

RAN-2311000501010003 / 2511000501011001
M.Sc. (C.A.) (Sem. I) Examination November - 2025
101 - Version Control and Database Management
Time: 1 Hour]
[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.:

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Student's Signature

Q. 1. [A] Select most correct answer from the following: (Write only correct choice) [04]

- Which Git file state indicates that a file has been modified but not yet staged?
 - Untracked
 - Staged
 - Modified
 - Committed
- Which of the following is an example of Continuous Integration/Continuous Deployment (CI/CD) provided by GitHub?
 - GitHub Pages
 - GitHub Issues
 - GitHub Actions
 - GitHub Wiki
- What is the main advantage of containerization in software development?
 - Increases hardware requirements
 - Makes applications dependent on the host OS
 - Provides isolated environments for applications
 - Eliminates the need for cloud deployment
- Which system is designed for analytical processing?
 - OLTP
 - OLAP
 - File System
 - RDBMS

[B] Answer following in two or three lines : (Short Answers) (ANY Four) [04]

- What is "staged" state in Git?
- What is the difference between pushing and pulling in GitHub?
- What is Docker Hub and how is it used?
- Explain the role of a Data Cube.
- What does the Transformation phase in ETL do?

Q.2 Answer Following in detail:

- [A] Explain the concept of Version Control Systems in detail. Discuss their importance, different types (centralized vs. distributed). [07]

OR

- [A] Explain Git branching and merging in detail. Discuss creating branches, switching, merging, and resolving merge conflicts with proper examples.

[B] Explain the architecture of Docker in detail, covering its main components such as Docker Daemon, CLI, Docker Hub, Images, and Containers with suitable examples. [05]

Q. 3. Write short-note: (Any One)

[05]

[A] What is a Data Warehouse? Explain its features and types.

[B] Define ETL. Explain its phases with examples.
