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MBA IV Semester

M-453
Emerging Technologies in Database Management

Sample Questions

Part A: Short answer question (up to 25 words)

Part B: Analytical/ problem Solving questions

Part C: Descriptive/ Analytical/ Problem Solving/ Case questions.

Part A

Unit 1 Introduction to Database management

Q1.What is DBMS and what is its utility? ...
Q2. What is a Database? ...
Q3. Explain a few advantages of a DBMS. ...
Q4. Explain different languages present in DBMS. ...
Q5. What is meant by ACID properties in DBMS?

Unit 2 The Relational Database Model

Q6. Relational Data Model
Q7. SQL and Relational Algebra
Q8. Enhanced Entity Relationship Data Model
Q9. Functional Dependencies and
Q10. Concurrency Control and Recovery

Unit 3 Normalization

Q11.What are the four 4 types of database normalization?

Q12.What are the 3 levels of database normalization?

Q13. What is the main purpose of normalization in a database?

Q14.What is the basic rule for normalization?

Unit 4 Structured query language

Q15. What is SQL?
Q16. What is the difference between SQL and MySQL?
Q17. What are Tables and Fields?
Q18. What are Constraints in SQL?
Q19. What is a Primary Key?

Unit 5 Entity Relationship Modelling

Q20. What are the 3 main components of entity-relationship modeling?

Q21. What is the purpose of entity-relationship Modelling?

Q22. What are the limitations of ER model?

Q23. What are the main elements of entity relationship model?

Unit 6 Distributed Database management

Q24.What is the main purpose of distributed database?

Q25. What are the two types of distributed database?

Q26. What is the main problem of distributed database?

Q27. What are the types of distributed database management?

Unit 7 NOSQL Data Management

Q28. Compare NoSQL & RDBMS

Q29. What is NoSQL?

Q30. What are the features of NoSQL?

Q31. Explain the difference between NoSQL v/s Relational database?

Q32. Explain "Polyglot Persistence" in NoSQL?

Q33. How does NoSQL DB budget memory?

Q34. How to script NoSQL DB configuration?

Q35. Does NoSQL Database Interact With Oracle Database?

Unit 8 Advance Data Models

Q36. What Are the Three Types of Data Models?

Q37. What is a Table?

Q38. What is Normalization?

Q39. What Does a Data Modeler Use Normalization For?

Q40. What is Denormalization, and What is its Purpose?

Q41. What Does ERD Stand for, and What is it?

Q42. What's the Definition of a Surrogate Key?

Part B

Unit 1

Q1. What is business intelligence? Describe the BI framework.

Q2. What are the most relevant differences between operational and decision support data?

Q3. What is a data warehouse, and what are its main characteristics? How does it differ from a data mart?

Q4. What is OLAP, and what are its main characteristics?

Unit 2

Q5. Explain ROLAP and give the reasons you would recommend its use in the relational database environment.

Q6. Explain the use of facts, dimensions, and attributes in the star schema and explain performance improvement techniques used in star schemas

Q7. Explain some of the most important issues in data warehouse implementation.

Q8. How does data mining work? Discuss the different phases in the data-mining process.

Unit 3

Q9. Explain the role of databases in organizations (OR) Describe and contrast the information needs at the strategic, tactical, and operational levels in an organization.

Q10. Describe the DBA's responsibilities(OR) Explain managerial and Technical functionalities of DBA.

Q11. How can the DBA function be placed within the organization chart? What effect(s) will that placement have on the DBA function?

Unit 4

Q12. Explain and contrast the differences and similarities between the DBA and DA.

Q13. What are security vulnerabilities? What is a security threat? Give some examples of security vulnerabilities that exist in different IS components.

Unit 5

Q14. List and briefly explain the four steps performed during the logical design stage.

Q15. List and briefly explain the three steps performed during the physical design stage.

Unit 6

Q16. What is RDBMS? How is it different from DBMS?

Q17. What is the difference between parametric & non-parametric models?

Q18. What is the difference between SQL and MySQL?What are the different subsets of SQL?

Q19. What do you mean by table and field in SQL?What are joins in SQL?

Q20 .What is the difference between CHAR and VARCHAR2 datatype in SQL?

Q21. What is the Primary key?What are Constraints?What is the difference between DELETE and TRUNCATE statements?

Unit 7

Q22. Compare NoSQL & RDBMS.What is NoSQL ans What are the features of NoSQL? ...

Q23. Explain the difference between NoSQL v/s Relational database? Explain "Polyglot Persistence" in NoSQL? ...

Q24. How does NoSQL DB budget memory? How to script NoSQL DB configuration?

Q25. Does NoSQL Database Interact With Oracle Database?

Unit 8

Q26. What Are the Critical Relationship Types Found in a Data Model? Describe Them.

Q27. What Are the Most Common Errors You Can Potentially Face in Data Modeling?

Q28. In the Context of Data Modeling, What is the Importance of Metadata?

Q29. What's the Difference Between forwarding and Reverse Engineering, in the Context of Data Models?

Part C

Unit 1

Q1. Why is the use of DBMS recommended? Explain by listing some of its major advantages.

Q2. What are the different types of languages that are available in the DBMS?

Q3. What is the use of DROP command and what are the differences between DROP, TRUNCATE and DELETE commands?

Unit 2

Q4. What are the different levels of abstraction in the DBMS. What integrity rules exist in the DBMS?

Q5. What is a functional dependency in the DBMS. What is a functional dependency in the DBMS?

Q6. What are the disadvantages of file processing systems. What is data abstraction in DBMS?

Q7.What will you do to get employees on board with digital transformation? How do you manage change for employees in a digital transformation project?

Unit 3

Q8. Explain the importance of Database models. Explain Hierarchical Data Model.?

Q9. Explain Network Data Model. Explain Relational Database Model. ?

Q10. Explain Entity Relationship Model.Explain The Object Oriented Model.

Q11. Explain Data abstraction or 3 schema architecture.

Unit 4

Q12. What is the difference between a physical database model and a logical model? What is the difference between DELETE and TRUNCATE?

Q13. How would you design the data model for the notification system of a Reddit-style app?

Q14. Name a few types of keys in an Database and also Denormalization the component in RDBMS?

Unit 5

Q15. What are the types of join and explain each? What is a relationship and what are they?

Q16. What is the difference between DELETE and TRUNCATE commands.What is a constraint?

Q17. What are some common clauses used with SELECT query in SQL. List the different types of relationships in SQL.

Unit 6

Q18. What Are Recursive Relationships, and How Do You Rectify Them?

Q19.. What Are Subtype and Supertype Entities? What is a Slowly Changing Dimension?

Unit 7

Q20. Why Are NoSQL Databases More Useful than Relational Databases? What's a Junk Dimension?

Q21, What are the different types of cardinal relationships. Define Critical Success Factor and list its four types?

Unit 8

Q22. If a Unique Constraint Gets Applied to a Column, Will It Generate an Error If You Attempt to Place Two Nulls in It?

Q23.Why Are NoSQL Databases More Useful than Relational Databases? What's a Confirmed Dimension?