

**2211000608020001**  
**EXAMINATION FEBRUARY-MARCH 2024**  
**MASTER OF SCIENCE (INFORMATION TECHNOLOGY)**  
**(EIGHTH SEMESTER)**  
**802: ENTERPRISE JAVA - LEVEL 2**

[Time: As Per Schedule]

[Max. Marks: 70]

**Instructions:**

- 1. 1. Fill up strictly the following details on your answer book**
  - a. Name of the Examination : **MASTER OF SCIENCE (INFORMATION TECHNOLOGY) (EIGHTH SEMESTER)**
  - b. Name of the Subject : **802: ENTERPRISE JAVA**
  - c. Subject Code No : **2211000608020001**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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Student's Signature

**Q.1 Answer the following Questions in brief. (Any 8)**

**16**

- a) Explain the importance of JNDI. Explain the steps of creating a JNDI for message queues.
- b) Write a sample code show One to One Relationship between course and course-coordinator.
- c) How can you create thread safe singleton beans?
- d) Explain the working of JSON Web Tokens.
- e) List and Explain Callback methods in EJB
- f) Explain the reason for evolution from two to n-tier architecture
- g) What are the differences between local and remote EJBs and how they are implemented.
- h) Compare the working of EJB and webservices on basis of their performance and robustness.

- i) Differentiate between Timers and schedulers with example

**Q.2 Do as directed (Any Two)**

**18**

- a) What are EJB. Explain their types and under what conditions they can be used. Describing lifecycle of Stateful bean with example.
- b) Explaining the working of JPA using Entities, Relationships, Persistence Context, and fetch Methods. Write suitable code for the same.
- c) Write a code to add, remove and retrieve the data from Many to Many Relationship entities and how Java EE maps it in the Persistence API.

**OR**

- c) Explain the working of Message Driven bean and JMS

**Q.3 Do as directed**

**18**

- a) Explain the building blocks of soap based webservices
- b) Explain the terms
- a) Singleton Beans
  - b) Asynchronous beans
  - c) local and remote beans

**Q.4 Do as directed (Any two)**

**18**

- a) Explain any Two
- a) EJB Timer
  - b)EJB security for Authorization
- b) Java EE 8 Security flow in Java Web Server
- c) Explain Rest Design pattern and its usage

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