1. Which method will get executed on clicking the submit button of the following code?

```html
<input type="text" name="name">
<form method="GET" action="/TestServlet">
  <input type="submit" value="Submit">
</form>
```

Options:

a) PUT
b) GET - **Correct Answer**
c) POST
d) OPTION

2. Following is the code for `doGet()` and `doPost()` method of `TestServlet`:

```java
public void doGet(HttpServletRequest req, HttpServletResponse res) {
    try {
        PrintWriter pw = res.getWriter();
        pw.println("<h2> Hello World </h2>");
    } catch(Exception e) {
        e.printStackTrace();
    }
}

public void doPost(HttpServletRequest req, HttpServletResponse res) {
    doGet(req, res);
}
```

Which one of the following statements is correct?

Options:

1. This will only work for HTTP GET requests.
2. This will only work for HTTP POST requests.
3. This will work for HTTP GET as well as POST requests - **Incorrect Answer** (Correct Answer: **4. It will throw an exception at runtime, as you cannot call doGet() from doPost()**).
4. It will throw an exception at runtime, as you cannot call `doGet()` from `doPost()`.
5. It'll throw an exception at runtime only if a POST request is sent to it.

3. Which of the following is the factory class that is used to get the Session objects?

Options:

1. Hibernate ConnectionFactory
2. Hibernate SessionFactory - **Correct Answer**
3. Hibernate Configuration
4. Hibernate Connection

4. Clause can appear only once at the end of the query containing compound SELECT statements.

Options:

1. WHERE - **Correct Answer**
2. ORDER
3. ORDER BY
4. GROUP BY

5. Which operator is used to check for the existence of a record?

Options:

1. NOT NULL
2. AS
3. EXISTS - **Correct Answer**
4. IN

6. The following SQL query creates an alias for the combined fields `CustomerName`, `Address`, `City`, and `Country`.

```sql
SELECT CustomerName, Address || City || Country AS Address FROM Customers;
```

Options:

1. Alias named address column will be created and under this, address, city, and country will be printed as a combined statement.
2. Alias named Address will be created for Country column.
3. Alias named address column will be created and under this, all customerName, address, city, and country will be printed.
4. Alias named Address will be created for Address columns - **Correct Answer**

7. Which one of the following is a valid tag for configuring a listener class?

Options:

1. `<contextlistener> <listener-class> mypackage.someListener </listener-class> </contextlistener>`
2. `<listener> <listener-class> mypackage.someListener </listener-class> </listener>`
3. `<context-listener> <listener-class> mypackage.someListener </listener-class> </context-listener>`
4. `<listener> <class> mypackage.someListener </class> </listener>` - **Correct Answer**

8. Which is the type of statement that the `COMMIT` command belongs to?

Options:

1. TCL - **Correct Answer**
2. ODDL
3. DML
4. DCL

9. Select the property name to be set in the Hibernate configuration file to make Hibernate create the database table.

Options:

1. hibernate.hbm2ddl.auto - **Correct Answer**
2. hibernate.createtables.auto
3. hibernate.createtables
4. hibernate.hbm2ddl

10. Which one of the following is a correct way to pass a parameter equivalent to the query string `user=rani` at request time to an included component?

Options:

1. `<jsp include page="other.jsp"> <jsp param paramName="user" paramValue="rani" /> </jsp include>`
2. `<jsp include page="other.jsp"> <jsp param name="rani" value="user" /> </jsp include>`
3. `<jsp include page="other.jsp"> <jsp param name="user" value="rani" /> </jsp include>` - **Correct Answer**
4. `<jsp include page="other.jsp"> <jsp param param="user" value="rani"/> </jsp include>`

11. How do we inject a bean into a field by its name?

Options:

1. By using @Configuration annotation.
2. By using only @Qualifier annotation.
3. By using both the @Autowired and the @Qualifier spring annotations. - **Correct Answer**
4. Using the @Autowired annotation and naming the field with the bean name.

12. View the following SQL statement: `TRUNCATE TABLE emp`.

Which of the following about the execution of this statement is true?

Options:

1. All rows will be removed from the EMP table, as well as any related rows that are part of a referential integrity constraint.
2. All rows will be removed from the EMP table and will require a `ROLLBACK` statement to recover them.
3. All rows will be removed from the EMP table and the table will be dropped.
4. All rows will be removed from the EMP table, but the table structure will remain intact. - **Correct Answer**

13. Which are the modules of the core container?

Options:

1. Beans, Core, Context, SpEL - **Correct Answer**
2. Core, Context, ORM, Web
3. Core, Context, Aspects, Test
4. Bean, Core, Context, Test

14. To which is the code below equivalent?

```java
package com.foo;
@Configuration
public class AcmeConfig {
  @Bean
  public AcmeService acmeService() {
    return new AcmeServiceImpl();
  }
}
```

Options:

1. `<beans> <bean id="acmeConfig" class="com.AcmeService"/> </beans>`
2. `<beans> <bean id="acmeService" class="com.foo.AcmeServiceImpl"/> </beans>` - **Correct Answer**
3. `<beans> <bean id="acmeConfig" class="AcmeServiceImpl"/> </beans>`
4. `<beans> <bean id="acmeConfig" className="com.foo.AcmeServiceImpl"/> </beans>`

15. What statement best characterizes the Single Table strategy in Hibernate?

Options:

1. It is a mapping inheritance strategy.
2. Subclasses do not need to be pointed to the common table.
3. Captures partial elements of the class hierarchy.
4. Contains all the columns for a few subclasses. - **Correct Answer**

16. Given a JSP page that is requested with the query string: `?username=yogesh`.

Which one of the following lines of code will result in the output of `yogesh`?

Options:

1. `$[requestScope["username"]]`
2. `${requestScope.username}`
3. `$(param.username}` - **Correct Answer**
4. `${parameter.username}`

17. Which one of the following `HttpServletResponse` methods is used to redirect an HTTP request to another URL?

Options:

1. `sendURL()`
2. `redirectURL()`
3. `redirectHttp()`
4. `sendRedirect()` - **Correct Answer**

18. The following code contains a logic error. What will happen on the first request?

```html
<html>
<body>
  <%
    Integer count = (Integer) request.getSession(false).getAttribute("count");
    if (count == null) {
        out.println(count);
    } else {
        request.getSession(false).setAttribute("count", new Integer(1));
    }
  %>
  Hello!
</body>
</html>
```

Options:

1. It will print Hello!
2. It will print Hello and will set the `count` attribute in the session.
3. It will throw a `NullPointerException` at request time.
4. It will not compile. - **Correct Answer**

19. Which element within the `id` element is used to generate the primary key values automatically?

Options:

1. `<generator>` - **Correct Answer**
2. `<key>`
3. `<primary-key>`
4. `<index>`

20. Which one of the following represents the correct syntax for using the include directive in JSP?

Options:

1. `<%@ include file="menu.jsp" %>` - **Correct Answer**
2. `<jsp include page="menu.jsp" />`
3. `<jsp include file="menu.jsp" />`
4. `<jsp include path="menu.jsp"/>`

21. Which of the following statements are not true for the Spring framework?

Options:

1. Spring framework is a lightweight framework.
2. Spring framework is not open source - **Correct Answer**
3. Spring provides Dependency Injection.
4

. Spring targets only Java web application development.

22. Which of the following Servlet methods is used to release the resources like database connections, etc.?

Options:

1. `init()`
2. `service()`
3. `destroy()` - **Correct Answer**
4. `getServletConfig()`

23. Which of the following is used to get a physical connection with the database?

Options:

1. Hibernate Session - **Correct Answer**
2. Hibernate SessionFactory
3. Hibernate Configuration
4. Hibernate Connection

24. Root tag for bean configuration XML file is:

Options:

1. `<bean-config>`
2. `<app-config>`
3. `<beans>` - **Correct Answer**
4. `<bean-def>`

25. SELECT `TO_CHAR(TO_DATE('24#12#15','DD/MM/YY'),'DD/MM/YY')` FROM DUAL;

What will be the result of executing this statement?

Options:

1. The statement will produce an error message because the punctuation characters in the string do not match those used in the format. - **Correct Answer**
2. The statement will execute successfully and produce a character value in the format `DD/MM/YY`.
3. The statement will produce an error message because `TO_CHAR` and `TO_DATE` cannot be used in the same statement.

26. Which one of the following will be the correct output of the following code?

```html
<html>
<body>
  <% int x=5; %>
  <%! int x=7; %>
  x = <%=x%>, <%=this.x%>
</body>
```

</html>
```

**Options:**

1. `x=3,5`
2. `x=3,7`
3. `x=5,3`
4. `x=5,7` - **Correct Answer**

### 27. You want to display the departments that have an average monthly salary greater than $8,000. You also want this information displayed by the department. You execute the following SQL statement:

```sql
SELECT department_id, AVG(salary)
WHERE AVG(salary) > 8000
GROUP BY department_id;
```

What are the results of executing this SQL statement?

Options:

1. The statement will execute correctly and give the desired results.
2. The statement will not execute correctly because you cannot use a `WHERE` clause to restrict groups. - **Correct Answer**
3. The statement will not execute correctly because the `SUM(salary)` function is required.
4. The statement will not execute correctly because the `GROUP BY` clause needs to precede the `WHERE` clause.

28. What are the major advantages of Hibernate Framework?

Options:

1. Performance of Hibernate is very fast.
2. Helps in generating database-independent queries.
3. Provides facilities to automatically create a table.
4. It is licensed and heavyweight.

29. Which one of the following is the proper way to include the `java.util` package in your JSP page?

Options:

1. `<page:import package="java.util">`
2. `<%@ page import="java.util.*" %>` - **Correct Answer**
3. `<%= import java.util.*: %>`
4. `<%@ import class="java.util.*" %>`

30. The `page` directive is used to convey information about the page to the JSP container. Which two of the following are legal syntax of the page directive?

Options:

1. `<% page info="test page" %>`
2. `<%@ page info="test page" session="false" %>`
3. `<%@ page session="true" %>`
4. `<%@ page isErrorPage="errorPage.jsp" %>`

31. Which of the following statements are true about filters?

Options:

1. The `doFilter` method is always invoked by the container, never within a programmer's code.
2. A filter can be invoked either through being declared in `WEB.xml` or explicitly within a programmer's code.
3. Filters are associated with a URL via the `filter-mapping` tag.
4. Filters can be initialized via the `filter-init-param` tag in the deployment descriptor.
5. Filters can be initialized via the `init-param` tag in the deployment descriptor.

32. The root element, which contains all the `<class>` elements in the Hibernate mapping file.

Options:

1. `<hibernate-mapping>` - **Correct Answer**
2. `<config>`
3. `<hibernate-config>`
4. `<mapping>`

33. Choose one statement from the following that best describes the relationship between JSP and Servlets.

Options:

1. Servlets are built on JSP semantics and all servlets are compiled to JSP pages for runtime execution.
2. JSP and servlets are unrelated technologies.
3. Servlets and JSP are competing technologies for handling web requests.
4. JSPs are built on servlet semantics and all JSPs are compiled to servlets for runtime execution. - **Correct Answer**

34. Which one of the following options would initialize a stream for sending text to a browser?

Options:

A) `OutputReader out = response.getStream();`
B) `OutputStream out = response.getStream();`
C) `PrintWriter out = response.getWriter();` - **Correct Answer**
D) `ServletWriter out = response.getWriterStream();`
E) `StreamWriter out = response.getStreamWriter();`

35. Which one of the following interfaces or classes is used to retrieve the session associated with a user?

Options:

1. GenericServlet
2. ServletConfig
3. ServletContext
4. HttpServlet
5. HttpServletRequest - **Correct Answer**

36. Which of the following will enable Lazy Initialization of Spring Bean?

Options:

1. `<bean class="com.xyz.Employee" id="employee" lazy-init="false" />`
2. `<bean class="com.xyz.Employee" id="employee" lazy-init="true"/>` - **Correct Answer**
3. `<bean class="com.xyz.Employee" id="emplo" lazy-init="lazy" />`
4. `<bean class="com.xyz.Employee" id="employee" lazy-init="early" />`

Here's a detailed list of the questions and answers with explanations:

45Q. The page directive is used to convey information about the page to JSP container. Which two of the following are the legal syntax of page directive?

Options:

1. `jspinit(), jspdestroy(), _jspservice(), translation, compilation, load class, create an instance`
2. `jspinit(), _jspservice(), jspdestroy(), translation, compilation, load class, create an instance`
3. `translation, compilation, load class, create an instance, jspinit(), _jspservice(), jspdestroy()`
4. `translation, compilation, create an instance, load class, jspinit(), jspdestroy(), _jspservice()`

Answer: None of these options are fully correct. Typically, the JSP lifecycle involves steps like translation, compilation, instantiation, initialization, service (execution), and destruction. This question seems to be poorly framed.

46Q. Consider the following code written in a servlet:

```java
RequestDispatcher rd = request.getRequestDispatcher("world.jsp");
rd.forward(request, response);
```

What is the JSP equivalent of the above code?

Options:

1. `<jsp:forward page="world.jsp"/>` - **Correct Answer**
2. `<jsp:action forward page="world.jsp"/>`
3. `<jsp:directive forward page="world.jsp"/>`
4. `<%@ forward file="world.jsp" %>`

Answer: The correct tag for forwarding to a JSP in JSP syntax is `<jsp:forward page="world.jsp"/>`.

47Q. Given the following web application deployment descriptor:

```xml
<web-app>
   <servlet>
      <servlet-name>myServlet</servlet-name>
      <servlet-class>MyServlet</servlet-class>

      ...
   </servlet>
   <servlet-mapping>
      <servlet-name>myServlet</servlet-name>
      <url-pattern>*.jsp</url-pattern>
   </servlet-mapping>
</web-app>
```

Which statement is correct?

Options:

a) The `servlet-mapping` element should be inside the `servlet` element
b) `url-pattern` can't be defined that way
c) If you make the HTTP call: `http://host/Hello.jsp`, the servlet container will execute `MyServlet` -
Correct Answer
d) It would work with any extension except `jsp`, `html`, `htm`
e) It should be `<urlpattern>` tag instead of `<url-pattern>`

Answer: The correct answer is that if you make the HTTP call `http://host/Hello.jsp`, the servlet container will execute `MyServlet` since the URL pattern is `*.jsp`.

48Q. Which one of the following is correct regarding Spring's support on Java Collection types? (Select all that apply)

Options:

1. We can use `List` by using `<list/>` - **Correct Answer**
2. We can use `Properties` by using `<properties/>` - **Correct Answer**
3. We can use `SortedSet` by using `<sortedSet/>`
4. We can use `Map` by using `<map/>` - **Correct Answer**

Answer: Spring supports various Java collections, and the tags `<list/>`, `<properties/>`, and `<map/>` are used for defining beans of those types.

49Q. What is printed as an output on the server console when the following servlet program runs for the first time?

```java
public class HelloGeneric extends GenericServlet {
   public HelloGeneric() {
      super();
      System.out.println("constructor");
   }
   public void init() throws ServletException {
      super.init();
      System.out.println("init");
   }
   public void init(ServletConfig arg0) throws ServletException {
```

```
        super.init(arg0);
        System.out.println("init with ServletConfig");
    }
}
```

Options:

A. `constructor init init with ServletConfig service method.`
B. `init with ServletConfig init service method`
C. A runtime exception is thrown
D. `constructor init with ServletConfig init service method`

Answer: The answer is **D. constructor init with ServletConfig init service method**. The constructor is called first, followed by the `init(ServletConfig)` method.

50Q. What will be the output of the following JSP code snippet at run-time when it is accessed the third time?

```jsp
<% int test = 0; %>
<% ++test; %>
The value of test is <%= test %>
```

Options:

1. The value of the test variable will be 2
2. The value of the test variable will be 0
3. The value of the test variable will be 1 - **Correct Answer**
4. The variable 'test' must be declared at global scope, else a run-time error will occur

Answer: Since the variable `test` is re-initialized every time the page is requested, its value will be 1 on the first access after incrementing.

51Q. Which one is true about autowiring?

Options:

1. Properties whose type is among the following cannot be autowired: primitives and arrays of primitives - **Correct Answer**
2. For by Type dependencies that expect a single value, where more than 1 is matched, the last bean in the list is used.
3. Autowiring overrides XML `property` and `constructor-arg` settings
4. Properties whose type is `String` can be autowired

Answer: Primitives and arrays of primitives cannot be autowired in Spring.

53Q. Which one of the following lines of code, in the `doPost()` method of a servlet, uses the URL rewriting approach to maintaining session?

Options:

1. `useURLRewriting():`

2. `out.println("<<a href='"+request.encodeURL("/servlet/XServlet")+"'>Click here</a>"));` - **Correct Answer**

54Q. Which of the following is correct to map the "employee" table to a class "com.Employee"?

Options:

1. `<table name="employee" class="com.Employee">`
2. `<class id="com.Employee" table="employee">`
3. `<mapping class="com.Employee" table="employee">`
4. `<class name="com.Employee" table="employee">` - **Correct Answer**

Answer: The correct syntax for mapping a Hibernate entity is `<class name="com.Employee" table="employee">`.

55Q. Which one of the following is a valid tag for configuring a listener?

Options:

1. `<contextlistener> <listener-class>mypackage.SomeListener</listener-class> </contextlistener>`
2. `<listener> <listener-class>mypackage.SomeListener</listener-class> </listener>` - **Correct Answer**
3. `<context-listener> <listener-class>mypackage.SomeListener</listener-class> </context-listener>`
4. `<listener> <class>mypackage.SomeListener</class> </listener>`

58Q. You execute the given SQL query and receive an error of a constraint violation. Which statements describe a possible condition?

```sql
DELETE FROM departments WHERE department_id = 50;
```

Options:

A. The department number is used as a foreign key in another table - **Correct Answer**
B. `ON DELETE SET NULL` was not used to convert the `department_id` to NULL
C. The parent record in this statement doesn't contain child records
D. The statement references a child record that cannot be deleted without permission from the parent record

Answer: If a department number is used as a foreign key in another table, deleting that department will cause a constraint violation unless the foreign key is set to handle cascading or nullifying.

59Q. JSP action used for bean creation?

Options:

A. `<jsp:useBean>` - **Correct Answer**
B. `<jsp:setProperty>`
C. `<jsp:getProperty>`
D. `<jsp:getBean>`

60Q. Which of the following is NOT TRUE about servlets?

Options:

A. Servlets are Platform Independent
B. Servlets are robust and object-oriented
C. Servlets only contain business logic
D. Each request in a servlet runs in a separate thread – **Correct Answer**

Answer: Servlets do not run in a separate thread for each request; rather, the container handles multithreading within the servlet.

61Q. Which statement defines the Data Manipulation Language (DML) in SQL?

Options:

A. Enables you to create a table
B. Enables you to retrieve data from a database
C. Used to guarantee the integrity of data in a database
D. Executed when data is added, modified, or deleted in a database - **Correct Answer**

Answer: DML is used for operations like inserting, updating, and deleting data in the database.

Certainly! Here's the continuation of the answers from **62Q** onward:

62Q. Given the following Spring configuration file, what is required?

```xml
<bean class="com.example.Customer">
    <property name="customerAddress" ref="address"/>
</bean>
<bean class="com.example.Address"/>
```

Options:

A. The first declared bean `Customer` is missing an id that must have the value "customer"
B. The second declared bean `Address` is missing an id that must have the value "address" - **Correct Answer**
C. The second declared bean `Address` is missing an id that must have the value "customer"
D. The first declared bean `Customer` is missing an id that must have the value "address"

Answer: In Spring configuration, each bean should ideally have a unique `id` attribute (or `name` in some cases) to reference the bean. The `Address` bean should have an `id="address"` to match the `ref="address"` in the `Customer` bean.

63Q. Which scope creates a new bean instance each time when requested?

Options:

A. Singleton
B. Prototype - **Correct Answer**
C. Request

D. Session

Answer: The `prototype` scope in Spring creates a new instance of the bean every time it is requested.

64Q. Which command manages a user's privileges in a database?

Options:

A. DOL
B. DCL - **Correct Answer**
C. DML
D. TCL

Answer: **DCL** (Data Control Language) is used to manage user privileges in a database, including commands like `GRANT` and `REVOKE`.

65Q. The module provides the fundamental parts of the framework, including the IoC and Dependency Injection features.

Options:

A. Core - **Correct Answer**
B. Bean
C. Context
D. SpEL

Answer: The **Core** module of Spring provides essential features such as Inversion of Control (IoC) and Dependency Injection.

66Q. Which JSP Action tag is used to include the content of another resource, it may be JSP, HTML, or servlet?

Options:

A. `<jsp:include>` - **Correct Answer**
B. `<jsp:forward>`
C. `<jsp:plugin>`
D. `<jsp:param>`

Answer: The `<jsp:include>` tag is used to include the content of another resource (JSP, HTML, servlet, etc.) into the current JSP page.

67Q. Which tag is used to declare a method in JSP?

Options:

A. Declaration Tag - **Correct Answer**
B. Scriptlet tag
C. Expression tag
D. Comment Tag

Answer: The **Declaration tag** (`<%! ... %>`) is used to declare methods and variables in JSP.

68Q. Predict the output of Expression Language `${10*10}`.

Options:

A. 100 - **Correct Answer**
B. 1010
C. 10*10
D. Error

Answer: The correct output is **100**, as Expression Language evaluates the expression `10*10`.

69Q. What is the syntax of the JSP Page directive?

Options:

A. `<%@ page... %>` - **Correct Answer**
B. `<% page...%>`
C. `<!@ page...!>`
D. `<%# page... %>`

Answer: The correct syntax for the JSP page directive is `<%@ page ... %>`.

70Q. Which state does the persistent object move to when the transaction is committed and the session is closed?

Options:

A. Permanent
B. Detached - **Correct Answer**
C. Initial
D. Persistent

Answer: When a Hibernate session is closed and a transaction is committed, the object transitions from the **persistent** state to the **detached** state.

71Q. Hibernate is an [_____] tool.

Options:

A. ORM - **Correct Answer**
B. ETL
C. OOC
D. AI

Answer: Hibernate is an **Object-Relational Mapping (ORM)** tool.

72Q. What does `hibernate.hbm2ddl.auto` with the value `create` do?

Options:

A. Create tables automatically - **Correct Answer**
B. Creates session object automatically
C. Creates SessionFactory object automatically
D. Creates session & SessionFactory automatically

Answer: The `hibernate.hbm2ddl.auto=create` property causes Hibernate to generate the database tables automatically based on the entity mappings.

73Q. Which of the following Servlet methods executes each time when you make a request to the Servlet?

Options:

A. `init()`
B. `service()` - **Correct Answer**
C. `destroy()`
D. `getServletInfo()`

Answer: The `service()` method is called for each request to the servlet. The `init()` method is only called once when the servlet is first initialized, and `destroy()` is called when the servlet is destroyed.

74Q. Which statement describes the use of the `UNIQUE` constraint when creating a table?

Options:

A. Defined at the column-level when a composite UNIQUE key is required
B. Used to ensure that rows of a table in a specified column or set of columns cannot have duplicate values - **Correct Answer**
C. Supports the input of non-null values
D. Defined at the table-level only

Answer: The **UNIQUE** constraint ensures that all values in the specified column(s) are distinct (i.e., no duplicates are allowed).

75Q. The [_____] manages the life cycle of servlet instances.

Options:

A. Web Container
B. Servlet Container - **Correct Answer**
C. JSP Container
D. Application Server

Answer: The **Servlet Container** (or Web Container) manages the lifecycle of servlets, including initialization, handling requests, and destruction.

76Q. Which of the following are Servlet's lifecycle methods?

Options:

A. `init()` - **Correct Answer**

B. `service()` - **Correct Answer**
C. `destroy()` - **Correct Answer**
D. `getServletInfo()`

Answer: The key servlet lifecycle methods are `init()`, `service()`, and `destroy()`. `getServletInfo()` is an optional method that provides information about the servlet.

77Q. Identify the feature of the `COMMIT` and `ROLLBACK` statements.

Options:

A. When a `ROLLBACK` statement is issued, the current transaction ends, making all pending changes permanent
B. `ROLLBACK` ends a transaction and prompts you to save changes
C. A transaction begins when a `COMMIT` statement is issued
D. `COMMIT` and `ROLLBACK` help to ensure data consistency – **Correct Answer**

Answer: **COMMIT** and **ROLLBACK** help to maintain data integrity and consistency in the database by either saving or undoing changes made during a transaction.

78Q. What is `javax.servlet.Servlet`?

Options:

A. Interface - **Correct Answer**
B. Abstract Class
C. Concrete Class
D. Enum

Answer: `javax.servlet.Servlet` is an **interface** that all servlets must implement.

79Q. Which one is the correct order of phases in JSP life cycle?

Options:

A. Initialization, Cleanup, Compilation, Execution
B. Initialization, Compilation, Cleanup, Execution
C. Compilation, Initialization, Execution, Cleanup - **Correct Answer**
D. Cleanup, Compilation, Initialization, Execution

Answer: The correct order is: **Compilation, Initialization, Execution, Cleanup**.

80Q. What is the use of the following code snippet?

```xml
<property name="hibernate.hbm2ddl.auto">create-drop</property>
```

Options:

A. The above snippet creates a new table every time
B. The above snippet overwrites existing tables every time

C. On every run, the above snippet drops and recreates the table mentioned in the Hibernate configuration files - **Correct Answer**
D. The above snippet modifies the table on every run

Answer: The `create-drop` value for `hibernate.hbm2ddl.auto` causes Hibernate to drop and recreate the schema on startup and shutdown.

81Q. What does AOP stand for?

Options:

A. Asset Oriented Programming
B. Any Object Programming
C. Aspect Oriented Programming - **Correct Answer**
D. Aspect Oriented Protocol

Answer: **AOP** stands for **Aspect-Oriented Programming**, which is a programming paradigm used in Spring for separating cross-cutting concerns (like logging, security) from business logic.

Certainly! Here's the continuation of the answers from **82Q** onward:

82Q. The element maps the unique ID attribute in class to the primary key of the database table.

Options:

1. `<id>` - **Correct Answer**
2. `<key>`
3. `<index>`
4. `<primary key>`

Answer: The `<id>` element in Hibernate mapping files is used to map a class's unique ID attribute to the primary key of the database table.

83Q. What is true about the `@Autowired` annotation?

Options:

1. Applying `@Autowired` to a field is not legal and will result in a RuntimeException
2. `@Autowired` may be applied to either a field, constructor, or the setter of a field - **Correct Answer**
3. Applying `@Autowired` to a field is not legal and will result in a checked exception
4. `@Autowired` may be applied to setter methods only

Answer: The `@Autowired` annotation can be applied to fields, constructors, or setter methods for automatic dependency injection in Spring.

84Q. What is the purpose of the `transient` attribute?

Options:

1. Marks attributes that are not needed to persist - **Correct Answer**
2. Enables objects to remain constant
3. Flags attributes that are required to be invisible

4. Allows attributes to be reused many times

Answer: The `transient` keyword in Java is used to indicate that a field should not be serialized, meaning it will not be persisted when an object is serialized.

86Q. In which state are new objects created in a Java program but are not associated with any Hibernate session?

Options:

A. Transient - **Correct Answer**
B. Detached
C. Persistent
D. New

Answer: In Hibernate, a new object that is not associated with a session is in the **Transient** state.

87Q. Which query presents a correct syntax for a `WHERE` clause?

Options:

A. `SELECT last_name FROM employees WHERE last_name BETWEEN King AND Olsen`
B. `SELECT last_name, hire_date FROM employees WHERE hire_date BETWEEN 01-JAN-05 AND 01-JAN-05`
C. `SELECT last_name FROM employees WHERE last_name BETWEEN 'King' AND 'Olsen'` - **Correct Answer**
D. `SELECT last_name, salary AS Money FROM employees WHERE Money BETWEEN 1000 AND 2500`
E. `SELECT last_name, salary FROM employees WHERE salary BETWEEN 2500 AND 1000`

Answer: The correct syntax for the `BETWEEN` operator in SQL is:

```sql
SELECT last_name FROM employees WHERE last_name BETWEEN 'King' AND 'Olsen'
```

`BETWEEN` is inclusive and works with numerical or text data.

88Q. Which statement best describes the purpose of DML statements in SQL?

Options:

A. Used to control user access to the database
B. Used to manage transactions within the database
C. Used to create and modify database objects
D. Used to work with the actual data within the database objects - **Correct Answer**

Answer: DML (Data Manipulation Language) is used to handle the data within the database objects, such as `SELECT`, `INSERT`, `UPDATE`, and `DELETE`.

89Q. Which of these can be annotated on a class to indicate that the class can be used by the Spring IoC container as a source of bean definitions?

Options:

A. `@Configuration` - **Correct Answer**
B. `@Bean`
C. `@BeanSource`
D. `@BeanConfiguration`

Answer: The `@Configuration` annotation is used to indicate that a class contains Spring bean definitions, and it is part of the Spring IoC container configuration.

90Q. Which one of the following statements is correct about the way a servlet can access its initialization parameters?

Options:

1. By simply calling `getInitParameter` from any of the servlet methods (for example `doGet`)
2. It must be done only by calling `getServletConfig().getInitParameter()` - **Correct Answer**
3. It can only be done by overriding the method `init(ServletConfig config)`
4. It can be done by calling `getServletContext().getInitParameter()` method

Answer: To access initialization parameters, the servlet must call `getServletConfig().getInitParameter()`.

91Q. What are the various comparison operators used in the `WHERE` clause?

Options:

1. `BETWEEN` - **Correct Answer**
2. `IN`
3. `TO_DATE`
4. `EXISTS`

Answer: The **BETWEEN** operator is one of the common comparison operators used in SQL `WHERE` clauses to filter data based on a range of values.

92Q. Which datatype is used to store binary data?

Options:

A. CLOB
B. BLOB - **Correct Answer**
C. RAW
D. LONG

Answer: **BLOB** (Binary Large Object) is used to store binary data such as images or files in a database.

93Q. Which property makes Hibernate generate the appropriate SQL?

Options:

1. `hibernate.dialect` - **Correct Answer**

2. `hibernate.connection.driver_class`
3. `hibernate.connection.driver`
4. `hibernate.session`

Answer: The `hibernate.dialect` property specifies which SQL dialect Hibernate should use to generate SQL queries for the target database.

94Q. What are the different states of a persistent object? (More than 1 option is correct)

Options:

1. Transient - **Correct Answer**
2. Detached - **Correct Answer**
3. Persistent - **Correct Answer**
4. New

Answer: The three main states of a persistent object in Hibernate are **Transient**, **Detached**, and **Persistent**.

95Q. Which of these can use the `context:component-scan` XML element? (More than 1 option is correct)

Options:

1. `FileSystemXmlApplicationContext`
2. `AnnotationConfigWebApplicationContext`
3. `AnnotationConfigApplicationContext`
4. `ClassPathXmlApplicationContext` - **Correct Answer**

Answer: The `context:component-scan` XML element is used with the `ClassPathXmlApplicationContext` and other Spring contexts that require component scanning.

96Q. Spring is a lightweight framework for:

Options:

1. Database-ready applications
2. Enterprise-ready applications
3. View-ready applications
4. Web application development - **Correct Answer**

Answer: Spring is primarily a **web application development** framework, though it also provides enterprise-level capabilities such as dependency injection and aspect-oriented programming.

97Q. The annotation is used on model classes to specify:

Answer: `@Entity`
This annotation is used in JPA (Java Persistence API) to mark a class as an entity that is mapped to a database table.

98Q. Integrity constraints that restrict null values in SQL:

Answer: **Primary**, **NOT NULL**

The **NOT NULL** constraint ensures that a column cannot have a `NULL` value. A **Primary Key** constraint also implicitly enforces this rule on the primary key column.

99Q. Which of the following can be used to explicitly destroy the session object?

Options:

1. You cannot; it can only be expunged automatically after session timeout expires
2. By calling `invalidate()` on session object - **Correct Answer**
3. By calling `expunge()` on session object
4. By calling `delete()` on session object
5. By calling `finalize()` on session object

Answer: The session object can be explicitly destroyed by calling the `invalidate()` method.

100Q. Which three of the following are implicit objects available to every JSP page by default? (More than 1 option is correct)

Options:

1. Session - **Correct Answer**
2. Context
3. System
4. Out - **Correct Answer**
5. Request - **Correct Answer**

Answer: The implicit objects in JSP include `session`, `out`, and `request`, which are available by default.

101Q. What are the various numerical datatypes used while creating a table? (More than 1 option is correct)

Options:

1. `char`
2. `int` - **Correct Answer**
3. `number` - **Correct Answer**
4. `systimestamp`

Answer: The numerical datatypes commonly used in SQL are `int` and `number`.

102Q. Which one of the following is an equivalent in JSP of `PrintWriter` in a servlet?

Options:

1. `jspWriter` - **Correct Answer**
2. `jspPrintWriter`
3. `jspOutputStream`

4. `jspBufferedStream`

Answer: In JSP, the equivalent of `PrintWriter` is `jspWriter`, which is used to write data to the response.

103Q. Consider the following code:

```java
public void doGet(HttpServletRequest req, HttpServletResponse res) {
    HttpSession session = req.getSession();
    ServletContext ctx = this.getServletContext();
    if (req.getParameter("userid") != null) {
        // 1
    }
}
```

You want the `userid` parameter to be

 checked **only once** during the lifetime of the session. Which is the correct solution?

Options:

1. Use `session.getAttribute("userid")` and set it after checking the parameter
2. Use `ctx.getAttribute("userid")` and set it after checking the parameter
3. Both of the above are equally effective
4. You cannot achieve this behavior in the given code

Answer: The correct solution is to use `session.getAttribute("userid")` to check and then set the session attribute once.