

[5253] - 184

T.E. (Computer Engg.)

DATABASE MANAGEMENT SYSTEMS APPLICATIONS

(2012 Course) (End Semester)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates :

- 1) Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8, Q9 or Q10
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data, if necessary

Q1) a) Explain View and Index Objects in SQL. [5]

b) Draw an ER diagram for Banking Enterprise. [5]

OR

Q2) a) Explain Normalization. Explain 3 NF with Example. [5]

b) Explain advantages of DBMS over file systems. [5]

Q3) a) Consider following structure for MongoDB collections and write a query for following requirements in MongoDB (Any 3) [5]

Teachers (Tname, dno, experience, salary, date_of_joining)
Students (Sname, roll_no, class)

i) Write a MongoDB query to create above collections & for insertion of some sample documents.

ii) Find the information about all teachers of dno = 2 and having salary greater than or equal to 10,000/-

iii) Find the student information having roll_no = 2 or Sname = Anil

iv) Display Total no of Students of TTE Class

b) Explain key-value data store model of NOSQL databases. [5]

OR

Q4) a) What are NOSQL Database Types? Explain Document database type in detail. [5]

b) What are ACID Properties of Transaction? Explain Isolation in detail. [5]

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Q5) a) Explain different Parallel System Architectures with their advantages and disadvantages. [8]

b) Explain 3-tier and 2-tier web architecture with diagram considering suitable example. [8]

OR

Q6) a) Explain different steps required for JAVA to MongoDB database connection using JDBC. [8]

b) Explain distributed database system architecture. [8]

Q7) a) What is XML? Explain XQuery and FLWOR with Example. [7]

b) Explain Hadoop Architecture in Detail. Also explain how map reduce works. [10]

OR

Q8) a) Write XML Document for Book Data (Category, Title, Author, and Price). Write XQuery to retrieve all book information with price > 30. [7]

b) Write a Short note on R Programming [5]

c) Write a Short note on Hive Database [5]

Q9) a) Explain BIS Components in Detail. [5]

b) Explain Association Rule mining Algorithm with Example [7]

c) Differentiate between OLAP and OLTP. [5]

OR

Q10) a) Write short note on Data-mining regression analysis. [5]

b) Explain K Means Clustering Algorithm with Suitable Example. [7]

c) What is Classification? Explain different steps in Classifications? [5]

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