SYLLABUS FOR THE POST OF
DATABASE ADMINISTRATOR

(A) WRITTEN TEST

1. Relational Database
    a. Relational Model
    b. Relational Algebra
    c. Transaction
2. SQL Query
    a. Basic Query: DDL, DML
    b. Joining, Views, Triggers
    c. Functions, Stored Procedures
3. Database Designing
    a. ER Diagram
    b. Normalization
    c. Indexing
4. Query Processing
5. Database Management
    a. Database Optimization
    b. Query Optimization
    c. Concurrency Control
    d. Failure Classification
    e. Backup and Recovery
    f. Database Change Management
    g. Performance Management
6. Database Security
7. Database Application Development
    a. Java Connectivity
8. PostgreSQL
    a. Database Caching Configuration
    b. Query Optimization
    c. Pooling and Caching
    d. Scaling with Replication
    e. LIVE Migration

(B) TRADE TEST

1. PostgreSQL
    a. SQL Query, DDL, DML, Join, View, Trigger, Stored Procedure, Functions
    b. Transaction and Locking
    c. Query cost, EXPLAIN, Indexing
    d. Log Files and System Statistics
    e. Performance using Query Optimization
    f. Backup and Recovery
    g. Migrating to PostgreSQL

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