

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI EXAMINATION – SUMMER 2025****Subject Code:3161609****Date:30-05-2025****Subject Name:Enterprise Application Development****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 Server Faces (JSF) and its primary purpose in web development? | 03 |
| | (b) How do you perform custom data validation in JSF? | 04 |
| | (c) Describe the advantages of using Faces flows in JSF applications. | 07 |
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| Q.2 | (a) Discuss the HTML5 support features introduced in JSF | 03 |
| | (b) Explain the concept of a persistence context in JPA and its lifecycle | 04 |
| | (c) Provide an example of a simple JSF application, including the necessary files and configurations. | 07 |
| OR | | |
| | (c) Provide examples of JPQL (Java Persistence Query Language) queries for retrieving data from the customer database. | 07 |
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| Q.3 | (a) What is the Java Persistence API (JPA), and what are its main components? | 03 |
| | (b) What is Message Driven Beans (MDB) in EJB, and how do they differ from session beans? | 04 |
| | (c) Explain the concept of asynchronous method calls in EJB. | 07 |
| OR | | |
| Q.3 | (a) Provide examples of bidirectional and unidirectional relationships in JPA entities | 03 |
| | (b) Describe the types of session beans and their purposes in EJB | 04 |
| | (c) Describe the life cycle of a session bean in EJB, including its creation, invocation, and removal phases. | 07 |
| Q.4 | (a) What is dependency injection, and how does CDI facilitate it? | 03 |
| | (b) Describe the concept of CDI events and event firing in Java EE applications | 04 |
| | (c) Provide examples of using JSON Pointer and JSON Patch for navigating and modifying JSON documents. | 07 |
| OR | | |
| Q.4 | (a) What is Java Messaging Service (JMS), and what role does it play in enterprise messaging? | 03 |
| | (b) What is a message queue, and how does it facilitate asynchronous communication between applications? | 04 |
| | (c) Explain the role of CDI in managing the lifecycle and dependencies of Java EE components | 07 |
| Q.5 | (a) List various advantages of RESTful Web Services | 03 |
| | (b) What is filter in Servlet? What is its use? Briefly explain. | 04 |
| | (c) Differentiate forward() of RequestDispatcher and sendRedirect() of HttpServletResponse. | 07 |
| OR | | |
| Q.5 | (a) What are microservices, and how do they differ from monolithic architectures? | 03 |
| | (b) Discuss the differences between query parameters and path parameters in RESTful APIs. | 04 |
| | (c) Explain the steps involved in developing a WebSocket server endpoint in Java. | 07 |
