



RAN-2511000608011001

M.Sc. (IT) (Sem.-8) Examination April - 2026

Enterprise Java (Paper-801)

Time: 3 Hours]
[Total Marks: 70

સૂચના : / Instructions (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fill up strictly the above details on your answer book	Seat No.: <table border="1"> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table> Student's Signature						

- Q.1. Do as directed (Any TWO) 14**
- Explain Java EE architecture layers and container services.
 - Develop JSPpage demonstrating directive elements, action elements, and EL.
 - Discuss Servlet Filters and Web Listeners in enterprise applications.
- Q.2. Do as directed (Any TWO) 14**
- Explain EJB Timer and Scheduler services.
 - Implement singleton and synchronous EJB method with example.
 - Explain JMS architecture and analyze its advantages in distributed systems.
- Q.3. Do as directed (Any TWO) 14**
- Explain the working of Persistence Context in reference to JPA. Also list and explain various method of JPA
 - Discuss the life cycle of stateful beans.
 - Discuss and implement crud operations on many to many relationship.
- Q.4. Do as directed (Any TWO) 14**
- Explain data integrity and confidentiality mechanisms in Java EE.
 - Describe implementation of JWT-based security in REST services.
 - Critically analyze OAuth vs OpenID Connect in enterprise security.
- Q.5. Do as directed (Any TWO) 14**
- Explain JSF Request Processing Lifecycle phases.
 - Develop JSF application demonstrating managed bean scopes and event handling.
 - Design a JSF web application using custom validators and converter