

MAY 2014  
DATABASE ADMINISTRATION  
MCA-301

Roll No.-----

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NOTE:-Attempt one question each from Section A,B,C&D, and the entire Section-E

SECTION-A

- 1)
- a) What is database administration? What are its functions and describe different forms of it.
  - b) Compare MS-SQL server and ORACLE server (give at least 4 comparisons). How do you configure various services of MS-SQL? (10, 10)
- 2)
- a) What is client server model of computing? What are its advantages? Explain the two tier model of client server? How is it different from 3 tier model? Explain with the help of an example.
  - b) What is the purpose of a Primary and Secondary indices in a database system? Explain with the help of examples. Which of the two indices enhance performance more? Give reason. (10, 10)

SECTION-B

- 3) What is database replication, and how does it increase database scalability? What problem does replication have? Design a high-availability solution that is based on replication. (20)
- 4) Explain the following in the context of performing Data Management Tasks:
- a) Import and export data
  - b) Implement data compression (10, 10)

SECTION-C

- 5)
- a) What is database security? How can a database be made more secure? How does database security differ from database integrity? Explain with the help of an example.
  - b) To automate many of the tasks you need to perform to maintain your SQL Server, you must define schedules when your jobs run. Create a new schedule for your Simple Backup job that will run the job every weekday at noon. (10, 10)
- 6)
- a) What are various types of database failure? How can a database recover from failure when many transactions are going on? Describe with the help of an example.
  - b) What is database encryption? What is the need of database encryption? How do you implement database encryption in a database? (10, 10)

SECTION-D

- 7) Explain the different aspects of database tuning in relational database? Explain how Query tuning help in database tuning. (20)
- 8)
- a) Define database partitioning, and how it can increase the performance of a database server. What problems are caused by partitioning a database?
  - b) What is database mirroring? Explain the procedure to implement database mirroring in a database server. (10, 10)

SECTION-E (Compulsory Question)

- 9)
- a) As a Database administrator, how can you meet the end-user requirements?
  - b) What is the difference between a database schema and a database instance?
  - c) What do you mean by 'communication protocol'?
  - d) How Does Database Security Differ from User Management?
  - e) Explain account level, table level and column level privileges.
  - f) Define RAID.
  - g) What is a sub-query?
  - h) Define high availability in a database.
  - i) What is 'audit trail' in a database?
  - j) Within a database, what is a primary key? (10x2=20)

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