

Reg. No. :

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Question Paper Code : 50814

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2023.

Seventh Semester

Information Technology

IT 8074 – SERVICE ORIENTED ARCHITECTURE

(Common to: Computer Science and Engineering / Computer and Communication Engineering)

(Regulations 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. State the purpose of XSLT.
2. What is DTD?
3. List down the benefits of SOA.
4. Compare Service – orientation and object – orientation.
5. Comment on type labels associated with SOAP nodes.
6. What are the capabilities of the UDDI Business Registry (UBR)?
7. What are Policy assertions and policy alternatives?
8. List down the various Atomic transaction protocols.
9. What are the Common phases of an SOA delivery lifecycle?
10. What is Application Service design?

PART B — (5 × 13 = 65 marks)

11. (a) (i) Explain the three different complex type compositors in XML schema with example: sequence, choice, and all (5)
- (ii) Write short notes on the following XML Name spaces:
- (1) Explicit and Default Namespaces (2)
 - (2) Inheriting Namespaces (2)
 - (3) And not inheriting Namespaces (2)
 - (4) Attributes and Namespaces (2)

Or

- (b) Explain the models of parsing XML using, DOM, SAX and XPath with a suitable program in Java. (13)
12. (a) Explain the characteristics of Service Oriented Architecture in detail. (13)
- Or
- (b) Explain in detail about the following three layers of abstraction identified for SOA:
- (i) The Application Service Layer (4)
 - (ii) The Business Service Layer (5)
 - (iii) The Orchestration Service Layer (4)
13. (a) Explain the following under Service Description with WSDL
- (i) Abstract description (3)
 - (ii) Concrete description (2)
 - (iii) Metadata and service contracts (3)
 - (iv) Semantic descriptions (2)
 - (v) Service description advertisement and discovery (3)

Or

- (b) Explain about the concepts behind SOAP Messaging Framework in detail with suitable diagram. (13)
14. (a) Explain the following in detail under Web Service Addressing with suitable diagram (13)
- (i) Endpoint references
 - (ii) Message information headers
 - (iii) Addressing and transport protocol independence
 - (iv) Addressing and SOA

Or

- (b) Explain in detail about the Framework of WS – Reliable Messaging in SOA. (13)

15. (a) Explain in detail about the following SOA delivery strategies with their Pros and Cons:

- (i) Bottom – Up Strategy (6)
- (ii) Agile Strategy (7)

Or

- (b) Explain the step – by – step process of Entity – Centric Business Service Design with suitable diagram. (13)

PART C — (1 × 15 = 15 marks)

16. (a) Consider the following primary characteristics of the Distributed Internet Architecture: (15)

- (1) Application logic
- (2) Application processing
- (3) Technology
- (4) Security
- (5) Administration

Analyze the above characteristics and compare them to the corresponding parts of SOA.

Or

- (b) Persons A, B and C are assigned an activity to wash the car, each of them are assigned with simple task, as follows: (15)

A – Gather equipment

B – Prepare the water

C – Wash the car

each of these simple tasks consists of a series of steps. A's task, for instance, is comprised of the following steps:

- (i) Locate bucket.
- (ii) Locate sponge.
- (iii) Locate hose.

Analyze the above scenario and illustrate the WS – coordination registration and completion process with suitable diagram.