

NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI-15
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
B.TECH. DEGREE, V SEMESTER, II CYCLE TEST, OCT-2024
CSPC52 - Database Management and Systems

DATE: 16-10-2024

TIME: 03.30 p.m. – 04.30 p.m.

MAX.MARKS:20 marks

Answer all Questions

5 x 4 =20 marks

any four

1. Let a relation R (A, B, C, D) and functional dependency $\{AB \rightarrow C, C \rightarrow D, D \rightarrow A\}$ is given. Relation R is decomposed into R1(A, B, C) and R2(C, D). Check if the decomposition is lossless and dependency is preserved in it.
2. Write short notes on Third Normal Form (3NF) and Boyce-Codd Normal Form with examples.
3. Explain log based recovery scheme with an example.
4. Write short notes on cascading rollback and define a cascadeless schedule.
5. Create an Employee's collections in MongoDB and perform the basic CRUD operations in the Unstructured data.