**Reg. No. \_\_\_\_\_\_\_\_**

**Karunya University**

**(Karunya Institute of Technology and Sciences)**

(Declared as Deemed to be University under Sec.3 of the UGC Act, 1956)

**Supplementary Examination - June 2011**

**Subject Title: DATABASE DESIGN AND TUNING Time: 3 hours**

**Subject Code: 10CA317 Maximum Marks: 100**

**Answer ALL questions (5 x 20 = 100 Marks)**

1. a. List and explain the five basic principles for performance considerations for tuning a database system. (15)

b. Scheduling of threads increase the performance of tuning – Justify. (5)

(OR)

2. a. Discuss the Lock tuning strategies in detail. (14)

b. Explain the three main ways to add hardware to the system to increase the performance of a database. (6)

3. a. The usefulness of an index depends on how queries use the Index – Justify. (15)

b. What is a key? Explain the different kinds of keys. (5)

(OR)

4. a. Write a note on Composite Index through suitable example. (10)

b. Explain clustering and non-clustering index with example. (10)

5. a. Discuss on the practical ways to design relations. (10)

b. Write a note on functional dependency test with suitable schema. (10)

(OR)

6. a. Discuss on Tuning De-normalization. (10)

b. Explain the concept of query tuning with 5 examples. (10)

7. Discuss the principles for tuning application interface in detail.

(OR)

8. a. Discuss the performance issues related to client-server mechanism. (10)

b. Write a note on bulk loading data related to performance tuning. (10)

9. **Compulsory**:

a. Explain the E-commerce architecture with a neat diagram. (10)

b. List and explain the three main aspects to consider when tuning the database supporting an e-commerce site. (10)