

RAN-2611000502011001
M.Sc (CA) (Sem.-II) Examination February - 2026
Open-Source Cloud And Database Deployment (TH) (Paper - 1)
[Total Marks: 25]
સૂચના : / Instructions

- (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the above details on your answer book

Seat No.:

Student's Signature

Q.I. [A] Write answers of following Multiple Choice Questions (Any 4 out of 5)
4

- Which open-source tools are commonly used for cloud storage and file synchronization?
 - Hadoop and Spark
 - Docker and Kubernetes
 - Nextcloud and MinIO
 - Jenkins and Git
- Which practice ensures data safety and business continuity in cloud-hosted databases?
 - Index optimization
 - Data normalization
 - Regular backup and recovery procedures
 - Query caching
- Which package is commonly used in Node.js projects to load environment variables from a .env file?
 - nodemon
 - axios
 - dotenv
 - bcrypt
- Platforms such as Render and Railway are mainly used to:
 - Design UI components
 - Host static images only
 - Deploy backend and full-stack applications
 - Manage DNS
- Which frontend library is widely used to display dynamic data using reusable components?
 - AngularJS
 - Vue
 - jQuery
 - React

Q.I. [B] Write answers for the following (Any 4 out of 5)
4

- State any four advantages of using open-source cloud solutions.
- What is a cloud dashboard? How is it used for dataset upload?
- What is meant by error handling in frontend applications, and why is it necessary for live data display?
- What is CI/CD, and how does it support automation in static website deployment?
- What is log management, and how do tools such as Logtail help in post-deployment operations?

- Q.2. [A]** What is form validation and data binding, and why are they important in real-time database interaction? **5**
- OR**
- Q.2. [A]** Which tools and methods are used to import datasets using CLI and GUI with reference to Adminer and DBeaver? **5**
- Q.2. [B]** What is error handling in frontend applications, and how does it support live data refresh in dynamic web systems? **4**
- Q.3. Write answers for the following (Any 2 out of 3)** **8**
1. State the purpose of SCP and SFTP in uploading datasets to cloud servers.
 2. What is Dockerization? How does Dockerizing a full-stack application help in cloud deployment and environment consistency?
 3. Which cloud deployment models are used in practice (Public, Private, Hybrid, Community) and where is each model suitable?
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