



Certificate in Database Management Systems (DBMS)

Vskills Certifications

Vskills Brochure



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DBMS or Database Management Systems is an application software for management of data as per its representational model. Due to immense growth in data there is a continuous and increasing need for DBMS professionals to manage data.

Why should one take this certification?

DBMS or Database Management Systems have become an integral part of IT systems and companies rely on DBMS for their operational and strategic needs.

The Certificate in Database Management Systems (DBMS) is suitable for professionals and graduates who want to stand out amongst their peers in skills and knowledge on DBMS.

The course covers

- DBMS Basics
- Data Modeling
- Relational Data Model
- Data Storage and DBMS File Structure
- Transaction And Concurrency
- Backup and Recovery
- Various DBMS (open source, commercial, cloud-based and No SQL)

Who will benefit from taking this certification?

The certification is suitable for administrators, system admins, IT admins and professionals engaged in database support. The certification is of immense benefit to professionals in IT management or administration department especially senior executives and managerial cadre candidates, to increase and demonstrate their skills in Database Management Systems (DBMS).

Test Details

- **Duration:** 60 minutes
- **No. of questions:** 50
- **Maximum marks:** 50, Passing marks: 25 (50%)

There is no negative marking in this module.

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Fee Structure

Rs. 2,499/- (Excludes taxes)*

*Fees may change without prior notice, please refer <http://www.vskills.in> for updated fees

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1. DBMS Basics

- 1.1 What is a Data?
- 1.2 What is a Database?
- 1.3 What is DBMS or Database Management System?
- 1.4 DBMS vs RDBMS vs File System
- 1.5 Client/Server Basics
- 1.6 DBMS Architecture
- 1.7 Data Models
- 1.8 Data Schemas
- 1.9 Data Independence
- 1.10 ACID Property

2. Data Modeling

- 2.1 Entity Relationship (E-R) Model
- 2.2 DBMS Keys
- 2.3 Mapping Constraints
- 2.4 DBMS Generalization
- 2.5 DBMS Aggregation
- 2.6 ER Diagram Representation

3. Relational Data Model

- 3.1 Relational Data Model
- 3.2 Codd's Rules for RDBMS
- 3.3 Relational Algebra
- 3.4 Relational Calculus
- 3.5 Integrity Constraints
- 3.6 ER to Relational Model

4. Relational Database Design

- 4.1 Dependency (Functional and Multivalued)
- 4.2 DBMS Normalization
- 4.3 DBMS Normal Forms (1NF to 5NF)
- 4.4 Database Joins

5. Data Storage and DBMS File Structure

- 5.1 File Organization (Sequential, Heap, Hash and B+)
- 5.2 DBMS ISAM

6. Indexing and Hashing

- 6.1 DBMS Indexing
- 6.2 Static and Dynamic Hashing

7. Transaction Processing

- 7.1 Transaction Processing
- 7.2 Serializability
- 7.3 Recoverability
- 7.4 Log-Based Recovery
- 7.5 DBMS Checkpoint
- 7.6 Deadlock in DBMS

8. Concurrency Control

- 8.1 Concurrency Control Protocols
- 8.2 Multiple Granularity

9. Backup and Recovery

- 9.1 Data Backup
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- 9.3 RAID

10. SQL

- 10.1 SQL Datatype
- 10.2 SQL Commands, Operators and Statements
- 10.3 SQL Clauses
- 10.4 SQL Aggregate Function
- 10.5 SQL JOIN
- 10.6 SQL Set Operation
- 10.7 SQL Query Processing

11. Open Source DBMS

- 11.1 MySQL
- 11.2 PostgreSQL

12. Commercial DBMS

- 12.1 Microsoft Access
- 12.2 Microsoft SQL Server
- 12.3 Oracle

13. NoSQL or Big Data DBMS

- 13.1 Cassandra
- 13.2 HBase
- 13.3 MongoDB
- 13.4 CouchDB

14. Cloud DBMS

- 14.1 AWS
- 14.2 GCP
- 14.3 Microsoft Azure

Sample Questions

1. Select from the following option which creates and deletes the structure of the relations
 - A. DML(Data Manipulation Language)
 - B. Query
 - C. Relational Schema
 - D. DDL(Data Definition Language)

2. What characterizes one to many relationship?
 - A. One class may have many teachers
 - B. One teacher can have many classes
 - C. Many classes may have many teachers
 - D. Many teachers may have many classes

3. Which phase involves gathering required fields for the database design?
 - A. Data Definition
 - B. Data Refinement
 - C. Establishing Relationship
 - D. None Of The Above

4. Which of the following option establishes an association between related tables?
 - A. Line
 - B. Relationship
 - C. Primary Key
 - D. Records

5. Select the option which uniquely identifies each record
 - A. Primary Key
 - B. Key Record
 - C. Unique Key
 - D. Field Name

Answers: 1 (D), 2 (B), 3 (A), 4 (B), 5 (A)

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- ▶ **Sales, BPO**
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 - Certified Telesales Executive

& many more job related certifications

Contact us at:
V-Skills
011-473 44 723 or info@vskills.in
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