Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐

Question Paper Code : 90797

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2022.

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.   Define Namespace in XML.

2.   What is X Path?

3.   Define web service. Give example.

4.   State the role of service layer in SOA.

5.   Define SOAP.

6.   State the relationship between UDDI and WSDL.

7.   What is Endpoint Reference in WS-Addressing?

8.   Name any two elements of WS-Policy.

9.   What are the types of derived business services?

10. Define the agile strategy of SOA delivery.

PART B — (5 × 13 = 65 marks)

11. (a) (i) Define DTD. Explain the components of DTD. (6)

    (ii) What is XML Schema? Explain how XML schema helps in structuring an XML document? (7)

    Or

    (b) (i) With example, explain the Components of XML document structure. (6)

    (ii) Differentiate parsing XML using DOM and parsing XML using SAX. (7)

12. (a) With a neat diagram, explain the components of service-oriented architecture. (13)

    Or

    (b) (i) Discuss the characteristics and benefits of SOA. (6)

    (ii) State the advantages of SOA over client-server and distributed architecture. (7)

13. (a) (i) Explain the WSDL document structure with example. (6)

    (ii) Discuss the basic and structured activities in Orchestration. (7)

    Or

    (b) (i) Elaborate the role and participants of Choreography. (6)

    (ii) Discuss about the SOAP messaging framework with a diagram. (7)

14. (a) (i) Present the Message Addressing properties of WS-Addressing. (6)

    (ii) Explain the various elements of WS-ReliableMessaging language basics. (7)

    Or

    (b) (i) Write a brief note of WS-Transactions. (6)

    (ii) Demonstrate WS-security framework in terms of the 'security' element. (7)

15. (a) (i) What is service modeling? Give the guidelines for service modeling. (6)

    (ii) Bring out the benefits of business-centric SOA. (7)

    Or

    (b) (i) Explain the steps towards composing SOA. (6)

    (ii) Compare Entity centric and Task-centric business service design. (7)

PART C — (1 × 15 = 15 marks)

16. (a) (i) Explain the various phases of SOA delivery lifecycle phases. (7)

    (ii) With required functional requirements, develop an XML schema for a banking system. (8)

    Or

    (b) What is service orientation? State the common principles of service orientation. Explain how service-orientation principles inter-relate. (15)