Roll No.												

PRESIDENCY UNIVERSITY

BENGALURU

Make- Up Examinations – December 2025

Date: 30 – 12- 2025 **Time:** 09:30am – 12:30pm

School: SOCSE	**Program:** B.Tech	
Course Code: CSE3125	**Course Name:** Service Oriented Architecture	
Semester: MK	**Max Marks**: 100	**Weightage**: 50%

CO - Levels	CO1	CO2	CO3	CO4	CO5
Marks	24	26	26	24	

Instructions:

(i) Read all questions carefully and answer accordingly.

(ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks. **10Q x 2M=20M**

1.	List out the featutres of XML.	**2 Marks**	**L1**	**CO1**
2.	Define the following with suitable examples (i) Root element (ii) Attributes	**2 Marks**	**L1**	**CO1**
3.	List out the primary characteristics of Distributed internet architecture.	**2 Marks**	**L1**	**CO2**
4.	Define XSLT .	**2 Marks**	**L1**	**CO2**
5.	Define Distributed Internet Architecture.	**2 Marks**	**L1**	**CO2**
6.	Define service oriented architecture.how does it differ from traditional architectural approaches.	**2 Marks**	**L1**	**CO3**
7.	Define webservice.	**2 Marks**	**L1**	**CO3**
8.	Define passive intermediaries.	**2 Marks**	**L1**	**CO3**
9.	List the basic phases of SOA delivery lifecycle.	**2 Marks**	**L1**	**CO4**
10.	List SOA composition guidelines.	**2 Marks**	**L1**	**CO4**

Part B

Answer the Questions. **Total Marks 80M**

11.	**a.**	Define (i) Xpath (ii) Xlink (iii)Xquery.	**4 Marks**	**L2**	**CO1**
	b.	Describe the valid XML and well-formed XML document with suitable examples.	**6Marks**	**L2**	**CO1**
	c.	Create an XML document for managing inventory across multiple locations.	**10Marks**	**L3**	**CO1**
		Or			
12.	**a.**	Describe the importance of XML schemas.	**4 Marks**	**L2**	**CO1**
	b.	Explain the significance of the XML DOCTYPE declaration.	**6Marks**	**L2**	**CO1**
	c.	Create an XML Schema Definition (XSD) file named LibraryCatalog.xsd to validate the LibraryCatalog.xml document. Define the schema such that:The Book element is defined as a complex type with Title, Author, ISBN, and PublicationYear as child elements.The ISBN is of type string ,the publication is of type positive interger .Link the XSD and XML document and provide instructions on how to validate the XML against the schema.	**10Marks**	**L3**	**CO1**

13.	**a.**	With an example describe how service-oriented architecture provides service composability.	**4 Marks**	**L2**	**CO2**
	b.	Explain the principle of "loose coupling" in SOA. Why is it significant for service interoperability and flexibility?.	**6Marks**	**L2**	**CO2**
	c.	Compare Client server architecture and service oriented architecture	**10Marks**	**L3**	**CO2**
		Or			
14.	**a.**	Describe the roles of clients and servers in a client-server architecture. How does this seperation of roles contribute to the efficiency and scalibility of network systems.	**4 Marks**	**L2**	**CO2**
	b.	List and explain the characteristics of contemprory SOA.	**6Marks**	**L2**	**CO2**
	c.	Illustrate the roles of service oriented architecture model along with its components.	**10Marks**	**L3**	**CO2**

15.	**a.**	Explain the WSDL Messages structure	**4 Marks**	**L2**	**CO3**
	b.	Explain the architecture of webservice model.	**6Marks**	**L2**	**CO3**
	c.	Describe how UDDI facilitates service discovery, registration, and interoperability in web service architectures	**10Marks**	**L3**	**CO3**
		Or			
16.	**a.**	Explain the classification of webservices.	**4 Marks**	**L2**	**CO3**

	b.	Define services model.Explain various service models available.	**6Marks**	**L2**	**CO3**
	c.	List out any four major difference between orchestration and choreography, and provide examples to illustrate the practical application of orchestration in real-world scenarios.	**10Marks**	**L3**	**CO3**

17.	**a.**	Explain the concept of Xpointer.	**4 Marks**	**L2**	**CO4**
	b.	Explain the structure of the WS-BPEL (Web Services Business Process Execution Language) document. Describe the basic components and concepts that make up a WS-BPEL system, and provide examples	**6Marks**	**L2**	**CO4**
	c.	Illustrate step by step process of entity centric service design.	**10Marks**	**L3**	**CO4**
		Or			
18.	**a.**	Explain the role of WS-ReliableMessaging in Web Services and how it addresses issues related to message delivery and reliability.	**4 Marks**	**L2**	**CO4**
	b.	Illustrate the SOA composition guidelines.	**6Marks**	**L2**	**CO4**
	c.	Sketch how SOA modularizes automation logic into units.	**10Marks**	**L3**	**CO4**