1. What does the EJB specification architecture define?

|  |  |
| --- | --- |
| A. | Transactional components |
| B. | Distributed object components |
| C. | Server-side components |
| D. | **All of the above** |

2. What executes EJB components?

|  |  |
| --- | --- |
| A. | A web server |
| B. | An application server |
| C. | **An EJB container** |
| D. | A database server |

3. What do enterprise beans use to communicate with the EJB container to get runtime context information?

|  |  |
| --- | --- |
| A. | **The javax.ejb.EJBContext provided by the container** |
| B. | A JNDI ENC context |
| C. | A javax.ejb.EJBHome object provided by the container |
| D. | A javax.ejb.EJBMetaData object provided by the container |

4. Through what interface does an application create, find, and remove enterprise beans?

|  |  |
| --- | --- |
| A. | java.rmi.Remote |
| B. | **javax.ejb.EJBHome** |
| C. | javax.ejb.EJBObject |
| D. | javax.ejb.EntityBean |

5. What type of enterprise bean is used to embody business objects?

|  |  |
| --- | --- |
| A. | javax.ejb.EnterpriseBean |
| B. | java.rmi.Remote |
| C. | javax.ejb.SessionBean |
| D. | **javax.ejb.EntityBean** |

6. What type of enterprise bean is used to embody application processing state information?

|  |  |
| --- | --- |
| A. | javax.ejb.EnterpriseBean |
| B. | javax.rmi.Remote |
| C. | **javax.ejb.SessionBean** |
| D. | javax.ejb.EntityBean |

7. What interface must the enterprise bean implement so that an application can invoke its operations?

|  |  |
| --- | --- |
| A. | javax.ejb.EntityBean |
| B. | javax.ejb.EJBHome |
| C. | **javax.ejb.EJBObject** |
| D. | javax.rmi.Remote |

8. At what point, precisely, in the life-cycle is a container-managed entity bean considered created?

|  |  |
| --- | --- |
| A. | Immediately prior to the execution of its ejbCreate() method |
| B. | **Immediately after the execution of its ejbCreate() method** |
| C. | After the CMP bean's data has been committed to the underlying persistent datastore |
| D. | During the execution of its ejbPostCreate() method |

9. What distinguishes a bean-managed persistent (BMP) enterprise bean from a container-managed persistent (CMP) enterprise bean?

|  |  |
| --- | --- |
| A. | A BMP bean must implement the ejbLoad() and ejbStore() methods |
| B. | A BMP bean can implement persistence to custom datastores such as legacy systems |
| C. | A BMP bean is responsible for managing its own persistence to a persistent datastore |
| D. | **All of the above** |

10. What is a deployment descriptor?

|  |  |
| --- | --- |
| **A.** | **An XML file format used by the container to learn about the attributes of a bean, such as transactional characteristics and access control** |
| B. | A method for transporting enterprise beans back and forth between systems |
| C. | An XML file used by enterprise bean clients to learn about the attributes of a bean, such as access control and transactional characteristics. |
| D. | A format for bundling enterprise beans for delivery to customers |

1. A local home or component interface for an EJB can only be used by:

|  |  |
| --- | --- |
| A. | Another EJB |
| B. | A web-tier client |
| C. | A business logic-tier client |
| D. | **A client located in the same JavaTM Virtual Machine (JVM)**[**1**](http://java.sun.com/developer/Quizzes/ejb/professionalejb.html#jvm) |

2. Local interfaces have declarative:

|  |  |
| --- | --- |
| A. | **Transactions and security** |
| B. | Transactions only |
| C. | Security only |
| D. | Neither, for performance reasons |

3. An entity in a unidirectional relationship that is the target of a role with a cmr field:

|  |  |
| --- | --- |
| A. | **Must have local home and component interfaces** |
| B. | Must have remote home and compnent interfaces |
| C. | May have either local or remote interfaces, but not both |
| D. | May have any combination of local or remote interfaces |

4. An entity in a unidirectional relationship that is the source of a role with a cmr field:

|  |  |
| --- | --- |
| A. | Must have local home and component interfaces |
| B. | Must have remote home and compnent interfaces |
| C. | May have either local or remote interfaces, but not both |
| D. | **May have any combination of local or remote interfaces** |

5. The bean class for an entity that uses the EJB 2.0 model of container-managed persistence:

|  |  |
| --- | --- |
| A. | Must implement java.io.Serializable |
| B. | Is only used for better integration with popular IDEs |
| C. | **Must be abstract** |
| D. | Must not be abstract |

6. The legal collection class type(s) to represent a many-valued relationship are:

|  |  |
| --- | --- |
| A. | java.util.Collection only |
| B. | **java.util.Collection and java.util.Set** |
| C. | java.util.List, java.util.Set, and java.util.Map |
| D. | java.util.Map only |

7. If you call a "set" abstract accessor for a cmr field, it can:

|  |  |
| --- | --- |
| A. | Throw a java.sql.SQLException |
| B. | Automatically cascade delete an entity |
| C. | **Automatically change the value of cmr fields in up to three additional beans** |
| D. | You can never call an abstract accessor |

8. You can only specify cascade-delete on a relationship role if:

|  |  |
| --- | --- |
| A. | The role has a multiplicity of 'One' |
| B. | **The other role in the relationship has a multiplicity of 'One'** |
| C. | The role has a multiplicity of 'Many' |
| D. | The other role in the relationship does not already use cascade-delete |

9. If an entity has a relationship to another entity, it must:

|  |  |
| --- | --- |
| A. | Declare that entity reference in the deployment descriptor using the <ejb-ref> element |
| B. | Declare that entity reference in the deployment descriptor using the <ejb-local-ref> element |
| C. | Declare that entity reference in the deployment descriptor using the <ejb-link> element |
| D. | **No entity reference declaration is required** |

10. The bean developer must be cautious when iterating over a relationship collection class, because:

|  |  |
| --- | --- |
| A. | Concurrent transactions can modify the values |
| B. | Changes to its contents can violate foreign key constraints in the database |
| C. | **Changes to its contents can trigger a referential integrity change to the collection class itself** |
| D. | The container developer is not required to support the Iterator class's next method |

11. The EJB 2.0 specification introduces ejbSelect methods. These are:

|  |  |
| --- | --- |
| A. | **Abstract methods in the bean class that call a query** |
| B. | The local home interface equivalent of a finder method |
| C. | Methods in the component interface that call a query |
| D. | A method that allows the bean developer to choose between a local and remote interface |

12. The new EJB Query Language (EJB-QL) has three clauses: select, from, and where. Of these:

|  |  |
| --- | --- |
| A. | Only the from clause is mandatory |
| B. | **Only the select and from clauses are mandatory** |
| C. | Only the where clause is mandatory. |
| D. | All clauses are mandatory. |

13. In EJB-QL, date and time literals are represented by:

|  |  |
| --- | --- |
| A. | A string in the format MM-DD-YYYY HH:MM:SS +MILLISECONDS |
| B. | A string in a locale-determined format |
| C. | A string in a vendor specific format |
| D. | **A long value that represents a millisecond count, such as 979837813000** |

14. The type of interface (local or remote) returned from an ejbSelect statement can be:

|  |  |
| --- | --- |
| A. | Specified in the query |
| B. | **Specified in the deployment descriptor** |
| C. | Specified by the client |
| D. | Is always a local interface |

15. The functions available for use in the where clause of an EJB-QL query are:

|  |  |
| --- | --- |
| A. | All functions defined in standard SQL |
| B. | All functions defined by the target database |
| C. | All functions with defined escapes in JDBC 2.0 |
| D. | **A limited subset of the functions defined for JDBC 2.0** |

**Enterprise JavaBeans 3.0 Simplified API Quiz**

1. How many Local business interfaces can one EJB 3.0 Session bean have?

|  |  |
| --- | --- |
| A. | 0 |
| B. | 1 |
| C. | 2 |
| **D.** | **As many as it wants.** |

2. Given a Session bean class with the following annotations:

private @EJB(name="fooejbref") Foo foo;

private @Resource SessionContext sessionCtx;

Which of the following could be used to retrieve the ejb dependency declared above?

|  |  |
| --- | --- |
| A. | (Foo) sessionCtx.lookup("foo"); |
| B. | (Foo) sessionCtx.lookup("fooejbref"); |
| C. | InitialContext ic = new InitialContext(); (Foo) ic.lookup("java:comp/env/foo"); |
| D. | InitialContext ic = new InitialContext(); (Foo) ic.lookup("java:comp/env/fooejbref"); |
| E | A and C |
| **F** | **B and D** |

3. Which are valid declarations for a Local business interface?

public interface Foo1 {

public void foo();

}

import javax.ejb.Local;

@Local

public interface Foo2 {

public void foo();

}

import javax.ejb.\*;

@Local

public interface Foo3 extends EJBLocalObject {

public void foo();

}

import javax.ejb.\*;

@Local

@Remote

public interface Foo4 {

public void foo();

}

|  |  |
| --- | --- |
| A. | Foo1, Foo2, Foo3 |
| B. | All of the above |
| C. | Foo2 |
| **D.** | **Foo1, Foo2** |

4. An interceptor class may contain:

|  |  |
| --- | --- |
| A. | AroundInvoke methods. |
| B. | Lifecycle Callback methods. |
| **C.** | **A and B** |
| D. | None of the above. |

5. Given the following @EJB declarations:

@EJB(beanName="foo") Foo ref1;

@EJB(beanName="foo") Foo ref2;

@EJB(beanName="bar") Bar ref3;

@EJB(beanName="bar") Bar ref4;

Where ejb "foo" is a Stateful Session bean with Local business interface Foo and ejb "bar" is a Stateless Session bean with Local business interface Bar

After injection has completed, what would be the output of the following code?

System.out.println(ref1.equals(ref2));

System.out.println(ref3.equals(ref4));

|  |  |
| --- | --- |
| A. | false false |
| **B.** | **false true** |
| C. | true false |
| D. | true true |

6. Which is a valid declaration of a PostConstruct method in a Session bean class?

public @PostConstruct void postConstruct1() {}

private @PostConstruct void postConstruct2() {}

|  |  |
| --- | --- |
| A. | postConstruct1 |
| B. | postConstruct2 |
| **C.** | **A and B** |
| D. | None of the above. |

7. Given the following Message Driven Bean declaration:

@MessageDriven

public class FooMsgBean implements javax.jms.MessageListener {

public void onMessage(Message m) { ... }

}

Assuming it is deployed without an ejb-jar.xml, which best describes the transactional nature of the onMessage method ?

|  |  |
| --- | --- |
| A. | The bean has bean-managed transactions. It is the bean developer's responsibility to demarcate transactions within onMessage(). |
| B. | The bean has container-managed transactions and the onMessage method has tx attribute NOT\_SUPPORTED. |
| C. | **The bean has container-managed transactions and the onMessage method has tx attribute REQUIRED.** |
| D. | The bean has container-managed transactions and the onMessage method has tx attribute REQUIRES\_NEW. |

8. Given the following Remote business interface:

@Remote

public interface Hello {

public String hello();

}

Which exceptions can be received by the caller as a result of invoking the hello() method?

|  |  |
| --- | --- |
| A. | **javax.ejb.EJBException** |
| B. | java.rmi.RemoteException |
| C. | A and B |
| D. | None of the above. |

9. In a Stateful Session bean, dependency injection takes place:

|  |  |
| --- | --- |
| A. | After the @PostConstruct lifecycle callback is invoked on the bean instance. |
| B. | **Before any business methods or lifecycle callback methods are invoked on the bean instance.** |
| C. | After the ejbCreate method is called on the bean instance. |
| D. | Stateful Session beans do not support dependency injection. |

10. Which of the following results in the removal of an EJB 3.0 Stateful Session bean?

|  |  |
| --- | --- |
| A. | Calling a business method that has been annotated with @Remove. |
| B. | Calling remove() on an EJBObject created from the bean's Adapted Home interface. |
| C. | Throwing a runtime exception from one of the bean's business methods. |
| D. | **All of the above.** |

A Vector is declared as follows. What happens if the code tried to add 6 th element to this Vector  
new vector(5,10)  
(a) The element will be successfully added  
(b) ArrayIndexOutOfBounds Exception  
(c) The Vector allocates space to accommodate up to 15 elements  
ANS: (a) and (c)  
EXPLANATION: The 1 st argument in the constructor is the initial size of Vector and the 2 nd argument in the constructor is the growth in size (for each allocation)  
This Vector is created with 5 elements and when an extra element (6 th one) is tried to be added, the vector grows in size by 10.

Which is the data structure used to store sorted map elements ?  
(a) HashSet  
(b) Hashmap  
(c) Map  
(d) TreeMap  
ANS: I think the answer is (d)

SessionListerner defines following methods  
(a) sessionCreated, sessionReplaced  
(b) sessionCreated, sessionDestroyed  
(c) sessionDestroyed, sessionReplaced  
ANS:

Which of the following is true ?  
(a) Stateless session beans doesn’t preserve any state across method calls  
(b) Stateful session beans can be accesses by multiple users at the same time  
ANS: (a)

Stateful Session beans contain  
(a) Home Interface  
(b) Remote Interface  
(c) Bean Class  
(d) All  
ANS: (d)

What is the Life Cycle of Session bean ?

Stateless session bean is instantiated by  
(a) newInstance()  
(b) create()  
ANS:

A servlet implements Single Thread model  
public class BasicServlet extends HttpServlet implements SingleThreadModel {

int number = 0;  
public void service(HttpServletRequest req, HttpServletResponse res) {  
}  
}  
Which is thread safe ?  
(a) Only the variable num  
(b) Only the HttpServletRequest object req  
(c) Both the variable num & the HttpServletRequest object req

If you are trying to call an EJB that is timed out, what will happen ?  
(a) Exception  
(b) It gets executed

A method is defined in a class as :  
void processUser(int i) { }  
If this method is overriden in a sub class,\_  
(a) the new method should return int  
(b) the new method can return any type of values  
(c) the argument list of new method should exactly match that of overriden method  
(d) the return type of new method should exactly match that of overriden method  
ANS: (c) & (d)

In a JSP page, a statement is declared as follows:

And below that, an \_expression appears as:

What is the output of this \_expression,  
(a) The Name of person is: Chetana  
(b) The Name of person is:  
(c) The Name of person is: null  
(d) None  
ANS: (a) Java Language Multiple Choice Questions for technical written test for IT, computer science – cse, electronics – ece b.tech branch engineers / freshers /it graduates

Without the use of Cartesian product, how many joining conditions are required to join 4 tables ?  
(a) 1  
(b) 2  
(c) 3  
(d) 4  
ANS:

What is the output of following piece of code ?  
int x = 2;  
switch (x) {  
case 1:System.out.println(“1″);  
case 2:  
case 3:System.out.println(“3″);  
case 4:  
case 5:System.out.println(“5″);  
}  
(a) No output  
(b) 3 and 5  
(c) 1, 3 and 5  
(d) 3  
ANS: (b)

In the init(ServletConfig) method of Servlet life cycle, what method can be used to access the ServletConfig object ?  
(a) getServletInfo()  
(b) getInitParameters()  
(c) getServletConfig()  
ANS: (c)

The Page directive in JSP is defined as follows:

Then which of the implicit objects won’t be available ?  
(a) session, request  
(b) exception, request  
(c) exception, config  
(d) session, exception  
ANS: I think answer is (d)

ejbCreate() method of CMP bean returns  
(a) null  
(b) Primary Key class  
(c) Home Object  
(d) Remote Object  
ANS: (a)  
Explanation: ejbCreate() method of BMP bean returns the Primary Key, where as ejbCreate() method of CMP bean returns null.

How can a EJB pass it’s reference to another EJB ?

Which of the following is correct syntax for an Abstract class ?  
(a) abstract double area() { }  
(b) abstract double area()  
(c) abstract double area();  
(d) abstract double area(); { }  
ANS: (c)

A JSP page is opened in a particular Session. A button is present in that JSP page onclick of which a new Window gets opened.  
(a) The Session is not valid in the new Window  
(b) The Session is valid in the new Window  
ANS: I think the answer is (b)

Which of the following JSP expressions are valid ?  
(a)  
(b)  
(c)  
(d)  
ANS:

A class can be converted to a thread by implementing the interface \_\_\_  
(a) Thread  
(b) Runnable  
ANS: (b)

What is the output of following block of program ?  
boolean var = false;  
if(var = true) {  
System.out.println(“TRUE”);  
} else {  
System.out.println(“FALSE”);  
}

(a) TRUE  
(b) FALSE  
(c) Compilation Error  
(d) Run-time Error  
ANS: (a)  
EXPLANATION: The code compiles and runs fine and the ‘if’ test succeeds because ‘var’ is set to ‘true’ (rather than tested for ‘true’) in the ‘if’ argument.

Which is not allowed in EJB programming ?  
(a) Thread Management  
(b) Transient Fields  
(c) Listening on a Socket  
ANS:

What happens if Database Updation code is written in ejbPassivate() method and if this method is called ?  
(a) Exception is thrown  
(b) Successfully executes the Database Updation code  
(c) Compilation error occurs indicating that Database Updation code should not be written in ejbPassivate()  
(d) ejbStore() method is called  
ANS: