

Question 1: What is the primary purpose of a Servlet in a web application?

A. To manage client-side scripting languages like JavaScript.

☒ B. To handle HTTP requests and generate responses.

C. To design the layout and presentation of web pages.

D. To establish database connections.

Answer: B. To handle HTTP requests and generate responses.

Explanation: Servlets are Java classes that are used to handle HTTP requests and generate HTTP responses.

Question 2: Which component of the MVC pattern is responsible for processing user input and updating the model?

A. Model

B. View

☒ C. Controller

D. Servlet

Answer: C. Controller

Explanation: In the MVC pattern, the Controller is responsible for processing user input and updating the Model.

Question 3: What is the main purpose of a JSP (JavaServer Pages) in a web application?

A. To define the database schema.

B. To handle client-side scripting.

☒ C. To generate dynamic web pages.

D. To manage server configurations.

Answer: C. To generate dynamic web pages.

Explanation: JSP is used to generate dynamic web pages by embedding Java code within HTML templates.

Question 4: Which Java API allows you to work with sessions in a web application?

A. JavaFX

B. JSP

C. Servlet

☒ D. HttpSession

Answer: D. HttpSession

Explanation: The HttpSession API allows you to manage and work with sessions in a web application.

Question 5: What is the primary purpose of using cookies in a web application?

- A. To store large files and images on the client-side.
- ☒ B. To maintain user-specific information across multiple requests.
- C. To secure database connections.
- D. To validate HTML forms.

Answer: B. To maintain user-specific information across multiple requests.

Explanation: Cookies are often used to store user-specific information and maintain state across multiple requests.

Question 6: In a Java web application, which component is responsible for interacting with the database using JPA (Java Persistence API)?

- A. Controller
- B. Servlet
- ☒ C. Model
- D. View

Answer: C. Model

Explanation: In a Java web application, the Model component is responsible for interacting with the database using JPA.

Question 7: What is the main purpose of the web.xml file in a Java web application?

- A. To define the layout and styling of web pages.
- ☒ B. To configure servlet mappings and other web application settings.
- C. To store user-specific information.
- D. To handle HTTP requests.

Answer: B. To configure servlet mappings and other web application settings.

Explanation: The web.xml file is used to configure servlet mappings and other web application settings in Java web applications.

Question 8: Which HTTP method is typically used for submitting form data to the server?

- A. GET
- B. PUT

☒ C. POST

D. DELETE

Answer: C. POST

Explanation: The POST method is typically used for submitting form data to the server.

Question 9: What is the purpose of the @Entity annotation in JPA?

A. To indicate a Java class is a servlet.

B. To define a JSP page.

☒ C. To specify that a Java class is a persistent entity.

D. To handle HTTP requests.

Answer: C. To specify that a Java class is a persistent entity.

Explanation: The @Entity annotation is used in JPA to specify that a Java class is a persistent entity and is mapped to a database table.

Question 10: Which of the following is NOT a part of the Servlet life cycle?

A. Initialization

B. Request Handling

C. Destruction

☒ D. Configuration

Answer: D. Configuration

Explanation: The Servlet life cycle includes Initialization, Request Handling, and Destruction phases. Configuration is typically handled in the web.xml file.

Question 11: What is the purpose of a deployment descriptor in a Java web application?

A. To store user-specific data.

B. To specify how JSP pages should be rendered.

☒ C. To configure the deployment settings of a web application.

D. To validate HTML forms.

Answer: C. To configure the deployment settings of a web application.

Explanation: The deployment descriptor, typically found in the web.xml file, is used to configure the deployment settings of a web application.

Question 12: What is the main function of a JPA EntityManager?

A. To process HTTP requests.

- B. To render JSP pages.
- C. To manage database connections.
- ☒ D. To interact with the database.

Answer: D. To interact with the database.

Explanation: A JPA EntityManager is used to interact with the database, including creating, updating, and deleting entities.

Question 13: In a Java web application, where should you place static resources like HTML, CSS, and JavaScript files for efficient serving?

- A. In the Controller package
- B. In the Model package
- C. In the WEB-INF directory
- ☒ D. In the View directory

Answer: D. In the View directory

Explanation: Static resources like HTML, CSS, and JavaScript files are typically placed in the View directory for efficient serving to clients.

Question 14: Which HTTP method is idempotent, meaning it should not have any side effects on the server?

- ☒ A. GET
- B. POST
- C. PUT
- D. DELETE

Answer: A. GET

Explanation: The GET method is considered idempotent, as it should not have any side effects on the server. It's used for retrieving data.

Question 15: What is the purpose of the @SessionScoped annotation in a Java web application?

- A. To define a JSP page.
- B. To indicate a Java class is a Servlet.
- ☒ C. To specify that a Java class is a session-scoped bean.
- D. To handle HTTP requests.

Answer: C. To specify that a Java class is a session-scoped bean.

Explanation: The @SessionScoped annotation is used in Java EE to specify that a Java class is a session-scoped bean.

Question 16: What does JPA stand for?

- A. Java Persistence Application
- B. Java Programming API
- ☒ C. Java Persistence API
- D. Java Performance Analyzer

Answer: C. Java Persistence API

Explanation: JPA stands for Java Persistence API, which is a Java specification for accessing, persisting, and managing data between Java objects and a relational database.

Question 17: What is the primary role of a Controller in the MVC pattern?

- A. To define the database schema.
- ☒ B. To handle user input and update the Model.
- C. To render HTML templates.
- D. To perform database operations.

Answer: B. To handle user input and update the Model.

Explanation: The primary role of a Controller in the MVC pattern is to handle user input and update the Model.

Question 18: Which HTTP status code is typically returned when a resource is successfully created?

- A. 200 OK
- ☒ B. 201 Created
- C. 400 Bad Request
- D. 404 Not Found

Answer: B. 201 Created

Explanation: The 201 Created status code is typically returned when a resource is successfully created in response to a POST request.

Question 19: What is the primary purpose of the JPA EntityManagerFactory?

- A. To process HTTP requests.
- ☒ B. To manage database connections.
- C. To handle session management.

D. To execute SQL queries.

Answer: B. To manage database connections.

Explanation: The JPA EntityManagerFactory is used to manage database connections and provide EntityManager instances.

Question 20: Which of the following HTTP methods is used to update an existing resource?

A. GET

☒ B. PUT

C. POST

D. DELETE

Answer: B. PUT

Explanation: The PUT method is used to update an existing resource at the specified URI.

Question 21: What is the purpose of the JSP Standard Tag Library (JSTL) in a Java web application?

A. To handle HTTP requests.

B. To process user input.

☒ C. To provide a set of custom tags for JSP pages.

D. To manage session data.

Answer: C. To provide a set of custom tags for JSP pages.

Explanation: The JSP Standard Tag Library (JSTL) provides a set of custom tags that can be used in JSP pages to perform common tasks.

Question 22: Which of the following is a valid method to invalidate a session in a Servlet?

A. request.invalidateSession();

B. session.destroy();

☒ C. session.invalidate();

D. session.end();

Answer: C. session.invalidate();

Explanation: The session.invalidate() method is used to invalidate a session in a Servlet, removing all session attributes and ending the session.

Question 23: What is the primary function of a servlet container in a Java web application?

A. To manage database connections.

B. To handle session management.

C. To process JSP pages.

☒ D. To manage the execution of servlets.

Answer: D. To manage the execution of servlets.

Explanation: A servlet container is responsible for managing the execution of servlets in a Java web application, including their lifecycle and handling of requests.

Question 24: In JPA, what is the purpose of the @GeneratedValue annotation?

A. To generate a unique session ID.

☒ B. To generate primary key values for entities.

C. To execute SQL queries.

D. To handle session management.

Answer: B. To generate primary key values for entities.

Explanation: The @GeneratedValue annotation is used in JPA to generate primary key values for entities automatically.

Question 25: What is the role of a View in the MVC pattern?

A. To handle user input and update the Model.

B. To manage database connections.

☒ C. To render the user interface.

D. To process HTTP requests.

Answer: C. To render the user interface.

Explanation: The View in the MVC pattern is responsible for rendering the user interface and presenting data to the user.

Question 26: Which of the following is a valid method to get a session attribute in a Servlet?

A. request.getSessionAttribute("attributeName");

☒ B. session.getAttribute("attributeName");

C. session.getSessionAttribute("attributeName");

D. request.getAttribute("attributeName");

Answer: B. session.getAttribute("attributeName");

Explanation: The session.getAttribute("attributeName") method is used to retrieve a session attribute in a Servlet.

Question 27: What is the purpose of a deployment descriptor in a Java web application?

- A. To define the layout and styling of web pages.
- B. To manage server configurations.
- C. To handle HTTP requests.
- ☒ D. To configure the deployment settings of a web application.

Answer: D. To configure the deployment settings of a web application.

Explanation: The deployment descriptor is used to configure the deployment settings of a Java web application, including servlet mappings, security constraints, and resource references.

Question 28: Which of the following is a valid method to set a session attribute in a Servlet?

- A. `session.set("attributeName", attributeValue);`
- B. `session.add("attributeName", attributeValue);`
- ☒ C. `session.setAttribute("attributeName", attributeValue);`
- D. `request.addAttribute("attributeName", attributeValue);`

Answer: C. `session.setAttribute("attributeName", attributeValue);`

Explanation: The `session.setAttribute("attributeName", attributeValue)` method is used to set a session attribute in a Servlet.

Question 29: What is the primary purpose of a web container in a Java web application?

- A. To execute JSP pages.
- B. To manage database connections.
- C. To process HTTP requests.
- ☒ D. To manage the execution of web applications.

Answer: D. To manage the execution of web applications.

Explanation: A web container is responsible for managing the execution of web applications, including the lifecycle of servlets and JSP pages.

Question 30: Which HTTP method is typically used for deleting a resource on the server?

- A. GET
- B. POST
- C. PUT
- ☒ D. DELETE

Answer: D. DELETE

Explanation: The DELETE method is typically used for requesting the removal of a resource on the server.

