**Unit 1**

1. Explain features of Swing components.
2. What is Swing? Explain the need of Swing.
3. Discuss the difference between AWT components and Swing components in Java.
4. Write a short note on ‘JFC’.
5. Discuss Swing components hierarchy in java.
6. Describe the three types of text controls in Swing.
7. Write short note on Components of Swings—JLabel, JButton, JTextfield, JTextArea, JPasswordField, Radiobutton, JCheckbox, JList, JTree, JScrollpane, JMenu.
8. Explain the role of JDBC in Java.
9. Write a short note on JDBC drivers and its type.
10. Write the steps to be followed in Java database connectivity for accessing database content.
11. Write in short with syntax along with examples: -
    1. Connection Interface
    2. Statement Interface
    3. ResultSet Interface
    4. PreparedStatement
    5. CallableStatement
12. Write in brief: -
    1. BLOB Object
    2. CLOB Object

**Unit 2**

1. Write a JSP code to display today’s date and time using expression tag.
2. Write a Java code to get ResultSetMetaData Object.
3. Describe how to create an object in JSON.
4. Create a JDBC program to create a Employee table. Insert two records in the table using PreparedStatement.
   1. Explain page directive in JSP.
   2. Explain the include directive in JSP.
5. Explain the following: -
   1. Expression tag
   2. Declaration tag
6. Write a servlet program to accept name and aggregate presentee percentage from index.html If the aggregate presentee presentage is greater or equal than 75, then print “you are eligible to attend exam”, else print “Not eligible to attend exam.”.
7. Write JSP program to accept a number from the user and its factorial. If the number is negative, show error message and accept the number again.
8. Write a short note on JSP application implicit object.
9. Explain session tracking mechanisms in servlets.
10. What is JSP scriplet tag used for?
11. Write a JDBC program to accept employee id from the user, find the employee in the table and display employee’s details (like emp name, id, salary, dept)
12. What is the purpose of HttpSession interface? Explain various methods of this interface.
13. Write a short note on ServletContext Interface.
14. Write a short note on MVC architecture.

**Unit 3**

1. What is JSON? Explain its features.
2. Explain the uses of JSON.
3. Explain the JSON Data types with example.
4. What is a JSON Object? Explain with an example
5. How to access Object values in JSON? Explain giving examples.
6. Explain how to loop an Object in JSON giving example.
7. How to create JSON Arrays? Explain with an example.
8. Explain JSON Schema with an example.
9. Differentiate between JSON and XML.
10. What are Java Beans? Explain its features.
11. Explain properties in Java Beans. Give an example.
12. Explain the advantages and disadvantages of Javabeans.
13. Explain the Struts 2 features.
14. Explain the Model View Controller Architecture in Struts 2.
15. Explain the Struts 2 Components.
16. Explain the struts.xml file
17. Explain the action element in Struts.
18. What do you understand by Interceptors, Value Stack and OGNL in Struts 2.