

(2½ Hours)

[Total Marks: 75]

- N.B.
- 1) All questions are compulsory.
 - 2) Figures to the right indicate marks.
 - 3) Illustrations, in-depth answers and diagrams will be appreciated.
 - 4) Mixing of sub-questions is not allowed.

Q. 1 Attempt All(Each of 5Marks)**(15)**

(a) Multiple Choice Questions:

- (i) What is not true about Swing API?
 - a) Swing components are platform-dependent
 - b) Swing components are light-weight
 - c) Swing supports pluggable look-and-feel
 - d) Swing follows MVC
- (ii) The doGet() method extracts values of the parameter's type and number by using _____
 - a) request.getParameter()
 - b) request.setParameter()
 - c) response.getParameter()
 - d) response.getAttribute()
- (iii) Which object of HttpSession can be used to view and manipulate information about a session?
 - a) session identifier
 - b) creation time
 - c) last accessed time
 - d) All mentioned above
- (iv) Abbreviate the term POJO?
 - a) Performance Old Java Object
 - b) Plain Old Java Object
 - c) Performance Optimize Java Object
 - d) None of the above
- (v) "application" implicit object in JSP is an object of which class?
 - a) javax.servlet.Context
 - b) javax.servlet.HttpContext
 - c) javax.servlet.ServletContext
 - d) javax.servlet.Application

- (b) Fill in the blanks:
 (out, request, IIS, request.getProtocol(), JSP Container, easier, response.getProtocol(), response.sendRedirect(URL), <logic:loop>, difficult, response.sendRedirect(URL))
- Java Server Pages are processed by _____.
 - _____ code retrieves name and version of the protocol?
 - _____ is an implicit object of PrintWriter class.
 - XML is much more _____ to parse than JSON.
 - _____ temporarily redirects response to the browser?
- (c) Answer in 1 - 2 sentences
- What is MIME type for JSON?
 - State True or False: The JDBC API has always supported persistent storage of objects defined in the Java programming language through the methods getObject and setObject.
 - What is a role of HttpServlet?
 - What is purpose of JList?
 - How to make declaration in JSP?

Q. 2 Attempt the following (Any THREE) (15)

- Describe three types of text controls in Swing.
- Write a program to create a login form (for entering the user name and password). On click of "Ok" button check the username and password is correct or not and report with proper messages.
- Differentiate between JList and JComboBox.
- Write a short note on DriverManager class.
- Explain various ways of creating ResultSet in JDBC.
- Write a JDBC program to accept a dept_id from user and displays total number of records in it. (Table: Employee(Eid, dept_id, Ename, Address, Salary))

Q. 3 Attempt the following (Any THREE) (15)

- State and explain advantages of JSP.
- Explain any 5 methods of HttpServletRequest interface.
- Write a JSP program to accept a number from the HTML form, and find its factorial using a recursive function.
- Explain Servlet Life cycle in detail.
- Explain the following implicit JSP objects:
 1) Request 2) pageContext 3)Exception 4)Response 5)Page
- Write a Servlet Program to display the name of the servlet and its initialization parameters with its respective values.

Q. 4 Attempt the following (Any THREE) (15)

- Explain the role of interceptors in struts.
- Discuss the similarities and differences between JSON and XML.
- Explain the getter and setter methods of JavaBeans class.

- (d) List and explain valid JSON data types.
- (e) Design a JavaBean program to store and retrieve different BankAccount details.
- (f) Explain the significance of struts.xml and web.xml file in Struts 2 application.

Q. 5 Attempt the following (Any THREE) (15)

- (a) Write a program in java which creates a list containing at least 3 theatres name. On the click of any theatre, the movie name from theatre should be displayed in a Text field.
- (b) Write java program to insert one record of information into the database table named (depttable), by accepting the details from the user; using PreparedStatement. **depttable(deptno int primary key, deptname varchar(10), deptloc varchar(10))**
- (c) Explain the request life cycle of Struts 2.
- (d) Discuss the features of JFC.
- (e) Write a JSP based application that serves the purpose of simple calculator.
