[5560]-184

T. E. (Computer Engg.)

DATABASE MANAGEMENT SYSTEM APPLICATIONS

(2012 Course) (Semester - I) (End Sem.) (310244)

Time : 2½ Hours]   *[Max. Marks : 70*

Instructions to the candidates:

1) *Attempt Q.No1or Q.No2, Q.No.3 or Q.No.4, Q.No.5 or Q.No.6, Q.No.7 or Q.No.8, Q.No.9 or Q.No.10.*

2) *Neat diagrams must be drawn wherever necessary.*

3) *Figures to the right indicate full marks.*

4) *Assume suitable data, if necessary.*

Q1) a) State and explain the advantages of Database systems over conventional file systems. **[5]**

    b) Explain difference SQL vs NoSQL **[5]**

OR

Q2) a) Explain the concept of Primary key and foreign key with example. **[5]**

    b) Explain the concept of Conflict Serializability and View Serializability.**[5]**

Q3) a) Explain CRUD operations in MongoDB. **[5]**

    b) Write note on Performance Tuning in SQL Databases. **[5]**

OR

Q4) a) Given the following database: **[5]**

Stud_marks(rollno,name,class)

Stud_result(rollno,total_marks,grade)

Write SQL queries for :

    i) Find all students class wise who got distinction grade.

    ii) Find the average of total_marks obtained by each class.

    iii) Display the students names with respect to class who are failed and at least 3 characters are in the name.

    b) Explain the concept of Indexing in MongoDB. **[5]**

P.T.O.

Q5) a) What are Distributed Databases? Explain with architecture, also enlist its advantages and disadvantages. **[8]**

b) Explain the concept and steps in JDBC Connectivity. **[8]**

OR

Q6) a) Explain the concept of Parallel Databases. Also explain speed up and scale up of Parallel Databases. **[8]**

b) Write short note on Cassandra and list out the differences of Cassandra and MySQL. **[8]**

Q7) a) Write note on HADOOP. **[7]**

b) Write note on : **[10]**
   i) XML DTD's
   ii) Querying XML data

OR

Q8) a) Explain the concept of HDFS and MapReduce. **[7]**

b) Explain the concept of R-Programming. **[5]**

c) Explain the concepts : i) JSON ii) BIGDATA **[5]**

Q9) a) Write short note on ETL Process. **[5]**

b) List out and explain any two Data Mining Techniques. **[7]**

c) Explain the BIS Components. **[5]**

OR

Q10) a) Differentiate between Operational Database and Data Warehouse. **[5]**

b) Explain the Association Rule Mining with example. **[7]**

c) Write note on: **[5]**
   i) Recommendation Algorithm
   ii) Supervised Vs Unsupervised Algorithm

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