Total No. of Questions : 10]

SEAT No. :

P2461

[Total No. of Pages : 2

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T.E. (Computer Engg.)
DATABASE MANAGEMENT SYSTEMS APPLICATIONS
(2012 Course) (End Semester)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates :

1) ***AnswerQ.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8, Q.9 or Q. 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) 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 TE 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]**

P.T.O.

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]**