(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) responce.getParameter()
d) responce.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.setRedirect(URL), <logic:loop>, difficult, response.sendRedirect(URL))

(i) Java Server Pages are processed by_____.

(ii) _____code retrieves name and version of the protocol?

(iii) _____ is an implicit object of PrintWriter class.

(iv) XML is much more _____ to parse than JSON.

(v) _____ temporarily redirects response to the browser?

(c) Answer in 1 – 2 sentences

(i) What is MIME type for JSON?

(ii) 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.

(iii) What is a role of HttpServlet?

(iv) What is purpose of JList?

(v) How to make declaration in JSP?

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

(a) Describe three types of text controls in Swing.

(b) 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.

(c) Differentiate between JList and JComboBox.

(d) Write a short note on DriverManager class.

(e) Explain various ways of creating ResultSet in JDBC.

(f) Write a JDBC program to accepts 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)

(a) State and explain advantages of JSP.

(b) Explain any 5 methods of HttpServletRequest interface.

(c) Write a JSP program to accept a number from the HTML form, and find its factorial using a recursive function.

(d) Explain Servlet Life cycle in detail.

(e) Explain the following implicit JSP objects:

1) Request 2) pageContext 3)Exception 4)Response 5)Page

(f) 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)

(a) Explain the role of interceptors in struts.

(b) Discuss the similarities and differences between JSON and XML.

(c) 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.

****