2006 JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY

I V B.TECH I I SEMESTER SUPPLEMENTARY EXAMINATIONS
DATABASE MANAGEMENT SYSTEM
(ELECTRONICS & COMMUNICATION S ENGINEERING)

APRIL/MAY 2006

TIME 3 HOURS
MARKS: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) What is a Data model ? List the important data models

(b) Explain

i. DDL
ii. DML
iii. Data sublanguage
iv. Host language

2. (a) what are the various salient features of the QBE ?

(b) Explain the following :
i. Relational database query.
ii. Query language
iii. SQL
iv. Embedded SQL.

3. (a) Explain the limitations of static hashing. Explain how this is overcome in dynamic hashing.

(b) Write a note on indexed sequential files.

4. Discuss the implementation of a select operation. Explain the processing mechanism by means of an example.

5. (a) Why is it not desirable to force users to make an explicit choice of a query processing strategy? Are there cases in which it is desirable for users to be aware of the costs of competing query processing strategies? Explain.

(b) What are the advantages and disadvantages of hash indices relative to B+ - tree indices? How the type of index available influences the choice of query processing strategy?

6. (a) What do you understand by the mapping cardinalities?

(b) For the following relation scheme, tell whether it is in 3 NF or not. Employee

(E code,E name,Dname,salary,projectno,Termination dataof project) Where each project no has unique termination dateof project. Justify your answer, if it in not 3NF bring it into 3NF through normalization.m

7. (a) State and justify "Thomas write rule."

(b) Explain multiversion concurrency control protocol.
(c) Explain blind write.

8. (a) How is the Recovery Manager is responsible for transaction atomicity and durability? Explain.

(b) Explain Stealing Frames and Forcing pages?
(c) What are difference between update log record and CLRS?