



PAPER ID-310934

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Subject Code: KCS079

Roll No:

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BTECH
(SEM VII) THEORY EXAMINATION 2023-24
SERVICE ORIENTED ARCHITECTURE

TIME: 3 HRS**M.MARKS: 100**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A**1. Attempt all questions in brief.**

Q no.	Question	Marks	CO
a.	What is the primary goal of Service-Oriented Architecture (SOA)?	2	1
b.	Why is enterprise-wide adoption important for the success of SOA?	2	1
c.	State the advantage of using service-oriented applications in a business environment.	2	2
d.	What is the significance of service-oriented analysis in the SOA lifecycle?	2	2
e.	Provide examples of key technologies commonly used in the implementation of SOA.	2	3
f.	List two aspects that are typically covered by SOA governance.	2	3
g.	Discuss the challenges organizations may encounter when implementing SOA with Big Data.	2	4
h.	How does SOA align with business agility and innovation?	2	4
i.	Name three best practices for designing and implementing services in an SOA environment.	2	5
j.	Briefly explain the role of Enterprise Architecture (EA) in aligning business and IT in the context of SOA.	2	5

SECTION B**2. Attempt any three of the following:**

a.	Define Service-Oriented Architecture (SOA) and explain its fundamental principles. How does it differ from traditional monolithic architectures?	10	1
b.	Provide examples of service-oriented applications and elaborate on how these applications leverage the principles of SOA for improved flexibility and scalability.	10	2
c.	Explore the various technologies that support the implementation of SOA. How do these technologies contribute to interoperability and flexibility in an SOA environment?	10	3
d.	Analyze the intersection of Big Data and SOA. How can SOA principles be applied to address the challenges and opportunities presented by Big Data?	10	4
e.	Discuss the role of standardization in implementing SOA best practices and ensuring consistency across services.	10	5

SECTION C**3. Attempt any one part of the following:**

a.	Discuss the historical evolution of SOA and its significance in the context of modern enterprise architecture.	10	1
b.	How can SOA be implemented on an enterprise-wide scale? Explain the challenges and benefits of adopting a comprehensive SOA strategy across an entire organization.	10	1

4. Attempt any one part of the following:

a.	Discuss the impact of service-oriented applications on user experience and customer satisfaction in comparison to traditional applications.	10	2
b.	Explain the key steps involved in service-oriented analysis and design. How does this process contribute to the successful implementation of SOA?	10	2



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SERVICE ORIENTED ARCHITECTURE

TIME: 3 HRS**M.MARKS: 100****5. Attempt any *one* part of the following:**

a.	Define SOA governance and explain its significance in the successful implementation and maintenance of an SOA infrastructure.	10	3
b.	Write short notes on: a) Technologies for Service Integration b) Technologies for Service Orchestration.	10	3

6. Attempt any *one* part of the following:

a.	Enumerate and explain best practices for designing, implementing, and maintaining an SOA. How do these practices contribute to the success of SOA initiatives?	10	4
b.	Develop a business case for adopting SOA in an organization. Consider the potential benefits, risks, and long-term impact on business processes and agility.	10	4

7. Attempt any *one* part of the following:

a.	Enumerate and explain best practices for designing, implementing, and maintaining an SOA. How do these practices contribute to the success of SOA initiatives?	10	5
b.	Discuss the challenges and solutions related to aligning business and IT strategies through the implementation of SOA and EA.	10	5