

8/5/13

PART-A

10 x 2 = 20

1. What is a data base? Give examples
2. Write a note on data independence
3. What is a relational database?
4. What is an atomic formula and what are the quantifiers used in atomic formula? Give examples
5. What are the problems of redundancy?
6. What is decomposition?
7. What is a transaction?
8. What is deadlock?
9. What is the order of B+ tree?
10. What is the most importance difference between disk and a tape?

PART-B

5 x 16 = 80

11. Draw the diagram of data base system architecture and explain the various components in it. 16
- 12a. Define division operation in terms of the basic relational algebra operations. Describe a query that calls for division. Unlike join division operation is not given special attention in data base systems. Explain Why? 16
(OR)
- 12b. Explain in detail about the aggregate operators supported in SQL with an illustration. 16
- 13a. What are functional dependencies? Explain how primary keys are related to functional dependencies 16
(OR)
- 13b. What is a normal form? Explain the various normal forms in detail. 16
- 14.a Explain ACID properties. Define atomicity, consistency, isolation and durability and explain them with examples 16
(OR)
- 14.b. Discuss in detail about concurrency control without locking 16
- 15.a. What are RAID systems? Explain the various levels of redundancies 16
(OR)
- 15.b. Write short notes on :(i) B+tree (ii) ISAM (iii) Static hashing (iv) DB tuning 4X4=16