**1.What is JDBC?**

**Answer:** JDBC is, by definition, an interface to relational data source. JDBC was designed as an object-oriented Java-based application program interface (API) for database access.

**2.What are the common tasks or steps of JDBC?**

**Answer:** The steps of loading JDBC is given below:

1. Import the necessary classes.
2. Load the JDBC driver.
3. Identify the data source.
4. Allocate a Connection object.
5. Allocate a Statement object.
6. Execute a query using the Statement object.
7. Retrieve data from the returned ResultSet object.
8. Close the ResultSet.
9. Close the Statement object.
10. Close the Connection object.

**3.What Class.forName will do while loading drivers of JDBC?**

**Answer:** By the Class.forName() we load a JDBC Driver Class under DriverManager. forName() is a public static Method that is throws ClassNotFoundException. When we used System.setProperties() for loading JDBC Driver we need to Security manager clearance, otherwise throws SecurityException but Class.forName() we don’t need that.

**4.Difference between PreparedStatement & Statement?**

**Answer:** PreparedStatement objects are great when:

❑ we need to execute the same statement several times and need to change only specific values.

❑ we are working with large chunks of data that make concatenation unwieldy.

❑ we are working with a large number of parameters in the SQL statement that make string con-catenation unwieldy.

Conversely, Statement objects work well when we have simple statements; and of course, we have no

option if JDBC driver doesn’t support the PreparedStatement interface.

**5.What is SQLException?**

**Answer:** : SQLException is a subclass of an exception. At runtime Java programming Technology return SQLException When a sql statement error . Every method of every JDBC class and interface can throw an exception of type **SQLException.**

**6.What is ResultSet object?**

**Answer:**  java.sql.ResultSet is a java object that is used for database connectivity to hold the data returned by a select query. When we run a select query it returns us the data in a table format with each row representing one logical group of data with a number of columns.   
The result set would contain this table of data and each row can be accessed one by one. we can use the resultset.get() methods to get the data from it.

**7.What packages are used by JDBC?**

**Answer:** JDBC used java. Sql package for Basic JDBC Classes and Interfaces and DataTypes it also map with java.util for date, java.math for BigDecimal.

**8. What is the difference between executequery () and executeupdate ()?**

**Answer:** The difference between executeQuery and executeUpdate is that executeUpdate is for executing statements that change data in the database. For example, use executeUpdate to execute a CREATE an INSERT or an UPDATE statement. executeUpdate returns an int, and the value of that int corresponds to the number of records that were modified. While executeQuery() method is used for executing SQL statements and it returns ResultSet object.

**9.What is TableModel?**

**Answer:** The TableModel interface declares methods that are used by a JTable object to access

the data item to be displayed at each position in the table. This interface is defined in

the javax.swing.table package, along with the JTable class.

**10.What is XML?**

**Answer:** XML stands for Extensible Markup language. XML is a markup language much like HTML that was designed to carry data but not to display data . XML tags are not predefined and we must define our own tags. XML is degined to be self-descriptive.

**11.Describe the differences between XML and HTML?**

**Answer:** XML is not a replacement for HTML. XML and HTML were designed to transport and store data with different goals:

XML was designed to transport and store data with focus on what data is XML is about carrying information.

HTML was designed to display data with focus on how data looks. HTML is about displaying information.

**12.What is an XML namespace?**

**Answer:** XML Namespaces provide a method to avoid element name conflicts. An XML namespace is a collection of element and attribute names that is identified by a URI. A namespace is associated with a particular element in a document. XML namespace declaration looks like:

<sketcher:sketch xmlns:sketcher=”http://www.wrox.com/dtds/sketches”>

A namespace declaration uses a special reserved attribute name, xmlns, within a element.

**13.What is DTD?**

**Answer:** DTD means document type declaration. A document type declaration specifying and external document Type definition(DTD) that identifies markup declarations for the elements used in the body of the document or explicit markup declaration or both.

**14.What is XML Schema?**

**Answer:** XML schema language for defining the content and structure of sets format of data within an XML document it provides a way for us to define and create XML documents that are inherently more precise and therefore safer than documents described by a DTD.

**15.What is document object model?**

**Answer:** The Document object Model(DOM) is an application Program Interface(API). Document object Model represent the HTML & XML page. The DOM used a mechanism that is completely different to simple API for XML(SAX).

**16.What is a Parser?**

**Answer:**  A *parser* is a piece of program that takes a physical representation of some data and converts it into an in-memory form for the program as a whole to use. Parsers are used everywhere in software. An *XML Parser* is a parser that is designed to read XML and create a way for programs to use XML.

**17.What is Well Formed XML Document?**

**Answer:** When an XML document is said to be well-formed, it just means that it conforms to the rules for writing XML as defined by the XML specification.

The rules for a document to be well-formed are as follows:

a. If the XML declaration appears in the prolog, it must include the XML version and May be used character encoding, standalone respectively.

b. If the document type declaration appears in the prolog, the DOCTYPE name must match that of the root element, and must be compliant with DTD.

c. The body of the document must contain root element, which contains all the other elements, and an instance of the root element must not appear in the content of another element. All elements must be properly nested.

**18.What is Java RMI?**

**Answer:** The Java Remote Method Invocation (RMI) system allows an object running in one Java virtual machine to invoke methods on an object running in another Java virtual machine. RMI provides for remote communication between programs written in the Java programming language.

**19.What are the layers of RMI Architecture?**

**Answer:** The three layers are the Stub and Skeleton Layer, the Remote Reference Layer, and the Transport Layer.

**The stub and skeleton layer** is responsible for marshaling and unmarshaling the data and transmitting and receiving them to/from the Remote Reference Layer.

**The Remote reference layer** is responsible for carrying out the invocation.

**The Transport layer** is responsible for setting up connections, managing requests, monitoring them and listening for incoming calls.

**20.What is the role java.rmi.Naming Class?**

**Answer:** The Naming class provides methods for storing and obtaining references to remote objects in the remote object registry.

**21.What is the use of UnicastRemoteObject in RMI?**

**Answer:** The UnicastRemoteObject class provides support for point-to-point active object references using TCP streams. Objects that require remote behavior should extend UnicastRemoteObject.

**22.What is the difference between using bind() and rebind() methods of Naming Class?**

**Answer:** bind method(String name) binds the specified name to a remote object while rebind(String name) method rebinds the specified name to a new remote object,any existing binding for the name is replaced.

**23.What is Stub & skeleton?**

**Answer:** A stub is a remote object at the client-side. This stub implements all the interfaces which remote object implementation supports. The role of the stubs is to marshal and unmarshal the messages that are sent and received on the client or the server side.

A skeleton is a remote object at the server-side. This stub consists of methods that invokes dispatch calls to the remote implementation of objects.

**24.What is DefaultMutableTreeNode & DefaultTreeModel?**

**Answer:** The DefaultMutableTreeNode class in the javax.swing.tree package is adequate for most purposes. This class implements the MutableTreeNode interface and adds a few more methods of its own. The javax.swing.tree package includes a DefaultTreeModel class that implements TreeModel. s We can create a DefaultTreeModel object using a single node that is the root node for our tree.

For example:

DefaultMutableTreeNode dbNode = new DefaultMutableTreeNode(“No Database”);

DefaultTreeModel dbTreeModel = new DefaultTreeModel(dbNode);

**25.Why is XML such an important development?**

**Answer:** XML is now as important for the Web as HTML was to the foundation of the Web. XML allows the flexible development of user-defined document types. It provides a robust, non-proprietary, persistent, and verifiable file format for the storage and transmission of text and data both on and off the Web; and it removes the more complex options of SGML, making it easier to program for.