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| **Department of Computer Science and Engineering** | | |

**SEMESTER: 8 QUESTION BANK (UNIT-1)**

**SUBJECT: SERVICE ORIENTED ARCHITECTURE SESSION: JAN-JUN 2018**

**SUBJECT CODE: 14CS81 FACULTY NAME: SAHANA SHETTY**

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|  | Discuss with an example how SOA with web service can provide multi-channel access? | 7 |
|  | What is SOA? How services encapsulate logic, relate and communicate? | 8 |
|  | Define BPM? What are its benefits? | 6 |
|  | State and explain the specification given by standard bodies currently active in web services? | 8 |
|  | Describe any 5 common characteristics of contemporary SOA? | 5 |
|  | Discuss SOA key characteristics and business benefits in details? | 8 |
|  | Discuss the disputes to adoption of SOA? | 5 |
|  | State the benefits of service-oriented development? | 4 |
|  | What does the web services frame work comprise of? Explain each in details? | 9 |
|  | Explain the key technologies that converge to create service oriented enterprise? | 8 |
|  | Explain the following:   1. Web services b) SOAP messages c) UDDI d) WSDL e) Extended web service specification f) Metadata specifications g) reliability and messaging h) Transactions for web services and SOA i) Orchestration. | 8 |
|  | Compare SOA with 3-tier client-server architecture (Describe presentation and business tier technologies)? | 8 |
|  | Why it is important to separate service from product? | 5 |
|  | With the diagram of basic web service architecture, describe the interaction between web service requester and provider? | 6 |
|  | Differentiate how developing a service is different from developing an object? | 6 |
|  | Define SOA? Explain the tangible benefits of SOA? | 8 |
|  | How to transform enterprise business in SOA? | 6 |
|  | Write a short note on composability v/s complexity with respect to web service specifications? | 5 |
|  | Define and explain service, service abstraction? | 6 |

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**SEMESTER: 8 QUESTION BANK (UNIT-2)**

**SUBJECT: SERVICE ORIENTED ARCHITECTURE SESSION: JAN-JUN 2018**

**SUBJECT CODE: 14CS81 FACULTY NAME: SAHANA SHETTY**

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|  | **Define Service oriented architecture and what are its goals.** | **5** |
|  | **How can you use SOA to align business and information technology?** | **10** |
|  | **Explain the key elements of SOA with a diagram.** | **10** |
|  | **Differentiate SOA and application architecture.** | **5** |
|  | **Explain service level abstractions in detail.** | **10** |
|  | **Explain the technical benefits of service oriented architecture?** | **10** |
|  | **In SOA, services are the fundamental unit if architecture. Justify.** | **5** |
|  | **Write a note on (a) Line of business services (b) Reusable technical services (c) service contracts.** | **10** |
|  | **Explain the various web service standards.** | **5** |
|  | **Highlight the importance of web service platforms.** | **10** |
|  | **Elaborate the relationship among service requesters and service providers.** | **5** |
|  | **Differentiate object reuse and service reuse .** | **5** |
|  | **Briefly explain the SOA governance policies, processes, principles and guidelines.** | **15** |
|  | **Explain the SOA guidelines for service requesters.** | **5** |
|  | **Briefly explain the primary key service characteristics.** | **10** |
|  | **List the primary and secondary key service characteristics.** | **5** |
|  | **What are the guidelines for legacy systems and legacy services?** | **10** |
|  | **Briefly explain the primary key service characteristics.** | **10** |
|  | **Explain the business benefits of SOA.** | **15** |
|  | **Explain the 3 common approaches for service requesters to invoke services with different levels of service abstraction and trade-offs.** | **10** |

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**SEMESTER: 8 QUESTION BANK (UNIT-3)**

**SUBJECT: SERVICE ORIENTED ARCHITECTURE SESSION: JAN-JUN 2018**

**SUBJECT CODE: 14CS81 FACULTY NAME: SAHANA SHETTY**

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| **1.** | **What are the characteristics of web services framework?** | **5** |
| **2.** | **With the neat are active and passive intermediaries?** | **5** |
| **3.** | **Explain the following:**   1. **Service provider b) Requester c) Initial sender and ultimate receiver**   **d) Business model.** | **15** |
| **4.** | **WSDL enables loosely coupled form of communication between services. Justify?** | **5** |
| **5.** | **Explain the categories that WSDL service description advertisement and discovery can be separated into.** | **10** |
| **6.** | **Explain SOAP messaging format?** | **6** |
| **7.** | **Explain design classification of web services:**   1. **Roles b) Service models c) Intermediaries d) Controlled service model**   **e) Metadata and service contracts.** | **10** |
| **8.** | **Explain service endpoints and service descriptions? Differentiate between abstract and concrete description?** | **7** |
| **9.** | **Give brief description of fundamental service roles?** | **15** |
| **10.** | **What are the number of interactions involved in invoice submission between RailCo and customer?** | **9** |
| **11.** | **Give brief description of service description (with WSDL)?** | **6** |
| **12.** | **How message exchange ensure service provisioning in Rail Co.Ltd. And Transit line system (TLS)?** | **5** |
| **13.** | **Can a service belong to more than one service mode. Justify.** | **6** |
| **14.** | **Explain SOAP nodes and its types?** | **10** |
| **15.** | **Explain invoice submission service of Rail Co. Ltd. And transit line system.** | **6** |
| **16.** | **Explain message paths of web services?** | **5** |
| **17.** |  | **10** |
| **18.** |  | **7** |

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**SEMESTER: 8 QUESTION BANK (UNIT-4)**

**SUBJECT: SERVICE ORIENTED ARCHITECTURE SESSION: JAN-JUN 2018**

**SUBJECT CODE: 14CS81 FACULTY NAME: SAHANA SHETTY**

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| **1.** | **Explain web service platform, with neat diagram?** | **10** |
| **2.** | **Briefly explain WSDL service contract architecture?** | **10** |
| **3.** | **Implement request/callback interaction?** | **5** |
| **4.** | **Explain web service platform principles?** | **5** |
| **5.** | **Explain service-level data model?** | **10** |
| **6.** | **Explain capabilities of SOA’s service platform?** | **5** |
| **7.** | **Explain with steps to implement asynchronous store – and- forward messaging? Explain with example** | **10** |
| **8.** | **With a neat diagram briefly explain publish/Subscribe interaction paradigm?** | **7** |
| **9.** | **State and explain service contract?** | **10** |
| **10.** | **What are the different levels of service level security?** | **10** |
| **11.** | **Explain with example of WSDL service contract for calendar service?** | **5** |
| **12.** | **Differentiate between Browser/HTTP interaction and request/reply interaction paradigm?** | **10** |
| **13.** | **Discuss the relationship between service level data model and internal data model?** | **6** |

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**SEMESTER: 8 QUESTION BANK (UNIT-5)**

**SUBJECT: SERVICE ORIENTED ARCHITECTURE SESSION: JAN-JUN 2018**

**SUBJECT CODE: 14CS81 FACULTY NAME: SAHANA SHETTY**

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| **1.** | **With a neat diagram, differentiate between atomic and composite services?** | **6** |
| **2.** | **With neat diagram, explain the advantages of defining multiple transports for a service?** | **7** |
| **3.** | **Differentiate between Proxies and Skeletons services.** | **6** |
| **4.** | **What are the additional specifications to be provided for Web sphere MQ?** | **4** |
| **5.** | **Which are the different technologies used to implement SOA?** | **3** |
| **6.** | **Explain with example of:**   1. **Generating java service proxy class** 2. **Generating C# classes from service contracts** 3. **Generating C++ classes from service contracts.** | **10** |
| **7.** | **Why would anyone use Web Sphere MQ as basis for an SOA?** | **6** |
| **8.** | **Discuss WSDL port syntax and SOAP over IBM web sphere MQ.** | **7** |
| **9.** | **What are the similarities and differences between SOAP over JMS and SOAP over CORBA IIOP.** | **6** |
| **10.** | **What are the key components and limitations of CORBA for implementing SOA?** | **7** |
| **11.** | **Discuss port definition of SOAP over Tibco Rendezvous?** | **6** |
| **12.** | **What are the similarities and differences between Java and J2EE related to SOA?** | **8** |
| **13.** | **Explain in detail comparison of SOA technologies.** | **10** |

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**SEMESTER: 8 QUESTION BANK (UNIT-6)**

**SUBJECT: SERVICE ORIENTED ARCHITECTURE SESSION: JAN-JUN 2018**

**SUBJECT CODE: 14CS81 FACULTY NAME: SAHANA SHETTY**

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|  | **What are the Common Technical Challenges faced During Integration.** |  |
|  | **What are the common business drivers for Integration** |  |
|  | **Explain the approaches for using XML and Web Services for integration and interoperability** |  |
|  | **What are the factors that ideal integration solution must satisfy.** |  |
|  | **Differentiate between strategic and tactical** |  |
|  | **Explain different layers of technology stack.** |  |
|  | **Explain how Integration and Interoperability are achieved using XML and Web Services** |  |
|  | **Write a note on WS integration and SOI.** |  |
|  | **Write a note on WS integration- .NET and J2EE interoperability** |  |
|  | **Write a note on WS integration and service bus pattern** |  |

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**SEMESTER: 8 QUESTION BANK (UNIT-7)**

**SUBJECT: SERVICE ORIENTED ARCHITECTURE SESSION: JAN-JUN 2018**

**SUBJECT CODE: 14CS81 FACULTY NAME: SAHANA SHETTY**

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| **1.** | **What do web service metadata and metadata technologies include?** | **5** |
| **2.** | **Explain:**   1. **WSPL** 2. **WS-Metadata Exchange. (8)** | **15** |
| **3.** | **Write a short note on:**   1. **Addressing** 2. **Policies.** | **8** |
| **4.** | **Differentiate between WSDL 1.1 and WSDL 2.0?** | **6** |
| **5.** | **Explain WS-reliable messaging language elements?** |  |
| **6.** | **Explain how metadata management is discovered and managed?** | **8** |
| **7.** | **Describe WS-notification framework?** | **6** |
| **8.** | **Explain the following:**   1. **XML** 2. **WSDL 2.0** 3. **UDDI.** | **20(6+7+7)** |
| **9.** | **List different web services using plain SOAP and WSDL** | **7** |
| **10.** | **Write a short note on:**   1. **WS-Message delivery** 2. **WS-Policy** 3. **WS-Policy framework** 4. **WS-Policy Assertion** 5. **WS-Policy Attachment.**   **OR**  **State any 3 approaches for specifying policy. Discuss each one of them briefly. Give the comparison among the three approaches.** | **20** |

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**SEMESTER: 8 QUESTION BANK (UNIT-8)**

**SUBJECT: SERVICE ORIENTED ARCHITECTURE SESSION: JAN-JUN 2018**

**SUBJECT CODE: 14CS81 FACULTY NAME: SAHANA SHETTY**

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|  | **How do you relate WS-security framework to other specifications.** | **10** |
|  | **Highlight different security level used in general approach.** | **5** |
|  | **List out security core concepts.** | **5** |
|  | **How encryption is used to protect system from snooping?** | **10** |
|  | **Implement XML signature algorithm to provide authentication.** | **10** |
|  | **Explain how security headers are added to SOAP messages?** | **10** |
|  | **How do you achieve security at message level?** | **10** |
|  | **Write a note on challenges, threats and remedies in securing web services.** | **10** |
|  | **Implement data-level security using XML.** | **10** |
|  | **What is Security Assertion Markup Language?** | **5** |
|  | **What are the different ways of securing communication layer?** | **10** |