**DBS**

**REFERENCE QUESTIONS**

**UNIT-III**

1. Functions and Procedures in database with syntax and example.
2. Programs using Functions and Procedures.
3. Write the SQL queries for the following.
   1. SELF JOIN
   2. TWO different TABLES JOIN
   3. CONDITIONAL JOIN
   4. SUB QUERIES
   5. QUERIES using various CLAUSES of SQL.
4. Normal Forms. ( ALL )
5. Functional-Dependency.

**UNIT-IV**

1. B+-tree Index Files
2. B-tree Index Files
3. Multiple-Key Access
4. Static Hashing Vs Dynamic Hashing
5. Short Notes on HASHING and INDEXING.
6. Bitmap Indices
7. Transaction? Various Transaction States.
8. Explain the concept of “Conflict Serializability” with an example.
9. Construct B+ tree for the following set of values ( with n=4 , as pointer value )

1, 4, 7, 10, 17, 21, 31, 25, 19, 20, 28, 42

1. Construct B+ tree for the following elements

6 17 28 22 43

54 65 76 87 98 99

1. Construct B-tree and B+ tree for the following set of values

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**UNIT-V**

1. Log Based Protocol.
2. 2 phase lock based Protocol. (2PL)
3. Log Based Recovery.
4. Multiple Granularity protocol.
5. Explain ARIES algorithm
6. Timestamp-based Protocols
7. Validation-based Protocols
8. Storage Structure
9. Recovery with Concurrent Transactions