Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – I • EXAMINATION – WINTER 2012

Subject code: 715306 **Date: 16-01-2013**

Subject Name: Database Technologies

Time: 02.30 pm – 05.00 pm **Total Marks: 70**

Instructions:

1. **Attempt question 1, which is compulsory and answer any five from the rest of the questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q. No. 1 [2 Marks X 10 = 20 Marks]

a. What is the concurrency control?
b. What is database tuning?
c. What is distributed transactions?
d. What is the referential integrity
e. What is ODMG Model?
f. Define fragmentation and types of fragmentation
g. What is data mining? Where it is useful
h. What is a web database?
i. What do you mean by commit protocol?
j. What is the cluster?

Q. No. 2

a. Why the normalisation process is necessary for a good database design? [5 Marks]
b. What are the various rules for query optimization and explain how these rules can be implemented? [5 Marks]

Q. No. 3

a. Explain in details the Inter and Intra Query Parallelism [5 Marks]
b. Describe multi version concurrency control? What are the benefits and disadvantage in comparison of locking [5Marks]

Q. No. 4

a. Explain the POSTGRES? [5 Marks]
b. Explain the Mobile Database? [5 Marks]

Q. No. 5

a. What are the different techniques for database recovery? Discuss in detail [10 Marks]

Q. No. 6

a. What is the Distributed Query Processing? [5Marks]
b. Explain two-tier and three-tier client/server architecture in details [5 Marks]

Q. No. 7

a. What is OODBMS? Explain the features, advantages and disadvantages of OODBMS? [10 Marks]

(OR)

b. What is the use of data warehouse? Discuss the architecture of data warehouse and its functionality in detail? [10 Marks]

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