

Total No. of Questions :10]

SEAT No. :

**P3532**

**[5560]-184**

[Total No. of Pages :2

**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.No.1 or Q.No.2, 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