Register Number: …………..………..

M.E. DEGREE EXAMINATIONS: JUNE 2015

(Regulation 2014)

Second Semester

COMPUTER SCIENCE AND ENGINEERING

P14CSTE31: Service Oriented Architecture

Time: Three Hours   **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. How is SOA different from OO Architecture?   [K2]

   a) Strong coupling among objects

   b) Communications are prescriptive rather than being descriptive

   c) Data is separated from a service or behavior

   d) Data and methods are integrated into a single object

2. Which of the following utilities is not a part of Application Service Layer?   [K1]

   a) Policy implementation

   b) QoS

   c) Security

   d) Verify invoice

3. _____ and _____ are used to classify and organize services within a service inventory.   [K1]

   a) service compositions, service-oriented solutions

   b) service capabilities, service compositions

   c) service models, service layers

   d) service contracts, service capabilities

4. Match the appropriate item from the RHS with those on the LHS.   [K2]

List I	List II
A. Business Service Layer	i. Service registry
B. Application Service Layer	ii. Loosely Coupled
C. Service metadata	iii. Task centric service
D. Service Oriented Architecture	iv. QoS

	A	B	C	D
a)	i	iii	iv	ii
b)	ii	iv	i	iii
c)	iv	iii	ii	i
d)	iii	iv	i	ii

5. Assertion (A) : "A primary focus of service modeling is the encapsulation and abstraction of   [K4]

business logic in support of defining business service candidates."

Reason (R)　: Service modeling is a phase dedicated one to define non-business service logic only.

a) Both A and R are true and R is the correct explanation of A.
b) Both A and R are true but R is NOT the correct explanation of A.
c) A is false but R is true.
d) Both A and R are false.

6. XML and XML Schema are examples of: [K₁]

a) custom design standards commonly used by service-oriented solutions
b) custom design characteristics commonly found in service-oriented solutions
c) industry standards commonly used by service-oriented solutions
d) industry characteristics commonly found in service-oriented solutions

7. The terminologies on which SOA service stands are [K₁]
   i) Contract
   ii) Address
   iii) Binding
   iv) SOA registry

a) i, iii and iv
b) i and iii only
c) i, ii, iii and iv
d) i, ii and iii only

8. Assertion (A) : In SOA, do we need to build systems from scratch? [K₄]
   Reason (R)　: No. If we need to integrate or make an existing system as a business service, we just need to create loosely coupled wrappers which will wrap your custom systems and expose the systems functionality in a generic fashion to the external world.

a) Both A and R are true and R is the correct explanation of A.
b) Both A and R are true but R is NOT the correct explanation of A.
c) A is false but R is true.
d) Both A and R are false.

9. You can create _____ or _____ service inventories. [K₁]

a) process-specific, process-wide
b) domain, enterprise
c) domain, process-specific
d) enterprise, process-specific

10. Arrange the following activities in order to build a SOA. [K₂]
    i. Virtualization through mediation.
    ii. Track services with registries.
    iii. Govern, secure and manage the services.
    iv. Design for interoperability through the adoption of standards.

a) i, ii, iii, iv
b) iii, ii, i, iv
c) ii, iii, i, iv
d) ii, iii, iv, i

PART B (10 x 2 = 20 Marks)

11. List the Principles of service orientation. [K₁]

12. Outline about Legacy System Adapter. [K₂]

13. Define Orchestration service. [K₁]

14. List the Atomic Transaction Protocols. [K₁]

15. Write the IT-centric entry points. [K₁]

16. What data elements will be returned by the service in its acknowledgement / receipt / return? [K₄]

17. Write the Basic Platform Blocks.   [K$_1$]

18. What is a Registry?   [K$_1$]

19. Define Concrete Choreography.   [K$_1$]

20. Brief about Web Services Enhancement.   [K$_2$]

PART C (10 x 5 = 50 Marks)

21. Mention the characteristics of SOA.   [K$_2$]

22. How do components in an SOA interrelate? Explain.   [K$_4$]

23. Explain briefly about Message Exchange Patterns for Enterprise SOA.   [K$_1$]

24. Enlighten about Technical Requirements for Orchestration.   [K$_2$]

25. Describe the atomic transaction process with suitable diagrams.   [K$_2$]

26. Are web-services SOA? Justify your answer with appropriate reasons.   [K$_4$]

27. Explain briefly about Service Oriented Design.   [K$_2$]

28. Explain in detail about JAX - RPC with example.   [K$_2$]

29. Explain with code example about ASP.NET Web Services.   [K$_3$]

30. Write down the syntax of the following with example   [K$_3$]
     i)   The process element
     ii) The partnerLinks and partnerLinkType

PART D (2 x 10 = 20 Marks)

31. i) Provide a practical example in SOA and explain the same.   [K$_3$]

     ii) Explain the various Business activity states of SOA in detail.   [K$_2$]

32. Explain in detail about SOA support in .NET.   [K$_2$]

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