

# Kerala State Calicut University

Third semester MCA degree examination, march/april, 2008

MCA 2k 303 -Database Management Systems

Time: Three hour

Mark full-100

## Answer any five questions

1. a) Define Data base and Data base systems. What are the advantages of using DBMS ? [10 marks]  
b) What is mean by local data, independence and physical data independence ? [10 marks]
2. a) Give the concept of parallelising data access using RAID technology. [10 marks]  
b) In what situation ,we go for secondary index structure ? Explain secondary indexing in details .How do indexing make search process faster. [10 marks]
3. a) Explain join dependencies and fifth normal form. [10 marks]  
b) Explain the following relational algebraic operations :-
  1. Division
  2. Join
  3. Cartesian product
  4. Set difference
  5. Project [10 marks]
4. a) Difference between view serializability and conflict serializability. [10 marks]  
b) What is mean by granularity of data items ? How do granularity affect the locking algorithms. [10 marks]
5. a) Explain the following terms with respect to ER model:-
  1. Weak entity types.
  2. Total and partial participation .
  4. Multivalued attributes.
  5. Recursive relationships [12 marks]  
b) What is meant by specialisation /generalisation hierarchies and lattices. [8 marks]
6. a) Compare single level indexes with multilevel indexes. [10 marks]  
b) Draw the node structure for B and B+ trees are more preferred access structure than B- trees

[10 marks]

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