SRM UNIVERSITY

DEPARTMENT OF INFORMATION TECHNOLOGY

Cycle Test – II

Course Code & Title: IT1022 – Integrative Programming and Technology **Date :** 30-10-2017

Semester / Year : VII / IV

Total : 100 Marks **Duration : 3 hrs**

INSTRUCTIONAL OBJECTIVES

IO2: Explore core object-oriented design patterns of J2EE and their applications.

IO3: Understand and create components in Microsoft Environment and EJB.

IO4: Develop an architect web services using Java

STUDENT OUTCOMES:

1. **[Outcome i]:** An ability to use current techniques, skills, and tools necessary for computing practice.

   i2. An ability to understand tools necessary for computing practice

2. **[outcome j] :** An ability to use and apply current technical concepts and practices in the core information technologies

   j1. An ability to use and apply current technical concepts in the core information technologies

   j2. An ability to use and apply current practices in the core information technologies

3. **[outcome m] :** An understanding of best practices and standards and their application

   m1. An Ability to understand best practices in the area of computing practice and their applications

   m2. An Ability to understand best fit standards in the area of computing practice and their applications

Q. No.	Ref. to IO	Ref. to SO	Marks Allotted	Marks Scored	LO Met Y/N
1	IO3	j1	1		
2	IO3	j1	1		
3	IO3	j1	1		
4	IO3	j2	1		
5	IO3	j2	1		
6	IO2	i2	1		
7	IO2	i2	1		
8	IO2	i2	1		
9	IO2	i2	1		
10	IO2	i2	1		
11	IO3	j2	1		
12	IO3	j2	1		
13	IO3	j2	1		
14	IO3	j2	1		
15	IO3	j2	1		
16	IO4	m1	1		
17	IO4	m1	1		
18	IO4	m1	1		
19	IO4	m2	1		
20	IO4	m2	1		

Q. No.	Ref. to IO	Ref. to SO	Marks Allotted	Marks Scored	LO Met Y/N
Part-B Questions					
21	IO3	j1	4		
22	IO3	j1	4		
23	IO2	i2	4		
24	IO3	j2	4		
25	IO3	j2	4		
26	IO4	m1	4		
27	IO4	m1	4		
Part-C Questions					
28a	IO3	j2	12		
28b	IO3	j2	12		
29a	IO2	i2	12		
29b	IO2	i2	12		
30a	IO3	j2	12		
30b	IO3	j2	12		
31a	IO4	m2	12		
31b	IO4	m2	12		
32a	IO3	j2	12		
32b	IO3	j2	12		
Total Marks Scored					

Faculty In-charge Signature

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SET C

Part B any 5 (5X4 = 20)

21. Explain your understanding of MSMQ?
22. "MSMQ can send and receive messages as a transaction" Justify
23. Compare and contrast Transfer Object and Session Façade
24. Draw the J2EE container architecture diagram.
25. State the purpose of an Enterprise Java Bean (EJB) home interface.
26. What are the limitations of UDDI?
27. Write a sample code snippet to enable communication between SOAP nodes

Part C (5X12 = 60)

28.a. A typical message queuing scenario achieves reliable asynchronous messaging between a client computer and a server application. The client application might be an order application that is used for entering orders from customers. This application could be installed on a laptop computer, the laptop moving with the salesperson from customer site to customer site. Connectivity might not be available from every customer site to the head office. When connectivity is unavailable, the order application on the salesperson's laptop computer would use message queuing to queue messages that contain order information to a local outgoing queue on the laptop computer. Suggest a window based component and a sample code

Or

b. Explain how transactions and MSMQ fit together? Explain with sample code.

29. a. Discuss in detail about Composite view design pattern
   [hint: pattern should include problem, forces, entities and solutions]

Or

b. Discuss in details about Front controller design pattern
   [hint: pattern should include problem, forces, entities and solutions]

30. a. How many types of messaging model do JMS provide for and what are they? Explain with suitable diagram.

Or

b. i) What container does? List the responsibility and services provided by container. (6)
   ii) With neat diagram explain EJB Container Architecture. (6)

31.a What do you mean by SOAP encoding? How to specific encoding style in SOAP?

Or

b.. List the different pages associated with UDDI

32. a Create a stateless session bean for shopping cart application.

Or

b. Consider the following scenario, after returning to the branch office, the salesperson establishes connectivity with the head office, and the queued messages are then transferred using SRMP from the local message queue on the laptop computer to a Web service that ru the message queue server at the head office. The Web service passes the SRMP messages the QueueManager on the server, which places them into the receiving message queue. At point, the orders are retrieved from the message queue on the server and processed by the application. Write a sample java code for receiving message from queue and sending the message to server queue

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Part A
20X1 = 20

1. _____ are good for inter-application communication across servers
   a. Message
   b. Public Queue
   c. Private Queue
   d. Components

2. Filling the contents of the messages, is the step involved in
   a. MSMQ transaction   b MSMQ receiver   c. MSMQ Events   d. MSMQ transmittal

3. Message queuing provides
   a. Guaranteed message delivery, efficient routing, security and priority based messaging
   b. Only message delivery
   c. only routing
   d. only security and priority based.

4. MSMQ messages are limited to ___ of data
   a. 4KB   b.4MB   c.8MB   d. 2MB

5. MSMQ is a _____ messaging system.
   a. Component-Oriented.
   b. Container-Oriented.
   c. Compound – Oriented
   d. Centralized Server Oriented.

6. pattern used for activating enterprise beans and other business services asynchronously
   a. data access object   c. service activator.
   b. Fast lane reader   d. service locator

7. which pattern is most appropriate when a decision must be made at the time a class is instantiated?
   a.bridge   b.composite   c. Factory method   d.command

8. Which of the following is true about design patterns?
   a. Design patterns represent the best practices used by experienced object-oriented software developers.
   b. Design patterns are solutions to general problems that software developers faced during software development.
   c. Design patterns are obtained by trial and error by numerous software developers over quite a substantial period of time.
   d. All of the above.

9. _____ is a description of a recurring solution to a problem, given a context.
a. Singleton Pattern   b. Design Pattern
                                        c. Factory Pattern   d. None of the above

10. _____ hides the java code in helper classes
      a. Composite pattern   b. View Helper   c. Session Façade   d. Business delegate

11. Which of the following is not a property of EJB transaction?
(a) Atomicity
(b) Consistency
(c) Isolation
(d) Distributed

12 using which instance is used for access the bean methods and property?
a. Bean instanceb.Bean Remote interface instance c. client instance   d. class instance

13. this bean is always specific to a single client.
a. javabean
                              b.stateless session bean
c. stateful session bean   d. message driven bean

14. which statement about a session bean are true?
a.it is a final class   b. overloaded constructors are supported
c. Their business methods can be private   d. the ejb create() method must not be final method.

15. Which session bean maintain their state between client invocations but are not required to maintain
their state across server crashes or shutdowns?
a. Stateful Session Bean   b. Stateless Session Bean
c. Singleton Session Bean
                              d. None of the above

16. SOAP is a
a. programming language
b. a business application component
c. a portable communication protocol
d. software

17. _____ is a combination of the Web browser and Java Plug-in running together on the client
machine
      a.   Web Container
      b.   Applet Container
      c.   Applet Client Container
      d.   EJB Container

18. Which of the following is correct about UDDI?
          a.UDDI is an XML-based standard for describing, publishing, and finding web services.
          b.UDDI is a specification for a distributed registry of web services.
      c.   UDDI is platform independent, open framework.
      d.   All of the above

19. web services use ____ to code and to decode data.
a. UDDI   b.JSON   c.XML   d.SOAP

20. which among the following is not included in anatomy of SOAP messages
a. envelope   b.header   c. body   d. port type