Code No: NR311202 **NR** **Set No. 2**

III B.Tech I Semester Examinations,November 2010
DATABASE MANAGEMENT SYSTEMS
Information Technology

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) What are the various salient features of the QBE ? [7]
   (b) Explain the following :
      i. Relational database query.
      ii. Query language
      iii. SQL
      iv. Embedded SQL. [2+2+2+3]
2. Write short notes on
   (a) Materialization
   (b) Pipelining along with its implementation. [8+8]
3. Discuss the difference between index sequential and hashed file organizations. Compare their storage and access efficiencies. List the applications where each of the file organization is suitable. [16]
4. Write short notes on the following :
   (a) Mho algebra
   (b) Parameters used in cost functions
   (c) Need of a query to be optimized. [4+6+6]
5. (a) Explain the concept of transaction atomicity.
   (b) How does the two phase locking protocol ensures serializability? [6+10]
6. (a) Explain about referential integrity constraints with suitable examples.
   (b) Distinguish between tuple relational calculus and relational calculus.
   (c) Describe table constraints. [6+6+4]
7. (a) When a system recovers from a crash ? In what order must transaction be Undone and Redone? Why is this order important?
   (b) What is a log in the content of DBMS? How does check pointing eliminate some of the problems associated with log based recovery? [8+8]
8. (a) Use the axioms for functional and multivalued dependencies to show that the following rules are sound
      i. the multivalued union rule

ii. the intersection rule

iii. the difference rule. [3+3+3]

(b) Explain why DKNF is highly desirable normal form , yet one that is difficult to achieve in practice. [7]

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Code No: NR311202 **NR** **Set No. 4**

III B.Tech I Semester Examinations,November 2010
DATABASE MANAGEMENT SYSTEMS
Information Technology

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

Answer any FIVE Questions
All Questions carry equal marks

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1. Discuss the difference between index sequential and hashed file organizations. Compare their storage and access efficiencies. List the applications where each of the file organization is suitable. [16]

2. (a) What are the various salient features of the QBE ? [7]
   (b) Explain the following :
      i. Relational database query.
      ii. Query language
      iii. SQL
      iv. Embedded SQL. [2+2+2+3]

3. (a) Explain about referential integrity constraints with suitable examples.
   (b) Distinguish between tuple relational calculus and relational calculus.
   (c) Describe table constraints. [6+6+4]

4. (a) When a system recovers from a crash ? In what order must transaction be Undone and Redone? Why is this order important?
   (b) What is a log in the content of DBMS? How does check pointing eliminate some of the problems associated with log based recovery? [8+8]

5. (a) Use the axioms for functional and multivalued dependencies to show that the following rules are sound
      i. the multivalued union rule
      ii. the intersection rule
      iii. the difference rule. [3+3+3]
   (b) Explain why DKNF is highly desirable normal form , yet one that is difficult to achieve in practice. [7]

6. (a) Explain the concept of transaction atomicity.
   (b) How does the two phase locking protocol ensures serializability? [6+10]

7. Write short notes on
   (a) Materialization
   (b) Pipelining along with its implementation. [8+8]

8. Write short notes on the following :

(a) Mho algebra
(b) Parameters used in cost functions
(c) Need of a query to be optimized. [4+6+6]

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Code No: NR311202 **NR** **Set No. 1**

III B.Tech I Semester Examinations,November 2010
DATABASE MANAGEMENT SYSTEMS
Information Technology

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

Answer any FIVE Questions
All Questions carry equal marks

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1. Discuss the difference between index sequential and hashed file organizations. Compare their storage and access efficiencies. List the applications where each of the file organization is suitable. [16]

2. Write short notes on the following :
   (a) Mho algebra
   (b) Parameters used in cost functions
   (c) Need of a query to be optimized. [4+6+6]

3. (a) Explain the concept of transaction atomicity.
   (b) How does the two phase locking protocol ensures serializability? [6+10]

4. (a) What are the various salient features of the QBE ? [7]
   (b) Explain the following :
      i. Relational database query.
      ii. Query language
      iii. SQL
      iv. Embedded SQL. [2+2+2+3]

5. (a) Explain about referential integrity constraints with suitable examples.
   (b) Distinguish between tuple relational calculus and relational calculus.
   (c) Describe table constraints. [6+6+4]

6. Write short notes on
   (a) Materialization
   (b) Pipelining along with its implementation. [8+8]

7. (a) When a system recovers from a crash ? In what order must transaction be Undone and Redone? Why is this order important?
   (b) What is a log in the content of DBMS? How does check pointing eliminate some of the problems associated with log based recovery? [8+8]

8. (a) Use the axioms for functional and multivalued dependencies to show that the following rules are sound
      i. the multivalued union rule

ii. the intersection rule

iii. the difference rule. [3+3+3]

(b) Explain why DKNF is highly desirable normal form , yet one that is difficult to achieve in practice. [7]

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Code No: NR311202 **NR** **Set No. 3**

III B.Tech I Semester Examinations,November 2010
DATABASE MANAGEMENT SYSTEMS
Information Technology

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) What are the various salient features of the QBE ? [7]
   (b) Explain the following :
      i. Relational database query.
      ii. Query language
      iii. SQL
      iv. Embedded SQL. [2+2+2+3]
2. (a) Explain about referential integrity constraints with suitable examples.
   (b) Distinguish between tuple relational calculus and relational calculus.
   (c) Describe table constraints. [6+6+4]
3. (a) When a system recovers from a crash ? In what order must transaction be Undone and Redone? Why is this order important?
   (b) What is a log in the content of DBMS? How does check pointing eliminate some of the problems associated with log based recovery? [8+8]
4. (a) Explain the concept of transaction atomicity.
   (b) How does the two phase locking protocol ensures serializability? [6+10]
5. Write short notes on
   (a) Materialization
   (b) Pipelining along with its implementation. [8+8]
6. Write short notes on the following :
   (a) Mho algebra
   (b) Parameters used in cost functions
   (c) Need of a query to be optimized. [4+6+6]
7. (a) Use the axioms for functional and multivalued dependencies to show that the following rules are sound
      i. the multivalued union rule
      ii. the intersection rule
      iii. the difference rule. [3+3+3]

(b) Explain why DKNF is highly desirable normal form , yet one that is difficult to achieve in practice. [7]

8. Discuss the difference between index sequential and hashed file organizations. Compare their storage and access efficiencies. List the applications where each of the file organization is suitable. [16]

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