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**Exam Name:** Java Enterprise Edition 5 Enterprise  
Architect Certified Master Exam (Step 1 of 3)

**Version:** Demo

**QUESTION 1**

What are the three primary roles in a web service interaction? (Choose three.)

- A. Broker
- B. Facade
- C. Provider
- D. Decorator
- E. Requestor
- F. Interceptor

**Correct Answer:** ACE

**QUESTION 2**

A stock trading company is writing a new application for stock market forecasting. A significant portion of the work required by the business logic involves navigating through the persistent object model. As lead architect on this project, you have chosen JPA over EJB2 entity beans to implement these persistent objects. You have done this to maximize performance when navigating through the model. Why does JPA offer better performance for this task?

- A. JPA guarantees referential integrity at the object level.
- B. JPA allows the application to specify lazy or eager retrievals.
- C. JPA simplifies the source code that implements the object model.
- D. The guaranteed referential integrity in EJB2 entity beans is expensive.

**Correct Answer:** B

**QUESTION 3**

A developer creates a Java web service to be used by consumers in an SOA. This SOA uses a UDDI service registry. How can the developer make the new service available to consumers?

- A. Deploy to the registry using JAXR
- B. Publish to the registry using JAXR
- C. Query the registry using JAX-RPC
- D. Target the registry using JAX-RPC

**Correct Answer:** B

**QUESTION 4**

With the release of a new product line, there has been a significant increase in the volume of transactions on your web site. You need to scale your application and manage session failover. What is the best option for scalability?

- A. Add additional web servers and application servers
- B. Introduce a High Availability pair and utilize sticky sessions
- C. Add additional application servers and implement DNS round robin
- D. Add additional application servers and use clustered HttpSession

**Correct Answer:** D

**QUESTION 5**

You are asked to architect an SOA solution that leverages Java web services. The architecture needs to be flexible and allow for the SOAP 1.1, SOAP 1.2, and REST implementations. Which Java EE technology should you use?

- A. JAXP
- B. JAXB

- C. JAX-WS
- D. JAX-RPC

**Correct Answer: C**

#### **QUESTION 6**

You are architecting an online ordering application with these requirements: Users access the system over the Internet using HTML.

An email message is sent to the user confirming the order. Users must log in and are validated using LDAP.

The product catalog is stored in a relational database. All orders are logged to the internal fulfillment system.

Orders must not be lost.

Which Java EE technology should be used to send orders to the fulfillment system?

- A. JNDI
- B. JMS
- C. JAX-WS
- D. RMI-IIOP

**Correct Answer: B**

#### **QUESTION 7**

An online sporting goods store's web application uses HttpSession to store shopping carts. When the application is initially deployed, the business plan predicts only a few customers will access the site. Over time, the store projects a steady increase in volume. The deployment plan calls for a single web container in the initial deployment. As demand increases, the plan calls for multiple web containers on separate hardware with clustered HttpSession objects. Which two principles will help the application meet the requirements and optimize performance? (Choose two.)

- A. The application should store as much as possible in HttpSession objects.
- B. The application should NOT make frequent updates to HttpSession objects.
- C. The application should make coarse-grained updates to HttpSession objects.
- D. The application should create new HttpSession objects instead of updating existing objects.

**Correct Answer: BC**

#### **QUESTION 8**

You are writing a utility that searches for existing web services provided by large companies through UDDI. Your web site allows the user to input search criteria using event-driven, state managed GUI screens, performs the search, and displays them in a formatted HTML page. Which technologies would you use for this application?

- A. JSP and JAXB
- B. JSF and JAXR
- C. JSF and JAX-WS
- D. JSP and JAX-WS

**Correct Answer: B**

#### **QUESTION 9**

A company has a web service that provides the most recent price for stocks, mutual funds, and commodities. The company has the only web service that allows a person to check prices on all three financial assets with one call. Its system does not store this information but sends individual calls to each of the primary vendors for an asset and then aggregates the response to the requester. The company has committed to support a non-functional requirement (NFR) for performance that states it must process all requests within three seconds and each of the three vendors is obligated to support the NFR as dictated by the company. Where, in the message flow, is it appropriate to measure whether all the NFRs are met?

- A. when a request is received and a response is sent to the requester
- B. when a request is received, first call to vendor, last response from vendors, response is sent to a requester
- C. when a requester sends a request, the request is received, each call to vendor, each response from vendor, requester receives response
- D. when a request is received, each call to vendor, each response from a vendor, a response is sent to a requester

**Correct Answer:** D

**QUESTION 10**

A Java web component, EJB component, or another web service can be a client to a web service. Which Java API can the client use to access the web service through a Service Endpoint Interface?

- A. JAXB
- B. JAXR
- C. JDBC
- D. JAX-WS

**Correct Answer:** D

**QUESTION 11**

Which three are parts of a SOAP message? (Choose three.)

- A. SOAP body
- B. SOAP endpoint
- C. SOAP headers
- D. SOAP handlers
- E. SOAP attachments

**Correct Answer:** ACE

**QUESTION 12**

You are integrating with a single legacy Enterprise Information System. You are interested in the transaction management capabilities of the Java Connector Architecture. This new system needs the capability to invoke multiple operations against this single legacy system. These operations succeed together or fail together as a group. To which minimum level of transaction management are you going to set your resource adapter?

- A. No transaction
- B. Local transaction
- C. Distributed transaction
- D. Container Managed transaction

**Correct Answer:** B

**QUESTION 13**

What is an advantage of XML over HTTP, as compared to SOAP over HTTP, for web services?

- A. Guaranteed delivery
- B. More security options
- C. Smaller message size
- D. Strongly typed parameters

**Correct Answer:** C

**QUESTION 14**

An application needs to invoke a service on a remote system over a low latency connection, and then wait

for a response. Which two are best for this type of invocation? (Choose two.)

- A. JMS topic
- B. JMS queue
- C. RMI over IIOP
- D. synchronous web service
- E. asynchronous web service

**Correct Answer:** CD

#### **QUESTION 15**

Your new architecture needs to access the business logic of an Enterprise Information Solution (EIS). What are three benefits of using the Java Connector Architecture to connect to EIS instead of implementing a proprietary solution? (Choose three.)

- A. Security
- B. Performance
- C. Loose coupling
- D. Connection pooling
- E. Common Client Interface

**Correct Answer:** ADE

#### **QUESTION 16**

Your web application requires access to several different services, so you created a Service Locator class to be used by the UI developers on the team. New services with different interfaces are occasionally added. Unfortunately, the caching benefits of the Service Locator class are NOT being realized because a new instance of this class is being created in every backing bean method that requires a service. Which pattern should you apply to eliminate this problem?

- A. Bridge
- B. Singleton
- C. Prototype
- D. Factory Method
- E. Business Delegate

**Correct Answer:** B

#### **QUESTION 17**

What are two benefits of using the Value List Handler pattern? (Choose two.)

- A. Improves network performance
- B. Facilitates exposing existing services
- C. Provides an alternative to potentially inefficient EJB finders
- D. Facilitates post-processing across heterogeneous requests
- E. Provides a mechanism to support shared elements of composite views

**Correct Answer:** AC

#### **QUESTION 18**

What are two capabilities of the Abstract Factory pattern? (Choose two.)

- A. Creates whole-part hierarchies
- B. Creates families of related objects
- C. Enforces dependencies between concrete classes
- D. Specifies the types of objects to create using a sample instance
- E. Separates the construction of a complex object from its representation

**Correct Answer:** BC

**QUESTION 19**

A teenage fashion web site, includes a set of pages for displaying and browsing their catalog, as well as pages for making fashion suggestions that also display tables of catalog entries. Currently, the JSP code uses scriptlets that perform database SELECT statements and format the results in HTML tables. You have been hired to help reduce the maintenance overhead when either the look is modified or the database schema changes. Which two patterns, used together, do you apply to reduce this maintenance overhead? (Choose two.)

- A. View Helper
- B. Front Controller
- C. Composite View
- D. Data Access Object

**Correct Answer:** AD

**QUESTION 20**

A new security feature has been requested for an existing web application with the following requirements: All requests must be logged to a secure database.

Each request must be time-stamped with the start and completion times. Each request must contain the IP address of the client that made the request. Which pattern is most applicable for this new feature?

- A. Strategy
- B. Front Controller
- C. Abstract Factory
- D. Intercepting Filter
- E. Model View Controller

**Correct Answer:** D

**QUESTION 21**

Which two are benefits of using the Intercepting Filter pattern? (Choose two.)

- A. Allows the recombination of filters
- B. Provides efficient data sharing between filters
- C. Facilitates creating a generic command interface
- D. Facilitates common processing across heterogeneous requests
- E. Helps to minimize coupling between the presentation and business tiers

**Correct Answer:** AD

**QUESTION 22**

You are building a subsystem that has several complex components, but you want to hide that complexity from the client code. Which pattern can you apply to hide this complexity?

- A. Proxy
- B. Bridge
- C. Adaptor
- D. Facade
- E. Decorator

**Correct Answer:** D

**QUESTION 23**

Some media players use a virtual proxy for image loading. What is the benefit of using a virtual proxy?

- A. It controls access to the original object.
- B. It defers creation of expensive objects until necessary.
- C. It provides a local representation for an object in a different address space.
- D. It is a replacement for a bare pointer that performs additional actions when an object is accessed.

**Correct Answer:** B

**QUESTION 24**

Your company's web site is supported with a cluster of load-balanced web servers and a database server. To reduce expenses, your company must replace your current cluster of web servers with a single web server. All servers under consideration have the same specification. Which three items will be negatively impacted by this re-architecture? (Choose three.)

- A. Security
- B. Reliability
- C. Scalability
- D. Availability
- E. Manageability
- F. Maintainability

**Correct Answer:** BCD

**QUESTION 25**

A company manufactures widgets for sale to distributors. Distributors call this company when they want to order more widgets. The company wants the distributors to send orders using XML documents over the Internet to reduce the number of data entry personnel needed. It has no control over the distributor's technologies. The company does not want the orders to impact the performance of the other users. You have been assigned the task of designing the new API. Which approach do you take?

- A. design the API as a JMS queue
- B. design the API as an RMI interface
- C. design the API as a synchronous web service
- D. design the API as an asynchronous web service

**Correct Answer:** D

**QUESTION 26**

You have been tasked with improving the availability of an existing three-tier application. What is your first step in evaluating what changes should be made to the architecture to achieve the goal?

- A. Monitor network traffic between tiers
- B. Separate presentation from business logic
- C. Identify and document all single points of failure
- D. Cluster the presentation tier without session replication

**Correct Answer:** C

**QUESTION 27**

Which non-functional requirement is a disadvantage for a two-tier architecture?

- A. Security
- B. Reliability
- C. Availability
- D. Manageability

**Correct Answer:** D

**QUESTION 28**

A travel company is designing an application to allow customers to browse for information on any flights operating domestically and to place new reservations on any of those flights. The company makes the following assumptions: significant read volume, in terms of operations the customers will perform significant overlap, in the search criteria of customers simple processing of each customer browse/update request What advice can you give this company?

- A. use a two-tier architecture (rich client directly accessing the database) because running copies of the business logic in each client provides significant advantages in terms of processing time per request
- B. use a three-tier architecture (thin client -> application server -> database) because executing business logic remotely on a central location results in better performance per request
- C. use a three-tier architecture (thin client -> application server -> database) because the shared business server allows them to cache information with high likelihood of cache hits, which reduces the load on the database
- D. use a two-tier architecture (rich client directly accessing the database) because each client can operate on its own business objects, independently of others, which provides significant advantages from reduced latency due to synchronization

**Correct Answer: C**

**QUESTION 29**

A company provides call center support for corporations world-wide. Each agent in the call center can be assigned to multiple call center customers. All of the company's customers use Windows- based user interfaces and it has just signed a new customer that uses a Java EE backend and wants a rich interface. The company is developing a user interface for the new customer with the following requirements: Customer service representatives (CSRs) must be able to work with minimal training on the application. CSRs must be able to switch between call center systems quickly. Screens must have a Windows "look and feel." 2000 agents spread across four locations must be able to use the system. What advice would you give this company on the user interface (UI)?

- A. Write the UI using JSP and JSTL
- B. Write the UI using JSPs with embedded scriptlets
- C. Write the UI using Ajax, accessing servlets directly
- D. Write the UI using Java Swing and distribute using JNLP

**Correct Answer: D**

**QUESTION 30**

A travel company decides to re-architect their two-tier application (where each client ran its own copy of the application against a shared database) and hires you as their lead architect. You suggest they re-architect their application as a browser-based, three-tier solution: presentation, business logic, and persistence. You also suggest they deploy each of the three tiers on its own computer. Why is the three-tier solution more scalable than the two-tier solution?

- A. Every client runs its own GUI application. Clients do not compete for resources for presentation purposes.
- B. Clients share the same business logic tier. Client-specific objects can be stored centrally, optimizing access.
- C. Every client shares the same business logic tier. Each client competes with each other for resources on that JVM.
- D. Clients share the same business logic tier. Duplicate effort can be avoided by sharing objects, reducing the load on the database.

**Correct Answer: D**

**QUESTION 31**

Which two can be used to maintain conversational state? (Choose two.)

- A. Entity beans
- B. HTTP session

- C. stateful session beans
- D. Message-driven beans
- E. Stateless session beans

**Correct Answer:** BC

### QUESTION 32

You are the architect of a project that will provide an external, low latency, scalable, and highly available service for handling string translations. Each request consists of a short string ID and a language key, limited to "EN", "FR", "ES", "DE" and "JP". Each response is a simple unicode string averaging 256 bytes in size, and there will be no more than 50,000 records for each language. All the records have already been translated and changes to the records will be rare. What should you do to ensure that your service will scale and perform well as new clients are added?

- A. Store all the records in an LDAP server and use JNDI to access them from the web tier
- B. Deploy a standard 3-tier solution that is supported by a fast and reliable relational database
- C. Deploy a single service on many servers in the web tier, each storing all the records in memory
- D. Store all of the records in a network attached file system so they can be served directly from the file system

**Correct Answer:** C

### QUESTION 33

You are the architect of a web application that uses JSF as a presentation tier for business processes coded as stateless session beans. When you add new code to the stateless session beans to address new accounting requirements, without changing the interface, you discover that the new business processes are being ignored by some of the JSF components. Which might be the cause of this problem?

- A. The presentation tier is relying on validation logic in the business tier.
- B. The browser is caching out-of-date versions of the JSF components.
- C. The business processes are not rigorously encapsulated in the session beans.
- D. The new session beans have been deployed incorrectly, and proper deployment will resolve the problem.

**Correct Answer:** C

### QUESTION 34

You have refactored your legacy Java application into a three-tiered architecture. Your Security Audit group is concerned that your architecture may be vulnerable to security threats in the separate tiers. Which two methods can you use to reduce those threats? (Choose two.)

- A. Programmatic security in the EJB Entities
- B. Intercepting Filters between the view and the controller
- C. Intercepting Filters between the controller and the model
- D. Role-based security for the EJBs in the deployment descriptor

**Correct Answer:** BD

### QUESTION 35

The current architecture of a fashion web site consists of one web server, three application servers, and a database. You, as the lead architect, recommend adding more web servers. What are two valid justifications for the new architecture? (Choose two.)

- A. New web servers will decrease latency for I/O-bound requests.
- B. Adding multiple web servers will have a positive impact on scalability.
- C. Adding new web servers will increase the overall availability of the web site.
- D. New web servers will increase the number of user accounts that can be supported.

**Correct Answer:** BC

**QUESTION 36**

Which three statements are true about delegation as an OO design technique? (Choose three.)

- A. It is applied to a system only at compile time.
- B. It is an essential element of the State pattern.
- C. It is an essential element of the Singleton pattern.
- D. It allows you to replace inheritance with composition.
- E. In Java technology, it is always implemented through the use of generics.
- F. It always requires that at least two objects are involved in handling a request.

**Correct Answer:** BDF

**QUESTION 37**

Which two statements are true about the Flyweight pattern? (Choose two.)

- A. It allows a single instance of a class to virtually represent many instances.
- B. When used appropriately it can reduce memory demands on your servers.
- C. It allows for many instances of a class to be controlled by a single instance.
- D. It allows many tightly related, homogeneous objects to each maintain their own state.

**Correct Answer:** AB

**QUESTION 38**

Which two techniques can be used to provide polymorphic behavior? (Choose two.)

- A. Extending a class and adding a new method
- B. Implementing two interfaces in the same class
- C. Extending a class and overriding an existing method
- D. Implementing an interface with several different classes

**Correct Answer:** CD

**QUESTION 39**

As a project architect, you are selecting technologies for a complex, n-tier web application's virtual platform. At this stage in the project, which two technologies should be of primary consideration? (Choose two.)

- A. RMI
- B. Linux
- C. JDBC
- D. Firefox
- E. Tomcat

**Correct Answer:** AC

**QUESTION 40**

A company offers a financial workbench tool that lets users search for a variety of financial products using an open-ended, variable set of query criteria. The resulting queries can have widely different structures and use a number of aggregate functions. The actual querying is performed on the server, so as to take advantage of sophisticated caching technology developed by the company. The company values ease of development and does not want to see resources taken away from the company's main specialty, which is financial analysis. Which persistence technology best supports this company's requirements?

- A. JPA
- B. JDBC using prepared statements
- C. CMP entity bean with DAO pattern

D. BMP entity bean with JDBC layer and DAO pattern

**Correct Answer:** A

#### QUESTION 41

Your company is considering migrating a persistence module implemented using CMP entity beans to JPA. Which two statements are true? (Choose two.)

- A. Each CMP entity bean can be mapped to a single JPA entity class.
- B. The client code that accesses the CMP entity beans does not have to change.
- C. JPA cannot capture all the kinds of relationships supported by CMP entity beans.
- D. The resulting JPA persistence module can be used on both the client and the server.
- E. The JNDI name of a JPA entity class can be customized to match that of the corresponding CMP entity bean.
- F. Remote clients of the CMP entity beans must start using web services to access the JPA entity classes on the server.

**Correct Answer:** AD

#### QUESTION 42

Which three statements are true about the server programming model for web services in Java EE? (Choose three.)

- A. Stateful session beans can be exposed as web services in the Java EE platform.
- B. Stateless session beans can be exposed as web services in the Java EE platform.
- C. EJBs that are exposed as web services are considered as normal EJBs by the EJB container.
- D. The Service Endpoint Interface (SEI) must follow the JAX-RPC or JAX-WS rules for WSDL to- Java mapping.
- E. EJBs that are exposed as web services are executed in a restricted sandbox by the EJB container when compared to an EJB not exposed as a web service.

**Correct Answer:** BCD

#### QUESTION 43

A stock company has operations in all major exchanges worldwide. Stockbrokers spend 80 percent of their trading time logged into and using the company's main application -BuyLowSellHigh. It is redesigning BuyLowSellHigh to use the Java EE platform. Key requirements are to minimize the size of messages sent between application tiers, and provide a consistent state mechanism for both Java Swing and HTML-based application clients. Server-side resources are dedicated to users for the lifetime of their session and the company charges a premium to its traders to ensure that resources do not need to be pooled or reused. Given these requirements, what is the best approach to maintaining state in the business logic tier?

- A. The HttpSession object accessed from the HttpServletRequest object
- B. A handcrafted singleton class accessed by the presentation tier using RMI-IIOP
- C. An entity bean acquiring and releasing resources as needed to service requests
- D. A stateful session bean created and associated with the client on login until logout, acquiring and holding all server-side resources needed

**Correct Answer:** D

#### QUESTION 44

Your company is creating a Java EE corporate-wide workflow system in which significant internal business events are consumed by multiple applications. Due to multi-year development and deployment plans, many of these applications do not exist yet, even at the design stage. IT has defined standard data formats for these events in the form of small XML documents. Also, the rules for how an application filters and processes events are not fixed in advance and can change over the life of the application. Which combination of technologies is best at distributing and consuming these events throughout the company?

- A. Relational database and JDBC
- B. HTTP client library and servlets
- C. RMI and stateless session beans
- D. JMS topics and message-driven beans
- E. JMS queues and message-driven beans

**Correct Answer:** D

**QUESTION 45**

Interceptors provide a way of refactoring code shared by multiple EJB 3 components into a single unit. This is particularly appealing when the code in question can be described as implementing a specific aspect, for example, having a well-defined purpose that can be described in a concise way. Which two actions can be implemented as interceptors? (Choose two.)

- A. Logging the IP addresses of all clients of a web application
- B. Computing sales tax based on customer ZIP code for a variety of purchase operations
- C. Publishing to a JMS topic the arguments to any successful method invocation on an EJB component
- D. Computing a discount percentage based on a customer's profile and the contents of the customer's shopping cart
- E. Logging the identity of any authenticated clients to any of the business methods defined by a set of EJB components
- F. Ensuring that the clients of a web service implemented as a stateless session bean are authorized to access its operations, based on a WS-Security SOAP message header

**Correct Answer:** CE

**QUESTION 46**

Your company has supported agile practices and as a policy, all their developers use test-driven development. Tests are run early and often, starting with the individual developers up to nightly tests and regularly scheduled durability tests. To make developers more productive in such an environment, management wants unit tests to run as much as possible outside the container, without requiring the application to be deployed to an actual server. This would reduce the time spent waiting for test results. Which components are most thoroughly testable outside a container without requiring the creation of mock objects?

- A. CMP entity bean
- B. BMP entity bean using JDBC for persistence
- C. Stateless session bean using JPA for persistence
- D. Stateless session bean exposing a web service interface

**Correct Answer:** C

**QUESTION 47**

Your company has defined a set of business operations that it makes accessible to client applications. These operations, which are modeled as methods on a stateless session bean component, act as building blocks for complex state changing activities that need to possess atomicity, consistency, isolation, and durability (ACID) semantics. Which remoting technology is most appropriate out of the box?

- A. RMI
- B. JMS
- C. Web services
- D. XML over HTTP

**Correct Answer:** A

**QUESTION 48**

Which programmatic activity is NOT appropriate for an MVC-based enterprise web application JSP?

- A. Iterating over a collection
- B. Embedding JavaScript code
- C. Setting state on the user's session
- D. Getting state from the user's session
- E. Conditional logic to show view elements based on state

**Correct Answer:** C

#### **QUESTION 49**

A company that makes avatar skins for virtual reality environments wants to deliver the textures that its customers purchase on the company's web site to its customer's avatar profile in-world. The target virtual reality environment can be communicated with from the outside-world using a web service. However, the web service invocation will fail if the customer is not online. Which architecture would be most appropriate to use in this situation?

- A. Stateless session beans to attempt delivery
- B. Invoke the web service from a JSF managed bean
- C. A JCA resource adapter to invoke the web service
- D. The EJB timer service to attempt delivery at regular intervals

**Correct Answer:** D

#### **QUESTION 50**

You must build a network management web application that interacts with a complex data model on the server. This data model uses strings, integers, and value objects that represent network IP addresses (represented to the user in the form "10.10.201.42") and port lists (represented in the form "80, 443"). The web forms and interaction with the backing beans is simple. Also, the web designer has extended the HTML <select> tag with JavaScript to perform data insertion to support users creating port lists. This special <select> tag appears in many forms. What is the simplest architecture to support this web application and reduce redundant HTML code?

- A. JavaServer Faces only
- B. JavaServer Pages only
- C. JavaServer Pages with standard tags
- D. JavaServer Faces with custom components

**Correct Answer:** D

#### **QUESTION 51**

A small company that sells avatar skins for virtual reality environments, has a static web site for advertising their wares. The web site was created by a talented graphic artist using a popular WYSIWYG (What You See Is What You Get) HTML editor and contains a great deal of JavaScript. The company wants to add server-side processing capabilities for the purpose of developing a shopping application. They are considering using JavaServer Faces (JSF). What is a potential disadvantage the JSF framework?

- A. The JavaScript will have to be rewritten to conform to JSF standards.
- B. JSF tags cannot be integrated into the HTML generated by WYSIWYG editors.
- C. The graphic artist cannot accurately preview the web pages offline with a generic WYSIWYG HTML editor.
- D. All the web pages will need to be converted into JSF before going into production, to keep the end users from losing a session context.

**Correct Answer:** C

#### **QUESTION 52**

Which application would NOT be a good candidate for an EJB-centric implementation of the business tier?

- A. An application that transfers money between accounts

- B. A news-oriented web site that receives millions of hits a day
- C. An application with business logic that calls third-party web services
- D. A small workflow-oriented application to provision and deprovision employee accounts

**Correct Answer:** B

**QUESTION 53**

You were hired by a company with a teenage fashion web site, to create a portal for their sales staff that is accessible over the Internet. As part of this web portal your application needs to generate a sales bar chart dynamically from real-time corporate data at request-time and streamed to the web browser. Which technology is best suited for creating these PNG-based bar graphs?

- A. JSP page
- B. filter class
- C. servlet class
- D. JSP custom tag
- E. JSF standard component

**Correct Answer:** C

**QUESTION 54**

A design company that makes avatar skins for virtual reality environments wants to create an online catalog system that enables customers to purchase skin textures. The company is concerned about being ranked well by search engines and therefore wants their entire catalog to be easily parsed by the search engine bots. Which view generation strategy is the most problematic for this endeavor?

- A. using servlets
- B. using JSF tags
- C. using JSP tags
- D. using PHP tags

**Correct Answer:** B

**QUESTION 55**

Which two actions limit the negative consequences of a successful attack? (Choose two.)

- A. Implementing the principle of least privilege
- B. Installing a firewall at the outer boundary of your systems
- C. Placing Internet-accessible servers in a demilitarized zone
- D. Using a single sign-on system so that administrators do not have to log in to each server separately
- E. Giving servers administrative rights to the databases they need, and ensure that the password is not hard-coded

**Correct Answer:** AC

**QUESTION 56**

Your company's new Internet application has complex requirements for the restriction of web page access, and you know the site's current security requirements are subject to change. You have recommended to your Chief Technology Officer that the Java Authentication and Authorization Service (JAAS) should be used for security. Which three security features influenced your decision? (Choose three.)

- A. Single sign-on support
- B. A framework for SOA governance
- C. Pluggable Authentication Modules
- D. Secure Internet connections using sockets
- E. A framework for encryption, key generation, and key agreement
- F. A flexible access control policy for user-based, group-based, and role-based authorization

**Correct Answer:** ACF

**QUESTION 57**

The requirements state that a new system must use encryption to prevent data theft. Passwords must be stored using a one-way encryption algorithm so that they can never be accidentally displayed. Social security numbers must be stored in the database using a symmetrical algorithm so that they can be output on reports when necessary. Which three encryption methods can you use? (Choose three.)

- A. Passwords can be stored using MD5.
- B. Passwords can be stored using RC4.
- C. Passwords can be stored using 3DES.
- D. Social security numbers can be stored using SHA.
- E. Social security numbers can be stored using 3DES.
- F. Social security numbers can be stored using Blowfish.

**Correct Answer:** AEF

**QUESTION 58**

A company has just released a new GUI interface for their product. As part of the interface, a navigation tree is displayed to the users using an unsigned applet that is loaded using the Internet. Which two actions can the applet take? (Choose two.)

- A. Create new threads in the JVM
- B. Start other programs on the client
- C. Use excessive amounts of CPU time
- D. Access load libraries on the local machine
- E. Access file directories on the local machine
- F. Make network connections to another web server

**Correct Answer:** AC

**QUESTION 59**

Which two checks are made possible in the byte-code verification? (Choose two.)

- A. CPU usage is controlled.
- B. Access to files is checked.
- C. Digital signatures are verified.
- D. Data type conversions are checked/controlled.
- E. The language access restrictions (for example private, protected) are respected.

**Correct Answer:** DE

**QUESTION 60**

You are architecting a new Internet-deployed application and you want to restrict access to parts of the system for security purposes. Which three security restrictions can be specified in the deployment descriptor according to the servlet API specification standards? (Choose three.)

- A. On page forwarding
- B. On encryption methods
- C. Based on the role name
- D. Based on the user name
- E. Based on the URL pattern
- F. Based on the HTTP method

**Correct Answer:** CEF

**QUESTION 61**

You are concerned about the threat of arbitrary code execution on your server. Which action should you take to address this?

- A. Install a firewall and create a demilitarized zone
- B. Move the vulnerable server onto a VLAN segment
- C. Enable "data execution prevention" in the host OS
- D. Require digital signatures on all communications to and from the server

**Correct Answer:** C

**QUESTION 62**

You have a web portal system that interfaces to a web service endpoint on an unsecured communication channel. Evil Hacker X is intercepting the message between the two endpoints. What kind of security threat is this?

- A. Session theft
- B. Man in the Middle
- C. Cross-site scripting
- D. Broken authentication
- E. Distributed Denial of Service

**Correct Answer:** B

**QUESTION 63**

What are two significant advantages of developing web applications with JavaServer Faces? (Choose two.)

- A. JSF pages can be previewed outside the web container.
- B. Backing beans can be unit tested outside the web container.
- C. Client-side validation mechanisms are automatically generated.
- D. The event driven model for invoking backing beans is friendly to JavaScript callbacks (Ajax).

**Correct Answer:** BD

**QUESTION 64**

Which three application concerns do most web application frameworks attempt to separate? (Choose three.)

- A. Data
- B. View
- C. Logic
- D. Logging
- E. Filtering
- F. Data validation

**Correct Answer:** ABC

**QUESTION 65**

A company is extending its successful social networking site to support the following channels: IM (instant messaging), email messaging, and text messaging/SMS. At present, the site has scaled 400 percent in one year using a standard MVC web framework. The application experiences large surges or spikes in demand and also periods of inactivity. Notification delivery to the three channels does not need to be guaranteed. Which solution extends the current architecture and best meets the company's requirements?

- A. Send the notifications inline, that is, within the normal HTTP request-response cycle
- B. Place messages on a JMS queue and use MDBs to create and send the notifications
- C. Insert the messages into a database and use POJOs to read the messages using JDBC and send the

notifications

- D. Insert the messages into a database and use entity beans to read the messages using JDBC and send the notifications

**Correct Answer:** B

**QUESTION 66**

A company has been using servlet and JSP technology for over seven years. The company's IT department is considering migrating to JSF technology. Which two drawbacks must the IT department consider during this migration? (Choose two.)

- A. JSF provides only a static set of built-in components.
- B. JSF reduces scalability because it synchronizes the creation of the form's component tree.
- C. JSF reduces scalability because it must store the view's component tree between requests.
- D. JSF reduces scalability because of the additional computational overhead of the JSF life cycle.
- E. JSF provides no built-in components forcing the development team to build everything from scratch.

**Correct Answer:** CD

**QUESTION 67**

A fashion web site has many small chunks of content that web designers cut-and-paste in many pages. Over time, inconsistencies have emerged as one designer alters the HTML of a given chunk. As an architect, one of your tasks is to introduce a mechanism to be used by the web designers to isolate these chunks and keep them consistent. Which two technologies allow web designers to isolate and reuse these chunks of HTML? (Choose two.)

- A. Tag files
- B. Simple tag handlers
- C. Classic tag handlers
- D. JSP include directive
- E. JSP forward directive
- F. JSP Expression Language

**Correct Answer:** AD

**QUESTION 68**

A hospital has a patient management system. Currently it is used by nurses who access the system using tablet computers with a browser-based interface. The application uses HttpSession objects to store state information. In phase two of the implementation, nurses will also have access through PDAs. These PDAs will use a rich client and access the business logic using a web service. What are two ways to manage conversational state in the new version of the system? (Choose two.)

- A. All clients use HttpSession objects.
- B. All clients use stateful session beans.
- C. All clients use stateless session beans.
- D. Web clients use HttpSession objects and rich clients build a session management framework.

**Correct Answer:** BD

**QUESTION 69**

A company has an existing system that is a two-tier (presentation/business logic -> database) architecture that requires the installation of code on a PC. The company wants the system to support a thin client (browser). Which three non-functional requirements will be improved as a result of separating the business logic into a third tier (presentation -> business logic -> database)? (Choose three.)

- A. Security
- B. Scalability
- C. Extensibility

- D. Performance
- E. Manageability
- F. Maintainability

**Correct Answer:** CEF

#### **QUESTION 70**

A travel company wants its application to reflect asynchronously any changes that any client might have made to information common to all clients. For example, if two clients are both viewing the same seat, when it is booked, both clients see the updated status of the seat as booked. The company is considering whether to implement the presentation using a Java Swing thick client, or a web-based client using JSP or Ajax. In which option are these technologies shown in order from best response time to worst response time?

- A. Swing thick client > web-based JSP > web-based Ajax
- B. web-based JSP > web-based Ajax > Swing thick client
- C. web-based JSP > Swing thick client > web-based Ajax
- D. Swing thick client > web-based Ajax > web-based JSP
- E. web-based Ajax > Swing thick client > web-based JSP

**Correct Answer:** D

#### **QUESTION 71**

Given the following architecture: browser clients one web server one database server You are considering modifying the architecture by replacing the single web server with a cluster of web servers that are capable of load balancing. All servers being considered have the same specification. Which two are true? (Choose two.)

- A. It would simplify security.
- B. It would improve scalability.
- C. It would improve availability.
- D. It would improve performance.
- E. It would improve maintainability.

**Correct Answer:** BC

#### **QUESTION 72**

A travel company built two prototypes of their application using two different architectures. The first was a two-tier application (where each client ran its own copy of the application against a shared database).The second was a three-tier solution: presentation, business logic, and persistence. For profiling and testing, the second prototype was deployed with each tier in its own server. The three-tier solution exhibited worse performance than the two-tier solution. Which statement explains this result?

- A. Concurrent update clients must wait for others to complete.
- B. The three-tier solution has more resources replicated across clients.
- C. The three-tier solution exhibits additional communication traffic between tiers.
- D. Concurrent read clients must wait for others to complete, thus slowing performance.

**Correct Answer:** C

#### **QUESTION 73**

A teenage fashion website has a multi-tier web application with 103 web servers, 12 middle-tier servers, and a large RDBMS server with more than enough capacity to support peak loads. You are the architect of the system, and you are concerned about reliability of the web application. Which change could you make to improve reliability?

- A. Add additional web servers
- B. Add additional database servers

- C. Add additional middle-tier servers
- D. Reduce the number of web servers
- E. Reduce the number of middle-tier servers

**Correct Answer:** B

**QUESTION 74**

What are two aspects of the Strategy pattern? (Choose two.)

- A. Provides a way to configure a class with one of many behaviors
- B. Defines an object that encapsulates how a set of objects interact
- C. Defines the skeleton of an algorithm, deferring some steps to subclasses
- D. Decouples an abstraction from its implementation so that the two can vary independently
- E. Defines a family of algorithms, encapsulates each one, and makes them interchangeable
- F. Allows subclasses to redefine certain steps of an algorithm without changing the algorithm's structure

**Correct Answer:** AE

**QUESTION 75**

You have been asked to improve the performance of a company's main stock market application. The application has been instrumented and the statistics have revealed that the client spends roughly 40 percent of its time waiting for results from the server. The API between the thick client and the server is fine-grained. Which design pattern should be investigated and prototyped to improve the network performance?

- A. Transfer Object
- B. Front Controller
- C. Service Locator
- D. Service Activator

**Correct Answer:** A

**QUESTION 76**

You have a large number of stateless session beans, entities, and JMS components in your system. What are three reasons to use the Service Locator pattern? (Choose three.)

- A. To provide a single point of control
- B. To improve performance by caching
- C. To receive asynchronous client requests and messages
- D. To reduce the number of business objects exposed to clients
- E. To simplify initial context creation, object lookup, and object recreation

**Correct Answer:** ABE

**QUESTION 77**

You are architecting a web service-based system that wraps existing remote business objects. The object interactions are complex, fine-grained, and expose proprietary business processes. Which pattern do you use to provide external access to these business objects?

- A. Adapter
- B. Session Facade
- C. Application Controller
- D. Model View Controller
- E. Chain of Responsibility

**Correct Answer:** B

**QUESTION 78**

As the architect charged with refactoring an existing system, you have determined that the interactions between objects in the existing system are too complex and that the objects are tightly coupled. Furthermore, due to the coupling, additional functionality would require the modification of many objects in the system. Which pattern can fix this problem?

- A. Facade
- B. Mediator
- C. Template
- D. Prototype
- E. Command
- F. Abstraction

**Correct Answer:** B

**QUESTION 79**

In which three situations is it best to use messaging with the Service Activator? (Choose three.)

- A. when high availability is required
- B. when you want to carry data across a tier
- C. when interactive client conversations are required
- D. when subtasks can be processed in random order
- E. when you need to listen for and process messages
- F. when you need to publish messages to multiple receivers

**Correct Answer:** DEF

**QUESTION 80**

What are two capabilities of the Decorator pattern? (Choose two.)

- A. Provides a unified interface to a subsystem
- B. Converts the interface of a class into another interface
- C. Is used when the base class is unavailable for subclassing
- D. Promotes loose coupling by keeping objects from referring to each other
- E. Modifies responsibilities to individual objects dynamically and transparently

**Correct Answer:** CE

**QUESTION 81**

You are designing a new subsystem to store and search user comments on a fashion company's web site. There are a large number of comments and they are indexed in several ways to provide fast access. The class used to add and search for comments is called CommentManager. In the prototype, the comments are stored in the file system, but they will be moved to a database as soon as it is available. Which two statements facilitate modifying the system to use a database? (Choose two.)

- A. The storage mechanism must be private to CommentManager.
- B. CommentManager should provide a JDBC driver for a file system-based database.
- C. The comments stored in CommentManager should only be accessed by CommentManager.
- D. CommentManager should be a singleton object and all the accessor methods must be static.

**Correct Answer:** AC

**QUESTION 82**

On your first day as the architect at a company, you discover that 217 servlets are making calls to various EJB components. The system is continually being enhanced and the APIs for the EJB components are changing weekly. The servlet developers are struggling to keep up with the changes. Which two statements are true? (Choose two.)

- A. This is an example of brittle code dependencies and tight coupling.
- B. Introducing a configuration and deployment system will fix the problem.
- C. Introducing an abstraction layer between the servlets and the EJB components will reduce the coupling.
- D. This problem can be corrected by converting all entity EJB components to stateless session EJB components.
- E. Having the servlets communicate with the EJB components using web services will prevent changing servlet code each time an EJB API changes.

**Correct Answer:** AC

**QUESTION 83**

What describes the design relationship between session beans and entity beans?

- A. Aggregation
- B. Separation of concerns
- C. Common reuse principle
- D. Liskov substitution principle
- E. Interface segregation principle

**Correct Answer:** B

**QUESTION 84**

Which two statements describe a design incorporating the use of interfaces and reuse by composition? (Choose two.)

- A. This design approach is sometimes referred to as "delegation."
- B. This design approach is sometimes referred to as "inheritance."
- C. This design approach is sometimes referred to as "white box reuse."
- D. This design approach is sometimes referred to as "black box reuse."
- E. This design approach is sometimes referred to as "parameterized types."

**Correct Answer:** AD

**QUESTION 85**

What are two results of high coupling? (Choose two.)

- A. Classes are easy to test.
- B. Classes are difficult to reuse.
- C. Classes hide their internal state.
- D. Classes are easy to understand in isolation.
- E. A modification in one class forces changes in other classes.

**Correct Answer:** BE

**QUESTION 86**

What are two advantages of using encapsulation in a multi-tier architecture? (Choose two.)

- A. Business components inherit behavior from the web container.
- B. Complex web container behavior can be hidden behind simple interfaces.
- C. Business logic can be modified without modifying objects that depend on it.
- D. Database records can be accessed directly from the web tier to improve scalability and performance.

**Correct Answer:** BC

**QUESTION 87**

An application must send information to a remote system using SOAP. According to the application

requirements only the SOAP headers contain sensitive information and need to be encrypted. It is a requirement that the sensitive information is encrypted during both transmission and storage. What is the best way to implement this messaging system?

- A. using WS-Security
- B. using XML over HTTPS
- C. using SOAP over HTTPS
- D. using Container-managed security

**Correct Answer:** A

#### **QUESTION 88**

A Java EE application starts a transaction, attempts a database insert using JDBC, and sends a message to an MDB over a transactional JMS Queue. Upon receipt of a message, the MDB attempts an insert in a different database using JDBC. What is NOT a possible result after attempting to commit the application's transaction?

- A. The application performs an insert and the MDB performs an insert.
- B. The application performs an insert and the MDB does NOT perform an insert.
- C. The application does NOT perform an insert and the MDB performs an insert.
- D. The application does NOT perform an insert and the MDB does NOT perform an insert.

**Correct Answer:** C

#### **QUESTION 89**

A mortgage company is building a system that allows customers to apply for a mortgage using a web application. A mortgage typically takes several days to process, so the customers receive results through an email message. When a customer completes the mortgage form, the customer must click the Submit button. When the Submit button is clicked, the application sends the mortgage data to an external system for processing and displays a JSP indicating that the application has been accepted. Because the company's core business is mortgages, the architecture must guarantee the delivery of mortgage data between the web application and the external processing system. In this situation, which technology should the web application use to send the mortgage data to the external processing system?

- A. a JMS queue
- B. XML over HTTP
- C. a synchronous web service
- D. an asynchronous web service

**Correct Answer:** A

#### **QUESTION 90**

An Enterprise Information System (EIS) needs to inform a Java EE application when an event occurs. How can the Java EE application use a Java Connector Architecture adapter to receive EIS notifications?

- A. using RMI
- B. using CORBA
- C. using an MDB
- D. using a web service

**Correct Answer:** C

#### **QUESTION 91**

You are interested in writing an XML messaging application. You would like to make methods calls to an API so you can read SOAP messages containing attachments and optionally send and receive these messages over the Internet. You are most interested in implementing XML messaging from the Java platform. Which Java API is best suited for your solution?

- A. StAX

- B. SAAJ
- C. JAXR
- D. JAXP

**Correct Answer:** B

**QUESTION 92**

Which technology should a Java EE application use to send an XML document and a PDF file to an application written in C?

- A. JMS queue
- B. XML over HTTP
- C. SOAP web service
- D. Java Connector Architecture adapter

**Correct Answer:** C

**QUESTION 93**

What results directly from failure of input validation?

- A. SQL injection
- B. forced browsing
- C. session hijacking
- D. insecure direct object reference

**Correct Answer:** A

**QUESTION 94**

Which two statements are true about the Java Cryptography Architecture (JCA)? (Choose two.)

- A. Any JCA provider must implement each supported category of algorithm.
- B. Exactly one implementation of each category of cryptographic algorithm must be provided.
- C. Implementations of cryptographic algorithms can be plugged into a JVM after it has been installed and at runtime.
- D. Categories of algorithms supported by the JCA include message digests, signatures, encryptions, key management, and random number generation.

**Correct Answer:** CD

**QUESTION 95**

Service method A(), implemented in a session bean, performs a highly sensitive operation. This operation must be available in limited ways to low-privilege users to support a low-sensitivity operation B(). Which approach addresses the requirements most securely?

- A. Mark the method A() as accessible to all necessary roles
- B. Mark the method A() as accessible to all appropriate roles, and use the programmatic security model to impose the necessary additional restrictions
- C. Mark the method A() as accessible to all appropriate roles, and use the deployment descriptor to indicate the conditions under which each role can invoke the high priority method
- D. Mark method A() as accessible only to a special role, then use a run-as element to invoke A() from B(); before making the call to A(), B() checks that conditions are appropriate for the call

**Correct Answer:** D

**QUESTION 96**

Using Java Web Start, you are going to deploy a new Java application from the IT development server to all the computers in your company's network. Which three actions can an unsigned JAR file in the Java Web Start sandbox take? (Choose three.)

- A. Persist session data
- B. Access network printers from the system
- C. Use the network to access an arbitrary file server
- D. Use the JNLP APIs to interact with the local file system
- E. Use the network to access the host from which the application was downloaded

**Correct Answer:** ADE

**QUESTION 97**

You need to restrict access to the administration screens in your web site. In which two locations can you determine whether a user is authorized to access a particular screen? (Choose two.)

- A. An EJB entity
- B. An intercepting filter
- C. A custom tag library
- D. Stored procedures
- E. A deployment descriptor
- F. Custom JavaScript in JSP

**Correct Answer:** BE

**QUESTION 98**

The web pages in a system are carefully designed so that links to security-sensitive URLs are not available in pages offered to untrusted users. Which statement is true?

- A. The system security is adequately protected by this approach.
- B. Every security-sensitive target must be additionally protected using the declarative security model.
- C. The system security is adequately protected by this approach provided only POST requests are accepted by the server.
- D. The system security is adequately protected by this approach, but security must be carefully maintained.

**Correct Answer:** B

**QUESTION 99**

A company's backend system is implemented as a set of stateless session bean components. Traditionally, it was accessed only by a web-based UI, developed in-house. Responding to strong customer demand, the company now wants to expose a programmatic way to access its system from other applications. Their customer base uses a variety of operating systems and deployment environments, with technologies ranging from C/C++ to Perl to Java. The company's customers place particular importance on the ready availability of tooling to make client development as painless as possible. Which remoting technology best meets the customer's requirements?

- A. RMI
- B. JMS
- C. web services
- D. XML over HTTP

**Correct Answer:** C

**QUESTION 100**

A company acts as a clearinghouse for credit card transactions. Certain bits of information inside individual transactions must be kept encrypted at all times to limit the potential for fraudulent transactions by untrustworthy merchants. Examples of data that must be kept confidential include the full credit card number and the CVV2 code associated with a card. Additionally, to limit the risk for tampering with transaction information, the company requires that information about a transaction travels as one data packet with the associated digital signature. You have been entrusted with developing the entry point into

the system, that is, the component that needs to accept data for an individual transaction and start processing it. Which technology best satisfies the company's requirements?

- A. Stateless session bean with RMI interface
- B. CMP entity bean generated from a database table
- C. Message-driven bean attached to a persistent JMS queue
- D. Stateless session bean with a RPC-style web service interface

**Correct Answer:** C

#### **QUESTION 101**

Over the years your company has developed a large set of EJB 2.1 components. Having upgraded its servers to an EJB 3 implementation, your company is ready to develop EJB 3 components for the first time in order to use the new development features. Which two can be implemented without upgrading an existing EJB 2.1 module to version 3, which would require repackaging and retesting the module? (Choose two.)

- A. EJB 2.1 stateless session bean using an EJB 3 interceptor
- B. EJB 3 stateless session bean invoking an EJB 2.1 stateless session bean
- C. EJB 3 stateless session bean replacing an existing EJB 2.1 stateless session bean
- D. EJB 3 stateless session bean sharing a timer with a EJB 2.1 stateless session bean

**Correct Answer:** BC

#### **QUESTION 102**

You have been asked to advise a client on the suitable architecture to use in the construction of their next generation hotel room reservation system. The primary requirements for the business tier are as follows: ease of development, separation of the persistence tier from the business logic tier, extensibility, performance, scalability, security, and transaction management. State is maintained in the presentation tier. What is the most suitable high-level architecture for the business tier that most closely meets the stated requirements?

- A. stateful session beans accessing the persistence tier directly
- B. stateless session beans accessing the persistence tier directly
- C. Plain Old Java Objects (POJOs) accessing the persistence tier directly
- D. stateful session beans accessing the persistence tier through a DAO layer
- E. stateless session beans accessing the persistence tier through a DAO layer

**Correct Answer:** E

#### **QUESTION 103**

Which three statements are guaranteed to be true about an ORM-centric approach to data persistence, regardless of the specific implementation chosen? (Choose three.)

- A. ORM implementations can be supported by tool vendors to improve developer productivity.
- B. ORM implementations typically trade off a small decrease in raw performance in return for greatly improved developer productivity.
- C. ORM implementations can optimize persistence strategies to scale in both single (one server) and clustered (multiple servers) scenarios.
- D. ORM implementations provide the same level of data access and manipulation semantics, as provided by accessing the underlying datastore directly.
- E. ORM frameworks are verifiably correct in applying ACID (atomicity, consistency, isolation, durability) to database access, which is an advantage over JDBC.

**Correct Answer:** ABC

#### **QUESTION 104**

Your company is starting its first project using EJB 3. The developers are familiar with developing web applications using servlets and MVC web frameworks. Which argument supports the decision of using EJB

3 on the project?

- A. EJB 3 session beans are POJO classes.
- B. EJB 3 session beans use the same threading model that servlets use.
- C. Database resources are available to every EJB 3 session bean without any developer intervention.
- D. EJB 3 session beans can be defined directly inside a WAR file, without requiring a separate EJB JAR file.

**Correct Answer:** A

#### **QUESTION 105**

A company has been using the database YourTables for many years. Recently, it started considering a migration to the database Pregres, which uses a different SQL dialect. Moreover, the SQL engines in YourTables and Pregres have significant differences in performance when executing the same SQL queries in the presence of advanced SQL features. Which two persistence approaches offer the easiest migration from YourTables to Pregres for this company? (Choose two.)

- A. JPA
- B. JDBC
- C. CMP entity bean
- D. BMP entity bean using JDBC
- E. YourTables high-performance driver
- F. JDBC rowset with XML serialization

**Correct Answer:** AC

#### **QUESTION 106**

WebLizard is using an application consisting of a single WAR file that exposes a number of web service endpoints using JAX-WS. What security-related information about an authenticated client is available from inside the web service endpoint implementation class?

- A. only its role
- B. only its principal
- C. both its role and its principal
- D. neither its role nor its principal

**Correct Answer:** C

#### **QUESTION 107**

Which three measurements are necessary to determine the availability of an application? (Choose three.)

- A. Total downtime
- B. Average response time
- C. Mean time between failure
- D. Application startup timestamp
- E. Application shutdown timestamp

**Correct Answer:** ADE

#### **QUESTION 108**

What are three web service support features in Java EE? (Choose three.)

- A. Generating a web service from an MDB
- B. Generating a Java class from a WSDL file
- C. Associating a Java class with a WSDL file
- D. Associating a JMS queue with a WSDL file
- E. Generating a web service from a stateful session bean

F. Generating a web service from a stateless session bean

**Correct Answer:** BCF

**QUESTION 109**

A company has a legacy system that it is going to use Java EE technology to re-engineer. The legacy solution consists of active server pages and a relational database. The company is interested in changing DB vendors in the future and this requirement is key to moving forward. This is a web-based transactional sales system. The company will keep the relational database schema because it still meets business requirements and will not require re-engineering. What is the best solution?

- A. JSP, JDBC only
- B. JSP, servlets, JDBC only
- C. JSF, servlets, JPA, EJB3
- D. JSF, servlets, DAO, JDBC

**Correct Answer:** C

**QUESTION 110**

Your web site's daily active user sessions have greatly increased. This is degrading performance because your application container is using all of its resources to manage the volume of active sessions. You need to deploy in a cluster to scale the application. You have been setting Java beans into your HttpSession. Which interface should you implement when re-factoring your beans to successfully deploy in a cluster supporting session fail-over?

- A. BeanContext
- B. Serializable
- C. Cloneable
- D. Accessible
- E. Comparable

**Correct Answer:** B

**QUESTION 111**

You work for a small IT shop. The developers are responsible for deploying production applications. All of the connection and resource parameters are distributed in the Java source code. Your IT shop has a limited infrastructure so there have been few issues with pushing production applications. Your IT shop has been purchased and is now reselling Java products to customers. You now have dedicated development, testing, staging, and production environments. A new requirement states that these applications must support rapid deployment to each environment. What is the best solution?

- A. refactor the Java application to use JNDI names and resource references
- B. identify a build engineer that has the responsibility of modifying the constant class for each deployment
- C. set your connection properties in a constants class to consolidate connection and resource parameters
- D. identify the environment parameters for connection and resources and make them readily available to developers

**Correct Answer:** A

**QUESTION 112**

What is a purpose of the Web Services Metadata for the Java Platform specification (JSR-181)?

- A. to simplify development of web services from JSPs
- B. to simplify development of web services from POJOs
- C. to simplify development of web services from JMS destinations
- D. to simplify development of web services from MDB components

**Correct Answer:** B

**QUESTION 113**

You are architecting a new web-deployed portfolio management application. The current system used by portfolio managers is a desktop application. Ease of migration for the portfolio managers is an important consideration. Once the users have set up and approved a portfolio, you must create a secure TCP connection to a fund trading system to execute buy and sell orders. Which two technologies are most appropriate for this system? (Choose two.)

- A. JSF
- B. JMS
- C. JAAS
- D. JSSE
- E. JAX-WS

**Correct Answer:** AD

**QUESTION 114**

A travel company wants to outsource the credit card processing functionality needed by their online flight reservations system. The company wants their application to support the ability to swap third-party vendors without impacting their application's business model. The credit card processing operation must participate in transactions, to ensure business constraints are obeyed. Which Java EE technology would most easily support this requirement?

- A. JMS
- B. UDDI
- C. Web Services
- D. Java Connector Architecture (JCA)

**Correct Answer:** D

**QUESTION 115**

Which design pattern is useful for hiding the construction and implementation details of an object?

- A. Flyweight
- B. Singleton
- C. Abstract Factory
- D. Chain of Command

**Correct Answer:** C

**QUESTION 116**

You are building a web application that must integrate to a content management system (CMS). Your company currently has a homegrown CMS, but management is considering purchasing a new CMS. Unfortunately, you have little confidence that their latest choice, BigCMS, is likely to be the final decision. After analyzing the interface to BigCMS, you find that its interface is different from the homegrown CMS. Furthermore, you suspect that any other third-party CMS will have yet another interface. What is the simplest pattern that would isolate your web application from the interface of the CMS tool?

- A. Proxy
- B. Bridge
- C. Adapter
- D. Service Locator
- E. Business Delegate

**Correct Answer:** C

**QUESTION 117**

What is a benefit of using the Transfer Object pattern?

- A. Reduces requests across the network
- B. Avoids the overhead of using EJB finder methods for large searches
- C. Separates the business state and related behavior from the rest of the application
- D. Implements parent-child relationships efficiently when implementing Business Objects

**Correct Answer:** A

**QUESTION 118**

A company created its own MVC-like framework in the years before Struts and JSF. Unfortunately, the company's Front Controller has become bloated with too many features including fine-grained authorization, view dispatching, and business logic invocation. Which three patterns could be applied to reduce the complexity of this Front Controller? (Choose three.)

- A. Mediator
- B. Command
- C. View Helper
- D. Intercepting Filter
- E. Composite View
- F. Application Controller

**Correct Answer:** BDF

**QUESTION 119**

What are two advantages of the Business Delegate pattern? (Choose two.)

- A. Increases the scalability of remote services
- B. Decouples presentation logic from business logic
- C. Avoids unnecessary invocation of remote services
- D. Hides underlying communication details of the service
- E. Enables transparent persistent storage of the business entity

**Correct Answer:** CD

**QUESTION 120**

What are two advantages of a thin client, three-tier architecture over a thick client, two-tier architecture? (Choose two.)

- A. It is more secure.
- B. It is more reliable.
- C. It is easier to maintain.
- D. It makes it easier to manage the application deployment.

**Correct Answer:** CD

**QUESTION 121**

Which is NOT a valid reason to separate presentation from business logic?

- A. Improved scalability
- B. Improved performance
- C. Separation of concerns
- D. Improved maintainability

**Correct Answer:** B

**QUESTION 122**

A company is considering re-architecting their application from a two-tier to a three-tier architecture. To see what impact the new architecture would have on their non-functional requirements (NFRs), they

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