

- N.B
- 1) All questions are compulsory.
 - 2) Figures to write 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 5 marks)

(15)

(a) Multiple choice Questions:

i) Which method can set or change the text in a Label?

- | | |
|--------------|-------------------|
| a. setText() | b. getText() |
| c. Add() | d. None the above |

ii) These objects hold data retrieved from a database after you execute an SQL query using Statement objects.

- | | |
|----------------------|--------------|
| a. CallableStatement | b. DBMS |
| c. Statement | d. ResultSet |

iii) Which methods are used to bind the objects on HttpSession instance and get the objects?

- | | |
|-----------------|----------------------|
| a. setAttribute | b. getAttribute |
| c. Both A & B | d. None of the above |

iv) 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 |

v) Abbreviate the term POJO?

- | | |
|-------------------------------------|--------------------------------|
| a) Plain Old Java Object | b) Performance Old Java Object |
| c) Performance Optimize Java Object | d) None of the above |

(b) Fill in the blanks:

(setText() ,public void rollback() ,.json,Singleton Session Bean,public void commit(),ErrorPage, .json,getText(),IsErrorPage,Stateful Session Bean)

i) ----- method drops all changes made since the previous commit/rollback.

ii) ----- method can get the text in a Label?

iii) -----attribute specifies a JSP page that should process any exceptions thrown but not caught in the current page.

iv) ----- is the file extension of JSON.

v) ----- maintain their state between client invocations but are not required to maintain their state across server crashes or shutdowns.

- (c) Answer in 1-2 sentence.
- i) List any two constructor of JButton ().
 - ii) List the types of Drivers in JDBC.
 - iii) What are the life cycle methods of Servlet?
 - iv) List the JSP Directives.
 - v) Abbreviate the term OGNL.

Q.2 Attempt the following (Any Three)

(15)

- (a) Write the difference between AWT and Swing.
- (b) Explain how to create and use JLabel component in swing.
- (c) Write short note on JTabbed Pane.
- (d) Explain JDBC Architecture.
- (e) Explain the statement class.
- (f) Write a JDBC program to accept customer details from user and save in database. (Assume Customer table exists with fields : Customerid, Name, Address, ContactNo)

Q.3 Attempt the following (Any Three)

(15)

- (a) Explain the servlet Life Cycle.
- (b) Write a short note on ServletContext Interface.
- (c) Write short note on JSP Scripting elements.
- (d) Explain JSP Page Directive.
- (e) Write a servlet program to perform addition of two Numbers.
- (f) Write a JSP program to find square root of given Number.

Q.4 Attempt the following (Any Three)

(15)

- (a) Explain interceptors in struts.
- (b) What is OGNL? Explain the execution flow of OGNL.
- (c) Compare between JSON and XML.
- (d) What are JavaBeans? Explain the components of JavaBeans.
- (e) List and explain Features of struts2.
- (f) Explain how to use JSON Schema.

Q.5 Attempt the following (Any Three)

(15)

- (a) Explain how to create and use JList component in swing.
- (b) Write short note on ResultSet.
- (c) Write a note on MVC Architecture of struts 2.
- (d) Explain JSP life cycle.
- (e) Write short note about SavePoints.