Practice Test III

Review of attempt 1

Finish review

Started on	Monday, 18 November 2013, 04:44 AM
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Time taken	18 secs
Grade	**1** out of a maximum of 64 (**2**%)
Feedback	FAIL

Show **All** / Correct / In-correct

1. Your online simulator exam application V2.0 is currently running with single Apache Web Server. The technologies used are JSPs and Servlets. You are asked to upgrade to newer version V3.0 to support high volume of traffic and load.

   Choose the best architecture from the given options?

   - A. Add one additional web server, Introduce EJB centric design and use JPA ✗
   - B. Just remove data access logic and use JPA to improve scalability ✗
   - C. Add one more web server and keep the architecture as is ✗
   - D. Introduce EJB centric design and use JPA, load balancing mechanism, clustered application server for running business logic and web server for presentation ✓

   Choice D is correct.

   The current architecture is based on web-centric and may not support high traffic (scalability). The new version will be designed as 3 or N-Tier architecture by creating presentation, business, integration and data tiers. Business logic will be implemented using EJBs and Cluster Application Server to improve scalability.

   Incorrect
   Marks for this submission: 0/1.

   Feedback to Author

2. You are architecting a new web based labor claim management application. Currently the users have a Java Swing-based application running on their local PCs, and you want to implement the new web-based solution with a GUI that is similar to their desktop application. Once the users have filled in their hours then you must send the details to central labor system through a Web service (instant response is needed for support team).

   Which of the following technologies would be required for building this application using Java EE environment? (Choose the best option.)

   - A. Servlet, JAX-WS ✗
   - B. JSP,Servlets ✗
   - C. JSP,Servlet, DAO ✗
   - D. JSF, JAX-WS ✓
   - E. JSF Partially correct

   Choice D is correct. The problem statement clearly states that the new web based application should support rich UI components part of the requirement. Rich UI components can be build using JSF framework UI components part of UI design components. Java EE5 provides the annotation based web service call using the regular POJO model.

Choice A is incorrect. This combination is partially correct. Using JAX-WS web service can be designed to get the instance response as JAX-WS supports both synchronous and asynchronous calls. Using regular Servlet, it's very difficult to design the rich UI components. Servlet is designed to handle the request/responses based on the user actions.

Choice B is incorrect. Rich UI components are difficult to implement using the regular JSP tags. There are no rich UI components available using the regular JSP tags. If user really wants to develop custom components, then need to write lot of code to achieve the functionality.

Choice C is incorrect. This combination is partially correct. Using Servlet you can call the web service, but building rich UI using JSP and Servlet is difficult, as the developer need to write lot of code to create custom rich components. DAO, separates a data resource's client interface from its data access mechanisms is not part of the requirement.

Correct
Marks for this submission: 1/1.

Feedback to Author

3. Which of the following statements are not true about JAXB implementation in Java EE environment? Select three choices from the given options.

- A. Client, Web and EJB containers support JAXB ✗
- B. Only EJB container supports JAXB ✓
- C. Only Web and Client containers supports JAXB ✓
- D. Only Web and EJB containers supports JAXB ✓

Choice B, C and D are correct.

JAXB - Java Architecture for XML Binding(JAXB) provides a way to bind XML schema to java representation. JAXB can be used independently or in combination with JAX-WS, where it provides a standard data binding for web service messages. All Java EE application client, web and EJB containers support the JAXB APIs.

Choice A is true about the JAXB implementation in Java EE environment.

For more information, please refer :
http://docs.oracle.com/javaee/5/tutorial/doc/bnazf.html

Incorrect
Marks for this submission: 0/1.

Feedback to Author

4. Your company is responsible for storing the credit history of citizens of ABC country. The government proposes that all financial institutions before lending must ensure that the candidate has a minimum credit score.

Which of the following would you choose to build this service?

- a. Build the service as a EJB ✗
- b. Build the service as a web service ✓
- c. Build the service as an IIOP Object. ✗
- d. Implement it as a JMS based service. ✗

Option B is correct.

Web services offers superior level of interoperability compared to rest of the options. Your new service may be accessed by various different applications/platforms. So, option B is correct.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

5. ABC company has a very old web application that was built on Servlets, JSP and a simple proprietary MVC framework which they must use. This application is mostly used for reporting purposes and retrieves data from DB2 through JDBC. They are planning to enhance the functionality of the application and also deploy on a Java EE

application server. They approached you for suggestions to improve the application code.

Which of the following would not be a valid recommendation (best-fit)?

- a. Refactor the common scriptlet code into tag libraries wherever possible ✗
- b. Create a common look & feel using templates, CSS files. ✗
- c. Use Entities ✓
- d. Use Expression Language ✗

Option C is correct.

There is no need for converting existing DAO objects into entities as most of the operations are read-only.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

6. ABC Company has decided to migrate existing J2EE application built using servlets, JSP, JMS, session & entity Beans to Java EE. They have approached you for recommendations.

Which of the following are valid recommendations? Select two choices.

- a. Replace entity beans with JPA entity classes ✓
- b. Use the new JMS API ✓
- c. Replace session Beans with web services ✗
- d. Use JCA ✗

Options C and D are improper as there is no explicit requirement.

Java EE replaces Entity Beans with Entities and also provides a new JMS API which can be used for both Topics & Queues. So, options A and B are correct.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

7. You have instructed the team to implement a solution that focuses on run-time flexibility and a design approach that will favor objects forwarding certain method calls to another object. What is this design concept commonly know as?

- a. Polymorphism ✗
- b. Encapsulation ✗
- c. Inheritance ✗
- d. Delegation ✓

Option D is correct.

The statement describes the concept of delegation.

Encapsulation (also information hiding) consists of separating the external aspects of an object which are accessible to other objects, from the internal implementation details of the object, which are hidden from other objects.

Polymorphism is a characteristic of being able to assign a different behavior or value in a subclass, to something that was declared in a parent class.

For example, a method can be declared in a parent class, but each subclass can have a different implementation of that method.

Delegation is the implementation of objects that forward certain method calls to another object, a delegate.

Separation of Concerns principle states that every unit in the system needs to have a clearly defined responsibility and functionality. This applies to all levels of the system, from EARs to methods.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

8. Which two statements describe the advantages of designing an application using inheritance compared to designing and application using interfaces? Select two choices.

- a. Inheritance enforces encapsulation while interfaces do not. ✗
- b. Inheritance allows you to restrict the behavior of objects. ✓
- c. Inheritance is a way to form new classes using classes that have already been defined. ✓
- d. Inheritance allows you to choose which of the properties of parent object are inherited but with interface all the properties are inherited automatically. ✗

Options B and C are correct.

Option A is incorrect because interfaces do help enforce encapsulation.

Option D is incorrect because it is an incorrect statement.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

9. Java EE Specification specifies various roles (Product provider, component provider etc..) for application development and deployment flow. This idea is close to which of the following principles?

- a. Separation of concerns ✓
- b. Polymorphism ✗
- c. Delegation ✗
- d. Encapsulation ✗

Option A is correct.

What the Separation of Concerns principle means is - Every unit in the system needs to have a clearly defined responsibility and functionality. Units that combine multiple concerns must be split into smaller pieces. These roles are also defined on the samelines.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

10. Which of the following statements is NOT true about Model View Controller design?

- a. Multiple views can use the same model ✗
- b. Easier support for new types of clients ✗
- c. It is not extensible. ✓
- d. It is aligned with separation of concern principle. ✗

Option C is correct as MVC design is highly extensible.

Options A, C and D are correct about MVC Design.

The MVC architecture has the following benefits:

- Multiple views using the same model:The separation of model and view allows multiple views to use the same enterprise model. Consequently, an enterprise application's model components are easier to implement, test, and maintain, since all access to the model goes through these components.
- Easier support for new types of clients: To support a new type of client, you simply write a view and controller for it and wire them into the existing enterprise model.
- Efficient modularity of the design. Changes to one aspect of the program aren't coupled to other aspects. Also, development of the various components can progress in parallel, once the interface between the components is clearly defined.
- Ease of growth: Controllers and views can grow as the model grows; and older versions of the views and controllers can still be used as long as a common interface is maintained.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

11. Which of the following resource optimization techniques could be available with Java EE Servers? Select two choices.

- a. Datasource Connection Pools ✓
- b. WebService connection pools ✗
- c. JAAS configurations ✗
- d. Ability to increase JVM Heap Size. ✓

Options A and D are correct.

Java EE servers do not provide any web service connection pools. JAAS deals with security;it is not a optimization technique.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

12. You are starting the development of a newly designed application. In the design, you have clearly identified various layers in the application and clearly defined interfaces for each of these units. Which of the following is NOT true about this approach?

- a. Developers of each unit can work on implementations parallely ✗
- b. There will be no integration issues with these layers. Once they are individually developed, there will be no need for testing the application. Everything will work smoothly. ✓
- c. Upgrades on individual unit will not lead to recompilation of code in other layers ✗
- d. Eases testing as developers of a unit can develop proxies/stubs with hard-coded data for their testing. ✗

Option B is correct.

This approach minimizes integration issues directly but does not assure that there will not be any bugs in the application (for eg: Poor requirements analysis, missed specifications for a component etc..)

Incorrect
Marks for this submission: 0/1.

Feedback to Author

13. Your project supports dedicated server side resources per client. Here "Client" can be a web application or a desktop application. On business tier, state of client's interaction with server is maintained. What is the best way to implement it?

- a. Keep data in HTTPSession object ✗
- b. Persist data on some storage media although performance will be a downside ✗
- c. Use stateless session beans ✗
- d. Use stateful session beans ✓

Choice D is correct because stateful session bean is a business tier components that is dedicated per client and maintains conversational state.

Choice A is incorrect because business tier data should not be kept on web tier which will overload web server. Secondly HTTPSession object may not be available as it can be a non-web application.

Choice B is incorrect as custom code to persist and retrieve data per client is time consuming, increases maintenance effort and is error prone.

Choice C is incorrect as stateless session beans cannot maintain client state

Further Reference: The Java EE 5 Tutorial – Third Edition by Eric Jendrock (Publisher – Pearson Education)

Incorrect
Marks for this submission: 0/1.

Feedback to Author

14. A store, with several departments, needs a system to generate business related messages. These messages will be accepted by one or more departments based on relevancy of the message subject for the respective department. You, as the architect of this project, will suggest which combination of technologies?

- a. JMS topics with message driven beans ✓
- b. JMS queues with message driven beans ✗
- c. RMI and stateless session beans ✗
- d. Servlets ✗

Choice A is correct as JMS topics ensure that a single message can be consumed by multiple MDBs

Choice B is incorrect as JMS queues allow only single consumer per message

Choice C and D are incorrect as this will be a custom solution and JMS is already a dedicated solution for this standard problem

Further Reference: The Java EE 5 Tutorial – Third Edition by Eric Jendrock (Publisher – Pearson Education)

Incorrect
Marks for this submission: 0/1.

Feedback to Author

15. In EJB3.0, the entity beans are replaced with Java Persistence API. What are the advantageous of EJB3.0 over EJB2.1 Entity programming model?
Which of the following statements are true about JPA model?

- A. In EJB 3.0, persistent fields must be identified through deployment descriptor. ✗
- B. The persistent state of an entity is represented either by its persistent fields or persistent properties. ✓
- C. For an EJB 3.0 entity, you no longer need to code interfaces such as LocalAddressHome and LocalAddress. ✓
- D. In the Java Persistence API, you do not not need to provide an XML descriptor to specify an entity's primary key. ✓
- E. Java Persistence API is simplified by removing support for complex relationships between Entities. ✗

Options B, C and D are correct.

Java Entity is a POJO class in EJB3.0 but not an regular EJB to implement any Local/Home interfaces. Entities may either use persistent fields or persistent properties.

If the mapping annotations are applied to the entity's instance variables, the entity uses persistent fields.

If the mapping annotations are applied to the entity's getter methods for JavaBeans-style properties, the entity uses persistent properties. You cannot apply mapping annotations to both fields and properties in a single entity.

Simple primary keys use the javax.persistence.Id annotation to denote the primary key property or field. Composite primary keys are denoted using the javax.persistence.EmbeddedId and javax.persistence.Id Class annotations.

Option A is incorrect because this was for EJB 2.1.

In the Java Persistence API, you no longer need to provide a deployment descriptor.

Option E is incorrect as it is incorrect statement. JPA supports complex relationships between Entities.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

16. There is an excellent open-source ORM framework available in the market. Your team suggests using this new framework. Which of the following is the main disadvantage of using this new framework?

- a. Application can be isolated from the database and the only connection to it is using the ORM framework and a JDBC driver. ✗
- b. Developer productivity increases. ✗
- c. Performance will be slower than direct JDBC connections. ✗
- d. Application maintainance may be a problem. ✓

Option D is correct.

Since it is open-source code, the maintainance team may find it hard in case of problems with the ORM Framework code.

Options A, B and C are true for any ORM Frameworks and are not sufficient reasons to discard this new framework.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

17. Which two statements are FALSE about implementing web services utilizing the Java EE programming model? Select two choices.

- a. Supports the processing of XML content, data binding, and the development SOAP based and RESTful Web Services. ✗
- b. Web Services exposed by JAX-WS can only be of type document/literal. ✓
- c. Stateless session beans cannot be exposed as web services using Java EE technology. ✓
- d. JAX-WS greatly simplifies the web service implementation model. ✗

Options A and D are incorrect as they are true statements with respect to Java EE Programming model.

Option B is correct because JAX-WS web services can be either a remote procedure call (RPC) style binding or a document style binding.

Option C is correct because a stateless session bean can be exposed as a web service.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

18. You are planning to design a Stateful Session Bean to maintain the state of the shopping cart items between method invocations.
What is true about Stateful Session Bean?
Choose three options.

- A. The bean's state does not represent the interaction between the bean and a specific client ✗
- B. The bean needs to hold information about the client across method invocations ✓
- C. The bean mediates between the client and the other components of the application, presenting a simplified view to the client. ✓
- D. The bean is short lived business component. ✓

Options B, C and D are correct.

Stateful Session Bean - The state of an object consists of the values of its instance variables. In a stateful session bean, the instance variables represent the state of a unique client-bean session. Because the client interacts ("talks") with its bean, this state is often called the conversational state.

The state is retained for the duration of the client-bean session. If the client removes the bean or terminates, the session ends and the state disappears. This transient nature of the state is not a problem, however, because when the conversation between the client and the bean ends there is no need to retain the state.

Option A is false. The bean's state does represent the interaction between the bean a specific client.

For more information, please refer:
http//docs.oracle.com/javaee/5/tutorial/doc/bnbly.html

Incorrect
Marks for this submission: 0/1.

Feedback to Author

19. The development lead instructed the team to handle the timeout notifications in Java EE environment. What type of enterprise beans support this feature?

- A. Only Stateless Session Bean ✗
- B. Stateless, Stateful and Message Driven Beans ✗
- C. Stateless and Stateful Session Beans ✗
- D. Stateless and Message Driven Beans ✓

Option D is correct.
In Java EE, The TimerService interface provides enterprise bean components with access to the container-provided Timer Service. The EJB Timer Service allows stateless session beans and message-driven beans to be registered for timer callback events at a specified time, after a specified elapsed time, or after a specified interval.

Options A, B and D are incorrect.

For more information, please refer:
http://docs.oracle.com/javaee/5/tutorial/doc/bnboy.html
http://docs.oracle.com/javaee/5/api/javax/ejb/TimerService.html

Incorrect
Marks for this submission: 0/1.

Feedback to Author

20. You are using an EJB3.0 Stateful Session Bean for storing shopping cart information. You would like to invoke a particular method to store state data whenever bean passivates. What is the best way to achieve it?

- a. You must write ejbPassivate() method. Shift the logic to this method. ✗
- b. Mention the method name in the deployment descriptor ✗
- c. Use annotations ✓
- d. There is no such facility in EJB3.0 ✗

Option C is correct.

You can annotate the method @PrePassivate. There is no requirement that method has to be ejbPassivate(). So, option A is incorrect.

Option B is incorrect as there is no such facility.

Option D is an incorrect statement.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

21. Your boss is raving about the new 3-Tier architecture on which your company's sales application will be deployed. He says that this architecture will solve all the existing problems.

Does a 3-Tier architecture have the potential to introduce any new problems?

- a. Fat Clients ✗
- b. Thin Clients ✗
- c. Poor scalability ✗
- d. Poor manageability ✓
- e. Reduced performance ✗

Choice D is correct.

The only problem a 3-Tier architecture could have is the possibility for poor manageability. The separation of tiers creates thin clients and distributes business logic processing. However, because of the distributed nature of the servers, there could be manageability problems. With J2EE solutions however, the possibility for such problems is limited because J2EE tiers and layers have very well defined roles and responsibilities.

Choice A is incorrect because fat clients are a characteristic of 2-Tier architecture where the business logic is implemented on the client side. Thin clients are good. Therefore, choice B is incorrect.

A 3-Tier architecture has excellent scalability, including horizontal scalability, making choice C incorrect.

It is possible to argue that a 3-Tier architecture may not perform as well as a single machine containing your web server, business logic and database. However, as soon as you introduce a significant amount of users, a 3-Tier architecture would out perform a single machine. Therefore, choice E is correct.

Choice F is incorrect because a 3-Tier architecture actually increases the separation of business logic.

Choice G is incorrect because a "single Point of failure" is not a problem that a 3-Tier architecture introduces.

Although it may have a single point of failure, you can avoid such pitfalls easily with careful design. This is much harder to do with 2-Tier architecture and impossible with 1-Tier architecture.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

22. A prospective employer is describing the existing architecture of a solution that is currently in production. He says that it is a 3-tier system with 3 clustered web servers and a server for the Oracle database with the business logic implemented using PL/SQL scripts.

What is true about this system? Select three choices.

- a. This solution has fat clients ✗
- b. This solution has thin clients ✓
- c. There is a good separation of business logic ✗
- d. The solution has good Scalability ✗
- e. There is a poor separation of business logic ✓
- f. The solution has poor scalability ✓

Choices B, E and F are correct.

The important aspect of this question is that the business logic has been implemented using PL/SQL stored procedures. This means the business logic is on the same server as the database and therefore this is a 2-tier system, not a 3-tier system as your prospective employer suggests.

There is a very tight coupling between the data store and the business logic, which has a direct affect on the potential scalability of this system. When you think of 2-Tier systems, you would normally associate them with fat clients. However as the business logic has been implemented using PL/SQL scripts, this system will have thin clients, making choice A incorrect.

Choice C is incorrect because the business logic and data store are tightly coupled. This tight coupling will have a direct affect on scalability. You may not be able to horizontally scale this system (adding more machines); vertical scaling might be easier (add more memory and CPUs).

However, even with vertical scaling, you would always run the risk of a network bottleneck making choice D is incorrect as well.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

23. N-tier applications show better performance than 2-tier applications because they are modular in nature and can be scaled easily by tuning components and containers individually.
True or False?

- A. True ✓

Choice A is correct as the statement is TRUE.

N-Tier applications (especially those based on Java EE) are designed to be modular in nature. In addition, N-Tier applications are more extensible and more scalable.

The tiers and layers separate roles and responsibilities of each component and container. Hence, components and containers can be individually targeted and scaled as needed. This results in better performance. Hence, choice A is correct.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

24. Moon Microsystems has a web-based solution that was originally built using Servlets. However, in recent months, the IS manager has asked developers to use JSP technology with Java Scriptlets embedded in HTML code. Scott Khosla, the architect, however is insisting that the code be modularized and that EJBs be used instead of Servlets and JSP for business logic processing.

Asking developers to modularize existing code, what software development technique is Scott asking the developers to follow?

- A. Code Break up ✗
- B. Code engineering ✗
- C. Code Tiering ✗
- D. Code Refactoring ✓

Choice D is correct.

Software applications have a tendency to grow in complexity over time. When that happens, they become difficult to extend, maintain and modify. They also become hard to understand. Code factoring is a modularization technique that deals with the separation of responsibilities in code.

Code Refactoring has looser coupling and minimal dependencies, making components and code more reusable. Hence, choice D is correct.

There are no standard concepts like code break up, code engineering or code tiering.
Hence, choices A, B and C are incorrect.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

25. You have given a new task to provide feedback about the third party code. You observed that, the JSP pages are directly calling EJBs and Servlets accessing database.
Which of the following statements are true?
Select two choices.

- A. Easy to maintain code, Difficult to implement extensions ✗
- B. Easy to implement extensions, Difficult to maintain code ✗
- C. Difficult to implement extensions, Difficult to maintain code ✓
- D. Not following separation of concerns ✓

Choices C and D are correct.

Extensibility refers to a system's ability to incorporate new functionality with ease. Writing database access code within Servlets or using JSP for locating Enterprise Java Beans make the code very difficult to maintain. These are poor programming practices and adversely affect the extensibility of a system. Hence, choices C and D are correct.

Modularized code, good design practices using patterns, and encapsulating database access with a DAO all make the code easy to maintain, thus rendering the system easily extensible.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

26. You are providing technical support for a supply chain product that your company (Company X) has sold to another company (Company Y). Whilst working on Company Y's site you need to run a simulation on Company X's network. This will involve securely connecting part of Company X's network to part of Company Y's network.

How should you do this?

- a. Create a DMZ between the two networks. ✗
- b. Create a VPN between the two networks. ✓
- c. Create a secure network connection between the two networks by using a combination of Java sockets and JSSE. ✗
- d. This is not possible, as the corporate firewalls would block this. ✗

Choice B is the correct answer.

Create a VPN between the two networks. Virtual Private Network - VPN - is a solution for securely connecting two networks that are in geographically different locations. A VPN will use a variety of different encryption and authentication techniques to ensure that data confidentiality is maintained.

Choice C would not work. You are not trying to communicate with one Java program running on Company X's network and one running on Company Y's network; instead you need to connect the networks.

A DMZ is the zone between two firewalls.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

27. Which of the following statements are true about thick-client based solution?
Select two choices.

- A. Provides very good client security, persons without a client cannot access system. ✓
- B. The transmission of data to and from the Fat/Thick client causes higher network bandwidth usage ✗
- C. Maintainability of application code is difficult. ✓
- D. UI changes are easily and immediately available to the clients. ✗

Options A and C are true about thick-client based solutions.

Option B and D are false. UI changes are available to clients only after next installation. The transmission of data to and from the Fat client causes lower network bandwidth usage.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

28. You are designing a new web application. You need to display data in tables and dropdowns. Your team which has expert JavaScript developers suggest to build these controls using JavaScript rather than Servlets/JSP.

What are the main disadvantages with this approach?

- a. Developing the code. ✗
- b. Confidentiality of code ✓
- c. It is very hard to deploy. ✗
- d. Javascript should never be used for Java EE applications. Java EE specification does not mention about javascript. ✗

Options C and D are incorrect statements.

Since you have expert JavaScript developers, developing the code may not be a problem. So, option A is incorrect.

When user browses the application, user will be able to view the complete JavaScript code as it is downloaded to the

browser. So, option B is correct.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

29. Which of the following scenarios expect an application developer to choose Web Services? Select three choices.

- A. Implementing a solution with guaranteed message delivery. ✗
- B. When there is a need to exchange data between different applications on different platforms. ✓
- C. Asynchronous communication with non Java application ✓
- D. Reduces the dependencies between implementations allowing other consumers to easily use the provided service without major changes ✓

Options B, C and D are correct.

Option A is incorrect as Web Services do not ensure the same.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

30. Which of the following statements are true about StAX over SAX parser?

- A. Pull, Streaming ✓
- B. In Memory Tree ✗
- C. Push, Streaming ✗
- D. Ease of use is high ✓

Options A and D are true about StAX parser.

StAX-enabled clients are generally easier to code than SAX clients. While it can be argued that SAX parsers are marginally easier to write, StAX parser code can be smaller and the code necessary for the client to interact with the parser simpler.

StAX is a bidirectional API, meaning that it can both read and write XML documents. SAX is read only, so another API is needed if you want to write XML documents. It's a Pull and streaming API and ease of Use is high.

Option B is incorrect. In Memory Tree is provided by DOM parser.

Option C is incorrect. Push and Streaming API is a SAX parser.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

31. You are working for a financial system where you need to get data from various external systems. The external systems are legacy and running on mainframe and AS/400.
Which of the following defines a standard architecture for connecting the legacy systems?

- A. J2SE ✗
- B. Java Web Start ✗
- C. JDBC ✗
- D. JMS ✗
- E. JCA ✓

Choice E is correct.

The following is taken from:
http://java.sun.com/j2ee/connector/

The J2EE Connector architecture provides a Java solution to the problem of connectivity between the many application servers and EISs already in existence. By using the J2EE Connector architecture, EIS vendors no longer need to customize their product for each application server. Application server vendors who conform to the J2EE Connector architecture do not need to add custom code whenever they want to add connectivity to a new EIS." Hence, choice E is correct.

J2SE is a platform that provides "the compiler, tools, runtimes and APIs for developing, deploying and running applets and applications in the Java programming language." Hence, choice A is incorrect.

The following is taken from:
http://java.sun.com/products/javawebstart/

"Java TM Web Start -- a technology for simplifying deployment of Java applications-- gives you the power to launch full-featured applications with a single click from your Web browser. You can now download and launch applications, such as a complete spreadsheet program or an Internet chat client, without going through complicated installation procedures." Hence, choice B is incorrect.

The following is taken from:
http://java.sun.com/products/jdbc/

"JDBCTM technology is an API that lets you access virtually any tabular data source from the Java TM programming language. It provides cross-DBMS connectivity to a wide range of SQL databases, and now, with the new JDBC API, it also provides access to other tabular data sources, such as spreadsheets or flat files. The JDBC API allows developers to take advantage of the Java platform's "Write Once, Run Anywhere TM" capabilities for industrial strength, cross-platform applications that require access to enterprise data. With a JDBC technology-enabled driver, a developer can easily connect all corporate data even in a heterogeneous environment." Hence, choice C is incorrect.

The following is taken from:
http://java.sun.com/products/jms/

"The JMS API improves programmer productivity by defining a common set of messaging concepts and programming strategies that will be supported by all JMS technology-compliant messaging systems." While you may be able to communicate with EIS systems using JMS (if the EIS supports JMS), it is not a standardized architecture for connecting to heterogeneous EIS applications. Hence, choice D is incorrect.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

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32. You are the lead architect for a project that will require you interfacing with existing CORBA systems. You are planning to use Java IDL to integrate with these other systems. Which of the following statements about Java IDL are true? Select two choices.

- a. Allows Java to use CORBA. ✓
- b. Should be used when most of your new Java applications will be entirely Java based. ✗
- c. Should be used if you have already been using CORBA for a while and wish to carry on with some CORBA systems. ✓
- d. Java IDL has nothing to do with CORBA. To communicate with CORBA you will need to use JNI (Java native interface) and J2C (Java 2 CORBA). ✗
- e. Same as D expect you won't need to use JNI. ✗
- f. Java IDL should be used when servicing messaging requests from CORBA clients. ✗

Choices A and C are correct.

The following is taken from: http://java.sun.com/j2se/1.3/docs/guide/idl/index.html

Java IDL adds CORBA (Common Object Request Broker Architecture) capability to the Java platform, providing standards-based interoperability and connectivity.

Java IDL enables distributed Web-enabled Java applications to transparently invoke operations on remote network services using the industry standard IDL (Object Management Group Interface Definition Language) and IIOP (Internet Inter-ORB Protocol) defined by the Object Management Group. Runtime components include Java ORB for distributed computing using IIOP communication.

Choice B is incorrect because you should use RMI-IIOP instead of Java IDL.

Choices D and E are not true as Java IDL adds CORBA capability to the Java platform.

Choice F is incorrect because Java IDL should not be used when servicing requests from CORBA clients and the reference to messaging is a red herring.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

33. You are implementing a Web Service and would like pass on errors/exceptions back to the client. Which is the appropriate part of the SOAP message where you can put this information?

- a. Envelope element ✗
- b. Header element ✗
- c. Body element ✗
- d. Fault element ✓

Option D is correct.

The SOAP Fault element is used to carry error and/or status information within a SOAP message. If present, the SOAP Fault element MUST appear as a body entry and MUST NOT appear more than once within a Body element.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

34. What are the possible scenarios where you will choose a dynamic dispatch invocation using JAX-WS part of your web service design from the following options?
Select three options.

- A. When interoperability with legacy JAX-RPC or non-WS-I compliant Web services is required ✓
- B. To invoke a Web service with xml/http binding and not traditional SOAP binding ✓
- C. To invoke a Web service by using a data binding other than JAXB ✓
- D. To invoke a Web service by using a data binding technology JAXB ✗

Option A, B and C are correct.

Choice D is incorrect because for dynamic dispatch invocation, there is no need of data binding using JAXB technology.

For more information, please refer:
http://jax-ws.java.net/nonav/2.1.1/docs/UsersGuide.html

Incorrect
Marks for this submission: 0/1.

Feedback to Author

35. You have given the following requirements part of two different projects.

1. Validate the credit card info using credit card number and get instant response
2. Item component can send a message to the Order component when the inventory level for an item goes below a certain level so that the orders can be stopped.

Which of the following statements are true?

- A. For instant response use Stateless Session Bean, To stop the orders for an item based on inventory level use Message Driven Bean ✓
- B. For instant response don't use Stateless Session Bean, To stop the orders for an item based on inventory level use Message Driven Bean ✗
- C. For instant response don't use Stateless Session Bean, To stop the orders for an item based on inventory level use Entity Bean ✗

Choice A is the correct answer. In Java EE platform, the instant response can be handled using stateless session bean. Message Driven Bean can be used to stop the orders for an item based on inventory level.

Choice B, C and D are incorrect.

For more information, please refer:
http://docs.oracle.com/javaee/5/tutorial/doc/bncdr.html

Incorrect
Marks for this submission: 0/1.

Feedback to Author

36. You are working for a investment banking sector where you need to send trade and/or static data to various systems inside and outside the bank. The outside systems are legacy and running on mainframe. You identified that JCA provides a uniform programming model to connect to a legacy system and can be managed by Application servers. Which of the following are benefits of using JCA over a custom solution?
Select two choices.

- A. System contracts defined between application server and the EIS resource adapter provides connection pooling. ✓
- B. The JCA coupling interface is strictly defined through Common Client Interface. ✓
- C. System contracts and container-component contracts are exposed for the application component. ✗
- D. An application server can use a transaction manager to manage transactions across a single resource manager. ✗
- E. With JCA, portability is achieved with any language and interoperability is not limited to a specific target. ✗

Options A and B are correct.

Option C is incorrect because these contracts are hidden for the application component.

Option D is incorrect because with a transaction management contract the transaction manager can manage transaction across multiple resources managers.

Option E is incorrect because JCA is not truly portable. It is a Java solution and interoperability is limited to a specific target. The Java Connector architecture enables Java EE components to interact with enterprise information systems (EISs) and EISs to interact with Java EE components.

Connector architecture simplifies the integration of diverse EISs. Each EIS requires only one implementation of the Connector architecture. A resource adapter is a Java EE component that implements the Connector architecture for a specific EIS. A resource adapter is analogous to a JDBC driver. The resource adapter mediates communication between the Java EE server and the EIS by means of contracts.

- The application contract defines the API through which a Java EE component such as an enterprise bean accesses the EIS. Components use the Connector architecture Common Client Interface (CCI) API to access data from an EIS.
- The system contracts link the resource adapter to important services that are managed by the Java EE server.
- The resource adapter itself and its system contracts are transparent to the Java EE component. The life-cycle management contract that allows an application server to manage the life cycle of a resource adapter. The work management contract ensures that resource adapters use threads in the proper, recommended manner. The connection management contract supports connection pooling, a technique that enhances application performance and scalability.

The transaction management contract between the transaction manager and an EIS supports transactional access to EIS resource managers. The security management contract provides mechanisms for authentication, authorization, and secure communication between a J2EE server and an EIS to protect the information in the EIS.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

37. Which of the following is not a Integration-Tier pattern?

- a. Composite Entity ✓

Option A is correct.

Presentation Tier Patterns :- Intercepting Filter, Context Object, Front Controller, Application Controller, View Helper, Composite View, Dispatcher View, Service To Worker

Business Tier Patterns:- Business Delegate, Service Locator, Session Facade, Application Service, Business Object, Composite Entity, Transfer Object, Transfer Object Assembler, Value List Handler

Integration Tier Patterns:- Data Access Object, Service Activator, Domain Store, Web Service Broker

Incorrect
Marks for this submission: 0/1.

Feedback to Author

38. The current application has been built using JSF & a custom persistence framework. You have been approached to expose some of the data as a EJB to another J2EE application. You may need to access multiple business objects to provide the data.

Which of the following design patterns best fits the situation?

- a. Application service ✗
- b. Session Facade ✓
- c. Service To worker ✗
- d. Business Delegate ✗

Option B is correct.

See description of patterns.
Application Service - Application Service centralizes and aggregates behavior to provide a uniform service layer to the business tier services. An Application Service might interact with other services or Business Objects. An Application Service can invoke other Application Services and thus create a layer of services in your application.

Session Facade - Session Facade provides coarse-grained services to the clients by hiding the complexities of the business service interactions. A Session Facade might invoke several Application Service implementations or Business Objects. A Session Facade can also encapsulate a Value List Handler.

The Service to Worker pattern, like the Dispatcher View pattern, describes a common combination of other patterns from the catalog. Both of these macro patterns describe the combination of a controller and dispatcher with views and helpers. While describing this common structure, they emphasize related but different usage of patterns. Both of these patterns differ in division of labour among components(Controller, Dispatcher and View).

In Dispatcher View content retrieval is done by View and in case of Service To worker content retrieval is done by controller.

Business Delegate - Business Delegate reduces coupling between remote tiers and provides an entry point for accessing remote services in the business tier. A Business Delegate might also cache data as necessary to improve performance. A Business Delegate encapsulates a Session Facade and maintains a one-to-one relationship with that Session Facade. An Application Service uses a Business Delegate to invoke a Session Facade.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

39. You need to interface with an existing application. You have full access to the source code and UML diagrams from the existing application. Part of the requirements implies that you will need to connect unrelated objects together. You want to know whether the Bridge pattern or the Adapter pattern will be suitable.

Which of the following are true about the Bridge and Adapter patterns? Select two choices.

- a. The Adapter pattern implements an interface known to its clients and provides an instance of a class not known to its clients. ✓
- b. The Bridge pattern implements an interface known to its clients and provides an instance of a class not known to its clients. ✗
- c. The Adapter pattern creates a separation between abstractions and classes that implement those abstractions. ✗
- d. The Bridge pattern creates a separation between abstractions and classes that implement those abstractions. ✓

Choices A and D are correct.

As the answers state the Adapter pattern implements an interface known to its clients and provides an instance of a class not known to its clients. The Bridge pattern creates a separation between abstractions and classes that implement those abstractions.

Choices B and C are incorrect because the descriptions are the other way around.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

40. In a project, low on performance, you have analyzed that a lot of time is spent on accessing data using fine grained remote method calls. After several method calls the required data is assembled into object and sent out for display. Which design pattern can be used to improve this performance limitation?

- a. Service Locater ✗
- b. Transfer Object ✓
- c. Singleton ✗
- d. Business Delegate ✗

Choise B is correct.

Choice B is correct because Transfer Object lets programmer assemble all data remotely and send it back to front layers. It reduces number of remote calls.

Choice A is incorrect because Service Locater pattern is used to centralize resource lookup code.

Choice C is incorrect because Singleton pattern is used to control number of instances not method calls.

Choice D is incorrect because Business Delegate pattern is used to encapsulate remote access code and remote exceptions behind itself.

Further Reference: Core J2EE Patterns: Best Practices and Design Strategies (2nd Edition) Authored By Deepak Alur, Dan Malks and John Crupi (Publisher: Prentice Hall)

Incorrect
Marks for this submission: 0/1.

Feedback to Author

41. Which of the following statements describe the Flyweight pattern and the benefits of using it?

- a. The Flyweight pattern should be used with application that has a low number of objects and increased performance is desired. ✗
- b. The Flyweight pattern should be used when you need to control access to an object. ✗
- c. You need to coordinate access for a group of objects. ✗
- d. May reduce the amount of memory an application uses. ✓
- e. The Flyweight pattern should be used when an application is dependent upon object identity." ✗

Choice D is the correct answer.

The Flyweight pattern will help increase the performance of the application by sharing objects as opposed to creating unique objects for each task. Flyweight - "Uses sharing to support large numbers of fine-grained objects efficiently".

Choice B describes the Proxy pattern.

Choices A and E are incorrect because an application needs to have a high number of objects that are not dependent upon object identity for the Flyweight pattern to be of any benefit.

Choice C describes the Mediator pattern.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

42. Which of the following choices describe the Template Method pattern and the benefits of using it? Select two choices.

- a. Promotes code reuse ✓
- b. An alternative to sub classing ✗
- c. Coordinates communication between groups of objects ✗
- d. Easy to add new operations to existing objects ✗
- e. Helps reduce code volume when dealing with localized versions of applications ✓

Choices A and E are the correct answers.

The Template Method pattern allows you to modify an algorithm without rewriting all of the algorithm code. This works by moving certain parts of the algorithm into separate methods and implementing these in sub classes.

Choice B is incorrect because the Template Method pattern uses subclasses to implement specific behavior (the Strategy pattern is an alternative to sub classing).

Choice C describes the Mediator pattern.

Choice D describes the Visitor pattern.

Template Method - "Define the skeleton of an algorithm in an operation, deferring some steps to sub classes. Template Method lets sub classes redefine certain steps of an algorithm without changing the algorithm's structure."

Mediator - "Define an object that encapsulates how a set of objects interact. Mediator promotes loose coupling by keeping objects from referring to each other explicitly, and it lets you vary their interaction independently."

Visitor - "Represent an operation to be performed on the elements of an object structure. Visitor lets you define a new operation without changing the classes the elements on which it operates."

Incorrect
Marks for this submission: 0/1.

Feedback to Author

43. Which of the following is a benefit of the Application Controller pattern?

- a. You want to intercept and manipulate a request and a response before and after the request is processed. ✗
- b. You want to apply common logic to multiple requests ✗
- c. You want to centralize controlled access points into your system ✗
- d. You want to centralize and modularize action and view management. ✓

Option A describes the benefit of Intercepting Filter Pattern.

Options B and C describes benefits of the FrontController Pattern.

Option D describes the benefit of the Application Controller pattern. So Option D is correct.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

44. Which of the following are benefits of using the Composite pattern? Select two choices.

- a. Decouples an abstraction and implementation ✗
- b. Minimizes the complexity of an object that consists of many different objects ✓
- c. Convert the interface of a class into that of another ✗
- d. Can easily add new types of component ✓
- e. Dynamically attach additional responsibilities to an object ✗

Choices B and D are the correct answers.

The Composite pattern allows you to easily add new types of component and it minimizes the complexity of an object that consists of many different objects.

Choice A describes the Bridge pattern.

Choice C describes the Adapter pattern.

Choice E describes the Decorator pattern.

Composite - "Composes objects into tree structures to represent part-whole hierarchies. Composite lets clients treat individual objects and compositions of objects uniformly."

Incorrect
Marks for this submission: 0/1.

Feedback to Author

45. You are working on application that will become the next generation digital multimedia service. The logic for playing each type of multimedia file is contained with a class. The classes that form this logic are ordered in two hierarchies. Firstly, two abstractions exist - one for video files and one for audio files. The second abstraction hierarchy is for playing logic such as MP3, MPEG, and AVI etc. (For each of these hierarchies there are separate implementation classes.)As we have seen in recent years new multimedia file types are always being developed, the application should be able to handle these new types without a need to recompile. You propose to develop the application WITHOUT combining abstractions and implementations (i.e. no distinct classes). This will allow you to extend abstractions without affecting existing implementations.

Is there a GOF design pattern to handle this problem and if so, what is it called?

- a. Adapter ✗
- b. Builder ✗
- c. Bridge ✓
- d. Composite ✗
- e. Decorator ✗

Choice C is the correct answer.

The requirements that the scenario describes are: the ability to extend abstractions without affecting existing implementations (maintain a separation between abstraction and implementation). The Bridge pattern meets this requirement.

Bridge - "Decouples an abstraction from its implementation so that the two can vary independently."

Adapter - "Converts the interface of a class into another interface clients expect. Adapter lets classes work together that couldn't otherwise because of incompatible interfaces."

Builder - "Separates the construction of a complex object from its representation so that the same construction process can create different representations."

Composite - "Composes objects into tree structures to represent part-whole hierarchies. Composite lets clients treat individual objects and compositions of objects uniformly."

Decorator - "Attaches additional responsibilities to an object dynamically. Decorators provide a flexible alternative to sub classing for extending functionality."

Incorrect
Marks for this submission: 0/1.

Feedback to Author

46. You are involved in the design of an email application. You have recognized a problem and know using a GOF pattern can solve it. The problem is described below, what is the name of the pattern that will solve this?

The construction of an email object can be extremely complex, setting email type, embedding multimedia objects etc. Therefore, you would like to specify the email object type and content and have the email object constructed automatically.

- a. Abstract Factory ✗

Choice B is the correct answer.

The builder pattern requires the client to only specify content and type and shields the client from the details of an objects construction.

Builder - "Separates the construction of a complex object from its representation so that the same construction process can create different representations."

Abstract Factory - "Provides an interface for creating families of related or dependent objects without specifying their concrete classes."

Factory Method - "Defines an interface for creating an object, but lets subclasses decide which class to instantiate. Factory Method lets a class defer instantiation to subclasses."

Prototype - "Specifies the kinds of objects to create using a prototypical instance, and creates new objects by copying this prototype."

Singleton - "Ensures a class only has one instance, and provides a global point of access to it."

Incorrect
Marks for this submission: 0/1.

Feedback to Author

47. You need to simplify the communication between objects. You propose to introduce a single object that will handle the message distribution. Is there a GOF design pattern to handle this situation and if so, what is it called?

- a. Command ✗
- b. Mediator ✓
- c. Observer ✗
- d. Proxy ✗
- e. Strategy ✗

Choice B is the correct answer.

The Mediator pattern controls how a set of objects interact (The objects refer to each other through one object).

Mediator - "Defines an object that encapsulates how a set of objects interact. Mediator promotes loose coupling by keeping objects from referring to each other explicitly, and it lets you vary their interaction independently."

Command - "Encapsulates a request as an object, thereby letting you parameterize clients with different requests, queue or log requests, and supports undoable operations."

Observer - "Defines a one-to-many dependency between objects so that when one object changes state, all its dependents are notified and updated automatically."

Proxy - "Provides a surrogate or placeholder for another object to control access to it."

Strategy - "Defines a family of algorithms, encapsulates each one, and make them interchangeable. Strategy lets the algorithm vary independently from clients that use it."

Incorrect
Marks for this submission: 0/1.

Feedback to Author

48. You are working on a presentation application that will become the next Microsoft PowerPoint. Consider the following part of the design:When the user selects a slide an empty object is created. When movies are dragged onto the slide movie playing functionality is added to the slide object dynamically. This design will allow for further expansion.

Is there a GOF design pattern to handle this problem and if so what is it called?

- a. Adapter ✗
- b. Builder ✗
- c. Decorator ✓
- d. State ✗
- e. Strategy ✗

Choice C is the correct answer.

The key to this question is that additional functionality needs to be added to objects dynamically, and the Decorator allows this (please see the GOF definition below).

The definition of the Decorator pattern in the GOF is: "Attaches additional responsibilities to an object dynamically. Decorators provide a flexible alternative to sub classing for extending functionality."

Adapter - "Converts the interface of a class into another interface clients expect. Adapter lets classes work together that couldn't otherwise because of incompatible interfaces."

Builder - "Separates the construction of a complex object from its representation so that the same construction process can create different representations."

State - "Allows an object to alter its behavior when its internal state changes. The object will appear to change its class."

Strategy - "Defines a family of algorithms, encapsulates each one, and make them interchangeable. Strategy lets the algorithm vary independently from clients that use it."

Incorrect
Marks for this submission: 0/1.

Feedback to Author

49. You are working on a multimedia application. When the user selects new from the pull-down menu, they are presented with the choice to create a variety of different types of file (objects). The class that handles the new requests will not be able to anticipate the class type of the objects it must create.

Is there a GOF design pattern to handle these requirements and if so, what is it called?

- a. Abstract Factory ✗
- b. Builder ✗
- c. Factory Method ✓
- d. Prototype ✗
- e. Singleton ✗
- f. There is no GOF design pattern that is suitable for use in the above scenario ✗

Choice C is the correct answer.

The Factory Method pattern allows sub classes to decide which class to instantiate. The scenario says that the class that processes the 'new' requests will not know in advance the type of class it must instantiate. The Factory Method pattern fits this.

Factory Method - "Defines an interface for creating an object, but lets subclasses decide which class to instantiate. Factory Method lets a class defer instantiation to subclasses."

Abstract Factory - "Provides an interface for creating families of related or dependent objects without specifying their concrete classes."

Builder - "Separates the construction of a complex object from its representation so that the same construction process can create different representations."

Prototype - "Specifies the kinds of objects to create using a prototypical instance, and creates new objects by copying this prototype."

Singleton - "Ensures a class only has one instance, and provides a global point of access to it."

Incorrect
Marks for this submission: 0/1.

Feedback to Author

50. You are designing the next generation multimedia player. As part of the design, you need to ensure that only two instances of the 'Speaker' class are ever created (the speaker class is used to control the volume, bass, and tone). Is there a GOF design pattern to handle this situation and if so, what is it called?

- a. Abstract Factory ✗
- b. Builder ✗

Choice E is the correct answer.

The Singleton pattern can ensure either only one instance of a class is ever created or that a fixed variable number of instances are created. In code, the constructor is made private and static getInstance() methods are used.

Singleton -"Ensures a class only has one instance, and provides a global point of access to it."

Abstract Factory - "Provides an interface for creating families of related or dependent objects without specifying their concrete classes."

Builder - "Separates the construction of a complex object from its representation so that the same construction process can create different representations."

Factory Method - "Defines an interface for creating an object, but lets subclasses decide which class to instantiate. Factory Method lets a class defer instantiation to subclasses."

Prototype - "Specifies the kinds of objects to create using a prototypical instance, and creates new objects by copying this prototype."

Incorrect
Marks for this submission: 0/1.

Feedback to Author

51. You are developing a paint application for use on the web. The application is an applet. As part of the application you need to read a system property that contains information about the user's graphics card. Depending upon the graphics memory, the paint auto-selects a resolution mode to execute in.

Which of the following statements regarding this scenario is true?

- a. This will work as expected. ✗
- b. This cannot be carried out by an applet. ✗
- c. This will only work if the applet is signed. ✗
- d. This may work, but it depends on the configuration of the user's browser. ✓

Choice D is the correct answer.

An applet may or may not be able to read system properties. Some system properties will require an applet to be signed but others can be read without this requirement. System properties can never be modified. Applets are permitted to make network connections back to the host that they were downloaded from.

They aren't however allowed to connect to arbitrary hosts because this would provide a mechanism for denial of service attacks. Also if a firewall or server filters packets by IP address, then it would be possible for a downloaded applet to be trusted automatically by the firewall/server (a downloaded applet sending requests from your machine would be sending them with your trusted IP address). It is not possible to change the priority of the thread that was created by the browser for the applet to run in (to do this would require an O/S call).

It is possible for an applet to create new threads and manipulate the threads in the thread group that the browser created for the applet. The security manager does not monitor the memory, CPU or network bandwidth usage of an applet. (It is assumed that the operating system will guard against an applet using an excessive amount of resources). When an applet runs out of memory, a java.lang.OutOfMemoryError will be thrown. Generally, operating systems will allocate a certain amount of memory for processes to use but this not fixed (an applet can ask for more and if available the O/S may assign it).

For more information please see: http://java.sun.com/sfaq/

Incorrect
Marks for this submission: 0/1.

Feedback to Author

52. Which of the following are NOT permitted by applets?

- a. Creating new threads ✗
- b. Changing the priority of O/S threads ✓
- c. Using excessive amounts of memory ✗
- d. Using excessive amounts of CPU time ✗
- e. Using excessive amounts of network bandwidth ✗

Choice B is the correct answer.

It is not possible to change the priority of the thread that was created by the browser for the applet to run in (to do this would require an O/S call). Choices A, C, D and E are incorrect. It is possible for an applet to create new threads and manipulate the threads in the thread group that the browser created for the applet.

The security manager does not monitor the memory, CPU, or network bandwidth usage of an applet. (It is assumed that the operating system will guard against an applet using an excessive amount of resources). When an applet runs out of memory a java.lang.OutOfMemoryError will be thrown. Generally, operating systems will allocate a certain amount of memory for processes to use but this not fixed (an applet can ask for more and if available, the O/S may assign it).

For more information please see: http://java.sun.com/sfaq/

Incorrect
Marks for this submission: 0/1.

Feedback to Author

53. Which of the following measures can be used in applications for mitigating phishing?

- a. Use SSL ✗
- b. Do not use Frames/IFrames. Disable JavaScript ✗
- c. Add an Intercepting Validation filter to your system to filter our special characters ✗
- d. None of the above ✓

Since phishing is a social engineering threat, option D is correct.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

54. You have a requirement that the PIN of the customer used for ATM transactions must be encrypted using a one-way encryption algorithm to prevent data theft. Which of the following would you choose?

- a. 3DES. ✗
- b. SHA. ✓
- c. Blowfish. ✗
- d. RSA ✗

Explanation :
Option B is correct.

This Standard one way encryption using Secure Hash Algorithm, SHA, for computing a condensed representation of a message or a data file. When a message of any length < 264 bits is input, the SHA produces a 160-bit output called a message digest. Hence, ATM PIN will be encrypted using SHA is the best choice.

Option A is incorrect because it is a symmetrical encryption algorithm.

Option C is incorrect because it is a symmetrical encryption algorithm.

Option D is incorrect because it is a asymmetrical encryption algorithm.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

55. Which security constraints can be specified in the web.xml deployment descriptor?

- a. Restrictions based on user login. ✗
- b. Restriction on Struts actions. ✗
- c. Restrictions on encryption methods ✗
- d. Restriction based on role name. ✓

Option A is incorrect because this is vendor specific.

Option B is incorrect because this is handled in different .xml files.

Option C is incorrect because you can only specify a transport guarantee. The browser and SSL server determine the protocol.

Option D is correct.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

56. Which of the following can be configured through Java EE deployment descriptors?

- a. Ports such as HTTP, HTTPS ✗
- b. Connection pool configuration ✗
- c. Fine-tuned Security constraints in the application code ✓
- d. JTA Transaction timeout ✗

Option C is correct.

Options A, B and D are Java EE Server specific. You can mention roles and role references in web.xml.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

57. You are building a website in which many pages have common features such as radio buttons, dropdowns and tabular data. Which of the following will you choose to prevent duplicate GUI code? Select two choices.

- a. Use a business delegate to decouple the GUI from the business service. ✗
- b. Use a service locator to locate business services. ✗
- c. Access the data using JDBC. ✗
- d. Use templates to create composite view ✓
- e. Custom Tag Libraries. ✓

Options D and E are correct.

Both custom tag libraries and templates can be used to facilitate reusability of code.

Options A, B and C are incorrect because they do not deal with the GUI.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

58. You are developing a standard architecture guide lines to design the web tier components/modules, which will be used by subsequent projects in the enterprise.
Which of the following you would consider the most important guide line from the given choices?

- A. A first-order principle of software architecture is to increase cohesion and reduce coupling ✓
- B. A first-order principle of software architecture is to decrease cohesion and increase coupling ✗
- C. A first-order principle of software architecture is not to increase coupling and decrease cohesion ✗
- D. A first-order principle of software architecture is not to increase cohesion and decrease coupling ✗

Option A is correct. The components/modules designed should have loose coupling between the components. Any change or extensions to the code should be easy to handle and provide good maintainability. Higher cohesion within

the module/component or class should be maintained part of any tier design.

Option B, C and D are incorrect.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

59. ABC Company has a desktop based Labour claim application. They are planning to build a new web-based application using Servlets/JSP. In which of the following scenarios, can JSP be used?

- a. Invoking business services ✗
- b. Invoke JSTL ✓
- c. Writing business logic ✗
- d. Invoking web services for display of read-only data on the website ✗

Option B is correct.

The JavaServer Pages Standard Tag Library (JSTL) encapsulates, as simple tags, core functionality common to many JSP applications.

Options A, C and D must not be present in JSP. JSP must be used only for presentation purposes.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

60. Your friend has suggested you to use Model-View-Controller pattern for your Web application. Which of the following are valid options for implementing controller logic?

- a. JSSE ✗
- b. Servlets ✓
- c. Custom Tag Libraries ✗
- d. JSTL ✗

Options C and D are options that can be used for View.

Option A is incorrect because JSSE is related to security.

Option B is the correct option for implementing controller logic.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

61. In a web application you are about to architect, you have to choose a technology for web-tier. One major concern is to prepare corresponding Java objects for form-data submitted on HTML pages. Which technology will you pick?

- a. JSP ✗
- b. JSP and Servlets together will be best ✗
- c. Java Server Faces ✓
- d. Create your own framework for this ✗
- e. Apply Request Values ✗

Choice C is correct.

Choice C is correct because JSF allows direct mapping between HTML elements and Java objects.

Choice A and B are incorrect because Servlets and JSP do not provide HTML to object mapping.

Choice D is incorrect. JSF provides this out of the box.

Further Reference: The Java EE 5 Tutorial – Third Edition by Eric Jendrock (Publisher – Pearson Education)

Incorrect
Marks for this submission: 0/1.

Feedback to Author

62. What is the standard presentation tier framework to build user interface in Java EE Platform?

- A. JSTL ✗
- B. JSF ✓
- C. WAF ✗
- D. Struts ✗

Options B is correct.

Java Server Faces technology is a standard server-side user interface component framework for Java technology-based web applications.

The main components of Java Server Faces technology are as follows:

An API for representing UI components and managing their state; handling events, server-side validation, and data conversion; defining page navigation; supporting internationalization and accessibility; and providing extensibility for all these features.

Two Java Server Pages (JSP) custom tag libraries for expressing UI components within a JSP page and for wiring components to server-side objects.
Option A, C, and D are incorrect.

For more information, please refer
http://docs.oracle.com/javaee/5/tutorial/doc/bnaph.html

Incorrect
Marks for this submission: 0/1.

Feedback to Author

63. You are designing an internet banking application using Java EE technologies. You would like to keep an audit of critical customer actions on the site such as money transfers, so that customer cannot deny the same in future. This audit data will be stored in a mainframe database and can be viewed only by authorized personnel.

Which of the following technologies would you choose?

- a. Web Services ✗
- b. Implement through MDB ✗
- c. Enterprise Service Bus ✗
- d. Implement through Stateless Session Beans ✓

There is no requirement for web services or an infrastructure such as ESB, so options A and C are incorrect.

Enterprise Service Bus is a set of infrastructure capabilities implemented by middleware technology that enable an SOA. The ESB supports service, message, and event-based interactions in a heterogeneous environment, with appropriate service levels and manageability.

Option D is correct. Whenever a critical action is made by customer, call has to be made to store the record in the database. Since it is very critical to audit actions, it is correct to implement synchronously.

In case auditing fails - you can stop the action which is not possible to achieve through MDB. So, option B is incorrect.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

64. You are designing an internet banking application for a very small bank. It would have typical features of banking application such as creating accounts, retreiving account information, making account transfers etc. You need to build and deploy this application as soon as possible and application must be scalable.

Which of the following would you choose? Select two choices.

- a. Stateless Session Beans with DAO ✗
- b. Use JSF for web layer. ✓
- c. Build business services as stateless session beans and use Java EE entities for business objects. ✓
- d. Use Servlets/JSP and DAO for persistence. ✗

DAO approach involves coding and testing effort which can be avoided by using Java EE Entities. So, options A and D are incorrect.

You can build this application quickly by using Java EE technologies - JSF for web layer, using EJB for business services (scalability) and Java EE entities for persistence. So, options B and C are correct.

Incorrect
Marks for this submission: 0/1.

Feedback to Author

Finish review