UNIT 3 Server Side Technologies

TOMCAT Server

1. What is the default port number of Tomcat

   a)7001

   b) 8080

   c)8443

   d) 8001

Ans:8080

2. What are the two types of connectors used in Tomcat

   a)Http connector and JSP connector

   b)AJP connector and JSP connector

   c)Http connector and AJP connector

   d) None of the above
Ans: Http connector and JSP connector

3. Which HTTP method gets invoked when a user clicks on a link? Select the one correct answer.

a)GET method

b)POST method

c)HEAD method

d)PUT method

4. Sharing of session data across multiple web servers is called _____ ?

a) Clustering

b)ShareWeb

c)loadBalancer

d) None of the above

5. What is called as Tomcat's JSP Engine.

a) Jasper.

b)Casper.

c)Catalina

d)Tomcat JSP Engine.

This set of Advanced Java Multiple Choice Questions & Answers (MCQs) focuses on "Web application".

1. Servlet are used to program which component in a web application?
a) client
b) server
c) tomcat
d) applet
View Answer

Answer: b
Explanation: A servlet class extends the capabilities of servers that host applications which are accessed by way of a request-response programming model.

2. Which component can be used for sending messages from one application to another?
a) server
b) client
c) mq
d) webapp
View Answer

Answer: c
Explanation: Messaging is a method of communication between software components or applications. MQ can be used for passing message from sender to receiver.

3. How are java web applications packaged?
a) jar
b) war
c) zip
d) both jar and war
View Answer

Answer: d
Explanation: war are deployed on apache servers or tomcat servers. With Spring boot and few other technologies tomcat is brought on the machine by deploying jar.

4. How can we connect to database in a web application?
a) oracle sql developer
b) toad
c) JDBC template
d) mysql
View Answer

Answer: c
Explanation: JDBC template can be used to connect to database and fire queries against it.

5. How can we take input text from user in HTML page?
a) input tag

b) inoutBufferedReader tag
c) meta tag
d) scanner tag
View Answer

Answer: a
Explanation: HTML provides various user input options like input, radio, text, etc.

6. Which of the below is not a javascript framework for UI?
a) Vaadin
b) AngularJS
c) KendoUI
d) Springcore
View Answer

Answer: d
Explanation: Springcore is not a javascript framework. It is a comprehensive programming and configuration model for enterprise applications based on java.

7. Which of the below can be used to debug front end of a web application?
a) Junit
b) Fitnesse
c) Firebug
d) Mockito
View Answer

Answer: c
Explanation: Firebug integrates with firefox and enables to edit, debug and monitor CSS, HTML and javascript of any web page.

8. What type of protocol is HTTP?
a) stateless
b) stateful
c) transfer protocol
d) information protocol
View Answer

Answer: a
Explanation: HTTP is a stateless protocol. It works on request and response mechanism and each request is an independent transaction.

9. What does MIME stand for?
a) Multipurpose Internet Messaging Extension
b) Multipurpose Internet Mail Extension
c) Multipurpose Internet Media Extension
d) Multipurpose Internet Mass Extension
View Answer

Answer: b

Explanation: MIME is an acronym for Multi-purpose Internet Mail Extensions. It is used for classifying file types over the Internet. It contains type/subtype e.g. application/msword.

10. What is the storage capacity of single cookie?
a) 2048 MB
b) 2048 bytes
c) 4095 bytes
d) 4095 MB
View Answer

Answer: c
Explanation: Storage capacity of cookies is 4095 bytes/cookie.

This set of Advanced Java Multiple Choice Questions & Answers (MCQs) focuses on "Client and Server".

1. How does applet and servlet communicate?
a) HTTP
b) HTTPS
c) FTP
d) HTTP Tunneling
View Answer

Answer: d
Explanation: Applet and Servlet communicate through HTTP Tunneling.

2. In CGI, process starts with each request and will initiate OS level process.
a) True
b) False
View Answer

Answer: a
Explanation: A new process is started with each client request and that corresponds to initiate a heavy OS level process for each client request.

3. Which class provides system independent server side implementation?
a) Socket
b) ServerSocket
c) Server
d) ServerReader
View Answer

Answer: b
Explanation: ServerSocket is a java.net class which provides system independent implementation of server side socket connection.

4. What happens if ServerSocket is not able to listen on the specified port?
a) The system exits gracefully with appropriate message
b) The system will wait till port is free
c) IOException is thrown when opening the socket
d) PortOccupiedException is thrown
View Answer

Answer: c
Explanation: public ServerSocket() creates an unbound server socket. It throws IOException if specified port is busy when opening the socket.

5. What does bind() method of ServerSocket offer?
a) binds the serversocket to a specific address (IP Address and port)
b) binds the server and client browser
c) binds the server socket to the JVM
d) binds the port to the JVM
View Answer

Answer: a
Explanation: bind() binds the server socket to a specific address (IP Address and port). If address is null, the system will pick an ephemeral port and valid local address to bind socket.

6. Which of the below are common network protocols?
a) TCP
b) UDP
c) TCP and UDP
d) CNP
View Answer

Answer: c
Explanation: Transmission Control Protocol(TCP) and User Datagram Protocol(UDP) are the two common network protocol. TCP/IP allows reliable communication between two applications. UDP is connection less protocol.

7. Which class represents an Internet Protocol address?
a) InetAddress
b) Address
c) IP Address
d) TCP Address
View Answer

Answer: a
Explanation: InetAddress represents an Internet Protocol address. It provides static methods like getByAddress(), getByName() and other instance methods like getHostName(), getHostAddress(), getLocalHost().

8. What does local IP address start with?
a) 10.X.X.X

b) 172.X.X.X
c) 192.168.X.X
d) 10.X.X.X, 172.X.X.X, or 192.168.X.X
View Answer

Answer: d
Explanation: Local IP addresses look like 10.X.X.X, 172.X.X.X, or 192.168.X.X.

9. What happens if IP Address of host cannot be determined?
a) The system exit with no message
b) UnknownHostException is thrown
c) IOException is thrown
d) Temporary IP Address is assigned
View Answer

Answer: b
Explanation: UnknownHostException is thrown when IP Address of host cannot be determined. It is an extension of IOException.

10. What is the java method for ping?
a) hostReachable()
b) ping()
c) isReachable()
d) portBusy()
View Answer

Answer: c
Explanation: inet.isReachable(5000) is a way to ping a server in java.

This set of Advanced Java Multiple Choice Questions & Answers (MCQs) focuses on "Servlet".

1. How constructor can be used for a servlet?
a) Initialization
b) Constructor function
c) Initialization and Constructor function
d) Setup() method
View Answer

Answer: c
Explanation: We cannot declare constructors for interface in Java. This means we cannot enforce this requirement to any class which implements Servlet interface.
Also, Servlet requires ServletConfig object for initialization which is created by container.

2. Can servlet class declare constructor with ServletConfig object as an argument?
a) True

b) False
View Answer

Answer: b
Explanation: ServletConfig object is created after the constructor is called and before init() is called. So, servlet init parameters cannot be accessed in the constructor.

3. What is the difference between servlets and applets?
i. Servlets execute on Server; Applets execute on browser
ii. Servlets have no GUI; Applet has GUI
iii. Servlets creates static web pages; Applets creates dynamic web pages
iv. Servlets can handle only a single request; Applet can handle multiple requests
a) i, ii, iii are correct
b) i, ii are correct
c) i, iii are correct
d) i, ii, iii, iv are correct
View Answer

Answer: b
Explanation: Servlets execute on Server and doesn't have GUI. Applets execute on browser and has GUI.

4. Which of the following code is used to get an attribute in a HTTP Session object in servlets?
a) session.getAttribute(String name)
b) session.alterAttribute(String name)
c) session.updateAttribute(String name)
d) session.setAttribute(String name)
View Answer

Answer: a
Explanation: session has various methods for use.

5. Which method is used to get three-letter abbreviation for locale's country in servlets?
a) Request.getISO3Country()
b) Locale.getISO3Country()
c) Response.getISO3Country()
d) Local.retrieveISO3Country()
View Answer

Answer: a
Explanation: Each country is usually denoted by a 3 digit code.ISO3 is the 3 digit country code.

6. Which of the following code retrieves the body of the request as binary data?
a) DataInputStream data = new InputStream()
b) DataInputStream data = response.getInputStream()
c) DataInputStream data = request.getInputStream()
d) DataInputStream data = request.fetchInputStream()
View Answer

Answer: c
Explanation: InputStream is an abstract class. getInputStream() retrieves the request in binary data.

7. When destroy() method of a filter is called?
a) The destroy() method is called only once at the end of the life cycle of a filter
b) The destroy() method is called after the filter has executed doFilter method
c) The destroy() method is called only once at the begining of the life cycle of a filter
d) The destroyer() method is called after the filter has executed
View Answer

Answer: a
Explanation: destroy() is an end of life cycle method so it is called at the end of life cycle.

8. Which of the following is true about servlets?
a) Servlets execute within the address space of web server
b) Servlets are platform-independent because they are written in java
c) Servlets can use the full functionality of the Java class libraries
d) Servlets execute within the address space of web server, platform independent and uses the functionality of java class libraries
View Answer

Answer: d
Explanation: Servlets execute within the address space of a web server. Since it is written in java it is platform independent. The full functionality is available through libraries.

9. How is the dynamic interception of requests and responses to transform the information done?
a) servlet container
b) servlet config
c) servlet context
d) servlet filter
View Answer

Answer: d
Explanation: Servlet has various components like container, config, context, filter. Servlet filter provides the dynamic interception of requests and responses to transform the information.

10. Which are the session tracking techniques?
i. URL rewriting
ii. Using session object
iii.Using response object
iv. Using hidden fields
v. Using cookies
vi. Using servlet object
a) i, ii, iii, vi
b) i, ii, iv, v
c) i, vi, iii, v

d) i, ii, iii, v
View Answer

Answer: b
Explanation: URL rewriting, using session object, using cookies, using hidden fields are session tracking techniques.

This set of Advanced Java Multiple Choice Questions & Answers (MCQs) focuses on "Session Management".

1. Which of the following is used for session migration?
a) Persisting the session in database
b) URL rewriting
c) Create new database connection
d) Kill session from multiple sessions
View Answer

Answer: a
Explanation: Session migration is done by persisting session in database. It can also be done by storing session in memory on multiple servers.

2. Which of the below is not a session tracking method?
a) URL rewriting
b) History
c) Cookies
d) SSL sessions
View Answer

Answer: b
Explanation: History is not a session tracking type. Cookies, URL rewriting, Hidden form fields and SSL sessions are session tracking methods.

3. Which of the following is stored at client side?
a) URL rewriting
b) Hidden form fields
c) SSL sessions
d) Cookies
View Answer

Answer: d
Explanation: Cookies are stored at client side. Hence, it is advantageous in some cases where clients disable cookies.

4. Which of the following leads to high network traffic?
a) URL rewriting
b) Hidden form fields

c) SSL sessions
d) Cookies
View Answer

Answer: a
Explanation: WRL rewriting requires large data transfer to and from the server which leads to network traffic and access may be slow.

5. Which of the following is not true about session?
a) All users connect to the same session
b) All users have same session variable
c) Default timeout value for session variable is 20 minutes
d) New session cannot be created for a new user
View Answer

Answer: c
Explanation: Default timeout value for session variable is 20 minutes. This can be changed as per requirement.

6. SessionIDs are stored in cookies.
a) True
b) False
View Answer

Answer: a
Explanation: SessionIDs are stored in cookies, URLs and hidden form fields.

7. What is the maximum size of cookie?
a) 4 KB
b) 4 MB
c) 4 bytes
d) 40 KB
View Answer

Answer: a
Explanation: The 4K is the maximum size for the entire cookie, including name, value, expiry date etc. To support most browsers, it is suggested to keep the name under 4000 bytes, and the overall cookie size under 4093 bytes.

8. How can we invalidate a session?
a) session.discontinue()
b) session.invalidate()
c) session.disconnect()
d) session.falsify()
View Answer

Answer: b
Explanation: We can invalidate session by calling session.invalidate() to destroy the session.

9. Which method creates unique fields in the HTML which are not shown to the user?
a) User authentication
b) URL writing
c) HTML Hidden field
d) HTML invisible field
View Answer

Answer: c
Explanation: HTML Hidden field is the simplest way to pass information but it is not secure and a session can be hacked easily.

10. Which object is used by spring for authentication?
a) ContextHolder
b) SecurityHolder
c) AnonymousHolder
d) SecurityContextHolder
View Answer

Answer: d
Explanation: The SessionManagementFilter checks the contents of the SecurityContextRepository against the current contents of the SecurityContextHolder to determine whether user has been authenticated during the current request by a non-interactive authentication mechanism, like pre authentication or remember me

1. Which page directive should be used in JSP to generate a PDF page?
a) contentType
b) generatePdf
c) typePDF
d) contentPDF
View Answer

Answer: a
Explanation: <%page contentType="application/pdf"> tag is used in JSP to generate PDF.

2. Which tag should be used to pass information from JSP to included JSP?
a) Using <%jsp:page> tag
b) Using <%jsp:param> tag
c) Using <%jsp:import> tag
d) Using <%jsp:useBean> tag
View Answer

Answer: a
Explanation: <%jsp:param> tag is used to pass information from JSP to included JSP.

3. Application is instance of which class?
a) javax.servlet.Application
b) javax.servlet.HttpContext

c) javax.servlet.Context
d) javax.servlet.ServletContext
View Answer

Answer: d
Explanation: Application object is wrapper around the ServletContext object and it is an instance of a javax.servlet.ServletContext object.

4. _jspService() method of HttpJspPage class should not be overridden.
a) True
b) False
View Answer

Answer: a
Explanation: _jspService() method is created by JSP container. Hence, it should not be overridden.

5. Which option is true about session scope?
a) Objects are accessible only from the page in which they are created
b) Objects are accessible only from the pages which are in same session
c) Objects are accessible only from the pages which are processing the same request
d) Objects are accessible only from the pages which reside in same application
View Answer

Answer: b
Explanation: Object data is available till session is alive.

6. Default value of autoFlush attribute is?
a) true
b) false
View Answer

Answer: a
Explanation: Default value "true" depicts automatic buffer flushing.

7. Which one is the correct order of phases in JSP life cycle?
a) Initialization, Cleanup, Compilation, Execution
b) Initialization, Compilation, Cleanup, Execution
c) Compilation, Initialization, Execution, Cleanup
d) Cleanup, Compilation, Initialization, Execution
View Answer

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

8. "request" is instance of which one of the following classes?
a) Request
b) HttpRequest

c) HttpServletRequest
d) ServletRequest
View Answer

Answer: c
Explanation: request is object of HttpServletRequest.

9. Which is not a directive?
a) include
b) page
c) export
d) useBean
View Answer

Answer: c
Explanation: Export is not a directive.

10. Which is mandatory in <jsp:useBean /> tag?
a) id, class
b) id, type
c) type, property
d) type,id
View Answer

Answer: a
Explanation: The useBean searches existing object and if not found creates an object using class

JDBC
1. What is JDBC?

A) java compiler

B) Java API

C) Java interpreter

D) Both A and B

2. JDBC is a ………………… interface, which means that it is used to invoke SQL commands directly

A) low-level

B) middle-level

C) higher-level

D) user

3. ODBC is not appropriate for direct use from java because it uses a ....

A) C interface

B) C# interface

C) java interface

D) Both A and C

4. Java Soft provides .... JDBC product components as part of the java Developer's Kit (JDK)

A) three

B) two

C) four

D) single

5. Kind of driver converts JDBC calls on the client API for Oracle, Sybase, Informix, DB2, or other DBMS is known as

A) JDBC-Net pure Java driver

B) JDBC-ODBC Bridge plus ODBC driver

C) Native-API partly-Java driver

D) Both A and B

6. JSP stands for ....

A) <u>Java server Pages</u>

B) Java server Programming

C) Java Server Process

D) Java Socket Programming

7. JSP includes a mechanism for defining .... or custom tags.

A) static attributes

B) local attributes

C) dynamic attributes

D) global attributes

8. JSP is not governed by the syntax and semantics defined by the .... specifications.

A) Java 2

B) Java 2.4

C) Java 1

D) <u>Java 1.2</u>

9. JSP containers are required to support .... different formats of JSP syntax.

A) Two

B) Three

C) Four

D) Only One

10. The difference between Servlets and JSP is the ……………..

A) translation

B) compilation

C) syntax

D) Both A and B

Answers:

1. B) Java API

2. A) low-level

3. A) C interface

4. A) three

5. C) Native-API partly-Java driver

6. A) Java server Pages

7. C) dynamic attributes

8. A) Java 2

9. A) Two

10. C) syntax