

III B.Tech I Semester Regular Examinations, November/December 2005
DATABASE MANAGEMENT SYSTEMS
(Information Technology)

Time: 3 hours**Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

1. Write short notes on:
 - (a) Key constraints
 - (b) General constraints
 - (c) Relational calculus. [6+5+5]
2. Explain the various types of aggregate functions with suitable examples in SQL. [16]
3. (a) Explain the limitations of static hashing. Explain how this is overcome in dynamic hashing.
(b) Write a note on indexed sequential files. [10+6]
4. Discuss the salient features of processing a high level query. Mention the steps and explain each step with an example. [16]
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? [8+8]
6. (a) Describe the term multivalued dependency(MVD). Is the decomposition in 4NF always dependency preserving and lossless? Justify your answer with the help of an example.
(b) What is join dependency? How is it different to that of multivalued dependency and functional dependency? Give an example for join dependencies and multivalued dependencies. [8+8]
7. (a) Write a note on
 - i. Conflict-serializable schedule
 - ii. View serializable schedule
 - iii. Strict schedule [3+3+4]
(b) State and Justify Thomas write rule and recoverability. [6]
8. Answer the following briefly:

- (a) How is check pointing done in ARIES?
- (b) Can a second end check point record be encountered during analysis phase?
- (c) Why is the use of CLRS important for the use of UNDO actions that are not the physical inverse of the original update? [5+5+6]

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