

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-V EXAMINATION – WINTER 2025****Subject Code:3154204****Date:25-11-2025****Subject Name:Internet and Web Programming****Time:10:30 AM TO 01:00 PM****Total Marks:70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

MARKS

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| Q.1 | (a) What is java networking? Explain the purpose of the URL class in java. | 03 |
| | (b) Write steps to create a socket connection using TCP in java. | 04 |
| | (c) Write a java program to create application using TCP Sockets where client can send message and server respond with the reverse of them. | 07 |
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| Q.2 | (a) What is the purpose of the ResultSetMetaData interface, and how is it used in JDBC? | 03 |
| | (b) Explain the SQLWarning class and its role in JDBC error handling. | 04 |
| | (c) Explain types of JDBC Drivers in brief. | 07 |
| OR | | |
| | (c) What is HQL? Write difference between HQL and SQL. | 07 |
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| Q.3 | (a) What is a Servlet, and how does it contribute to web development? | 03 |
| | (b) What is socket? Explain the difference between TCP and UDP. | 04 |
| | (c) Briefly discuss the technique of URL rewriting in session management | 07 |
| OR | | |
| Q.3 | (a) What is an API , how does it work ? | 03 |
| | (b) What is the purpose of the web.xml deployment descriptor in a web application? | 04 |
| | (c) Explain the life cycle of a JSP page, and how does it differ from the life cycle of a Servlet? | 07 |
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| Q.4 | (a) What are JSP directives, and how are they used in JSP development? | 03 |
| | (b) What are JSP implicit objects, and how are they utilized in JSP programming? | 04 |
| | (c) How can JSP be utilized in an MVC application design, and what are the key components in this approach? | 07 |
| OR | | |
| Q.4 | (a) How do Filters enhance the functionality of Servlets? Provide examples of scenarios where Filters are useful. | 03 |
| | (b) What is the difference between include directive and jsp: include action tag? | 04 |
| | (c) Develop a JSP form that accepts user input for a username and password. Implement server-side validation to ensure that both fields are not empty before submission. Provide feedback to the user if validation fails. | 07 |

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| Q.5 | (a) | What is Hibernate, and what are its main features and capabilities in the context of database management? | 03 |
| | (b) | What is the role of validation tags in JSF, and how do they help ensure data integrity and user input validation | 04 |
| | (c) | Write a simple Hibernate program that demonstrates the configuration setup for Hibernate using XML configuration files. | 07 |

OR

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| Q.5 | (a) Explain the purpose and usage of Facelets tags in JSF | 03 |
| | (b) Draw and explain Hibernate Architecture. | 04 |
| | (c) Explain the request processing life cycle of JSF and its stages. | 07 |
