in web services?
- 4 (a) Give brief description about the role of metadata exchange in SOA.
(b) Write and explain the WS - policy framework in detail.
- 5 (a) Explain the role of the following in business process design:
 - (i) Invoke element
 - (ii) Sequence element
 - (iii) Coordination context element
 - (iv) Reply element
(b) Write short notes on process description.
- 6 (a) List and explain the artifacts of service component architecture.
(b) Present a detailed note on WS - reliable messaging language.
- 7 Draw and explain the architecture of enterprise service bus pattern.
- 8 Write short notes on the following:
 - (a) Architecture components of .NET
 - (b) J2EE APIs for building SOA
 - (c) J2EE service provider

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- 1 (a) Explain the role of distributed architecture in service oriented architecture.
(b) Give brief description about the role of service oriented computing in SOA.
(c) How can we establish a standardized XML data representation by using SOA?
- 2 (a) Explain in detail about the service layer abstraction.
(b) What are agnostic services? Explain them in detail.
(c) How components in SOA inter relate to each other? Explain.
- 3 (a) How messaging is done by using SOAP? Draw and explain its structure.
(b) What are the various factors that should be considered when an activity is initiated?
- 4 (a) In what way the WS -reliable messaging specification is different from that of activity management specifications.
(b) What are the security requirements for SOAP message communication? Explain them in detail.
- 5 (a) Explain the different structured elements used to add conditional logic to a process.
(b) Draw and explain the flowchart for TLS timesheet submission process.
- 6 (a) Explain the various elements present in service component architecture.
(b) Give brief description about the endpoint reference element and ack requested element.
- 7 Describe in detail about the various components present in service oriented architecture platform.
- 8 Write a short notes on the following:
 - (a) Architecture components of J2EE
 - (b) Platform overview of .NET
 - (c) Service requestor for .NET

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- 1 (a) Explain in detail about the common disadvantages when we adopt the SOA.
(b) Distinguish between standards, specifications and extensions.
(c) Explain, how to built the services.
- 2 What are the common sets of principles associated with service orientation? Explain them in detail.
- 3 (a) How to implement the commit and rollback features in atomic transactions.
(b) What is WS - CDL? Explain its role in service oriented architecture.
(c) Explain, how services will respond to specific condition.
- 4 (a) What addressing specifications are used to implement the addressing features of SOAP? Explain them in detail.
(b) Explain the importance of dynamic notification in SOA.
- 5 (a) Draw and explain the sequence diagram for a failure condition cause by an authorization rejection.
(b) What are the various attributes present in receive element and reply element? Explain them with a suitable example.
- 6 (a) Discuss in detail about the SOA meta model.
(b) Explain sequence acknowledgement and acknowledgement range elements.
(c) What is the role of Nack element in messaging?
- 7 (a) Explain the following by using SOA:
(i) Layers of SOA
(ii) Building blocks of SOA
(b) Give brief description about the transformation rules of ESB pattern.
- 8 (a) Explain the role of the following in .NET frame work:
(i) Service requestor of J2EE
(ii) .NET APIs for building SOA
(b) Write short notes on the support for service orientation principles.

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- 1 (a) Describe the role of distributed internet in SOA.
(b) Present a detailed history on SOA.
(c) How SOA increase quality of services? Explain.
- 2 (a) Compare the business logic with that of application logic.
(b) What are the various components of automation logic? Explain them in detail.
- 3 (a) Explain how orchestration controls the complex activities.
(b) Describe how the business activity builds the WS - coordination context management framework.
- 4 (a) Why we need to use the reliable message address techniques to transmit the messages between the sender and receiver.
(b) How to implement the publish and subscribe messaging model by using WS - notification and event specifications.
- 5 (a) What is the role of partner links and partner link elements in WS - BPEL?
(b) Draw and explain the structure of WS - BPEL process.
(c) Draw the sequence diagram for successful completion of the timesheet submission of a process.
- 6 (a) What are the principles that should be followed while designing an application by using service component architecture? Explain them in detail.
(b) Explain the message information header elements and addressing reusability.
- 7 (a) Explain the relationship between SOA layers and technologies.
(b) Give brief description about the service processing logic.
- 8 (a) Describe in detail about the contemporary support for SOA support to the .NET.
(b) Give brief description about the platform overview of J2EE.
