

**Integ. M.Sc. (CS) Semester 6 Examination**  
**Distributed Application Development**

Time : 3-00 Hours]

June-2024

[Max. Marks : 70

**Instructions:**

- Write both the Sections in the separate answer book.
- Both Sections having equal weightage.
- Draw Diagrams wherever necessary.
- Make Assumptions wherever necessary.

**SECTION – I**Q-1 Attempt the following: (Any five) 05

1. \_\_\_\_\_ method is used to delete a session in servlet.  
a) kill() b) invalidate() c) sessionTimeout() d) None of these
2. \_\_\_\_\_ is known as thin driver  
a) Type-1 b) Type-3 c) Type-4 d) Type-2
3. \_\_\_\_\_ Package contains the generic interface and classes that are implemented & extended by all servlets.  
a) java.util b) java.servlet c) java.servlet.http d) java.servlets
4. In which file do we define a servlet mapping?  
a) servlet-mapping.xml b) web.xml c) servlet.xml d) None of these
5. \_\_\_\_\_ interfaces are implements on GenerticServlet class.  
a) java.servlet.Servlet and java.io.serializable  
b) javax.servlet.Servlet and java.io.serializable  
c) javax.servlet.Servlet and java.io.deserializable  
d) None of these
6. Tomcat is \_\_\_\_\_  
a) Container b) Web server c) None of these

Q-2 Attempt the following: (Any five) 10

1. Differentiate GET and POST
2. Write a servlet to display current date and time.
3. Describe some problems with cookies.
4. Explain role of container.
5. What is Request Dispatcher? What is the difference between Request dispatcher's forward() and include() method?
6. List the differences between GenericServlet and HttpServlet

Q-3 Attempt the following: (Any four) 20

1. What is Servlet? What are the strengths of Servlet? Explain any three strengths of Servlet compared to its competitors.
2. Explain Servlet's life cycle stages with example.
3. What do you mean by cookies? What are the typical uses of cookies? Explain cookies in servlet with suitable example.
4. Explain the structure of Java web application.
5. What is session? describe session tracking basics with example.
6. What is JDBC? List the different types of JDBC driver available for database connectivity and write down steps of database connectivity in Java.

## SECTION – II

- Q-4 Attempt the following: (Any five) 05
1. Which one is true for EL?
    - a) &{expr} b) \${expr} c) %{expr} d) @ {expr}
  2. The object can be accessed from any page has \_\_\_\_ scope.
    - a) session b) application c) page d) pageContext
  3. Which of the following is used to declare methods in JSP?
    - a) <%! %> b) <% %> c) <%= %> d) None of these
  4. XML stands for \_\_\_\_\_.
    - a) eXtensible Markup Language b) Xtensible Markup Language
    - c) eXtensible Markup Language d) Xtensible Markup Language
  5. In MVC 'C' stands for \_\_\_\_\_.
    - a) Container b) Controllers c) Collector d) Controller
  6. XML tags are case-insensitive?
    - a) Yes b) No
- Q-5 Attempt the following: (Any five) 10
1. Differentiate JSP and Servlet.
  2. Differentiate DTD and Schema.
  3. Differentiate XML and JSON.
  4. Explain errorPage and isErrorPage attributes of page directives.
  5. Explain XML.
  6. What is difference between include directive and jsp:include action tag?
  7. How to declare in a JSP page that Indicates whether or not the page is intended to be an error page of some other JSP page.
  8. Create DTD file following XML (**Note:** students elements contains one or more student element).
- ```

<students>
    <student id="2">
        <name>Vijay</name>
        <mobile>1234567890</mobile>
    </student>
</students>
  
```
- Q-6 Attempt the following: (Any four) 20
1. What is Session? Define Session Tracking. What are the session tracking techniques?
  2. List and explain various stages of JSP life cycle. Briefly give the function of each phase.
  3. Explain the following
    - 1) JSP scriplets 2) JSP Comments 3) JSP Expressions
    - 3) JSP Declarations 5) <jsp:forward>
  4. List the JSTL core tags and explain any three with examples.
  5. What is MVC architecture? Explain MVC architecture with neat Sketch and its advantages.
  6. Write a JSP that takes two numbers as an input and display all the prime numbers between them. Also write web.xml description for the servlet.
  7. Explain use of <jsp:useBean> action tag with example.

—X—