SUBJECT CODE : CS/MC/DB34

B.C.A. DEGREE EXAMINATION – NOVEMBER 2008
THIRD SEMESTER

REG. NO. : _____

COURSE   : MAJOR CORE
PAPER   : DATABASE MANAGEMENT SYSTEMS
TIME   : 20 MINUTES   MAX. MARKS : 20

TO BE ANSWERED ON THE QUESTION PAPER ITSELF:

SECTION – A   **(20X1=20)**
ANSWER ALL THE FOLLOWING:
Choose the best answer:

1. DBMS stands for _____.
   a) Data Blocking and Management Systems
   b) Database Management Systems
   c) Database Business Management Systems
   d) None of the above

2. What represent a correspondence between the various data elements?
   a) Data   b) Relationships   c) Constraints   d) Schema

3. SQL stands for
   a) Scalable Query Language   b) System Query Language
   c) Structured Query Language   d) None of the above

4. Which of the following is a bottom-up approach?
   a) specialisation   b) Generalization   c) Categorization   d) None of the above

5. Which is the symbol used to denote the RENAME operation?
   a) Sigma   b) Rho   c) P: d) None of the above

6. Which of the following is the operation that is used if we are interested in only certain attributes or columns of a table?
   a) select   b) project   c) union   d) join

7. When all the columns in a table describe and depend upon the primary key, the table is said to satisfy the _____ normal form?
   a) First   b) Second   c) Third   d) Fourth

8. Which of the following is a column in the table whose purpose is to uniquely identify records from the same table?
   a) Primary key   b) Candidate key   c) Foreign key   d) Intelligent key

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9.   Which of the following is a transaction property?
       a) Actuality   b) Compatibility   c) Isolation   d) Dependency

10.   Which of the following is not a transaction management SQL command?
       a) Select   b) Commit   c) Rollback   d) Savepoint

True or False :

11.   Two types of locks are read and write locks.

12.   Data normalization is a corner stone of the relational theory.

13.   Relational calculus is a non procedural language.

14.   Primary key will not be unique.

15.   A database is a collection of data designed to be used by different people.

Fill in the blanks :

16.   The E-R model is represented using an _____.

17.   Each pair of primary and foreign key is a _____ relationship.

18.   Relational calculus is the collective term for _____ and _____.

19.   A _____ is a column in table that uniquely identifies the records
from a different table.

20.   The ACID properties of a transaction are _____, _____,
_____, _____.

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COURSE   : MAJOR CORE
PAPER   : DATABASE MANAGEMENT SYSTEMS
TIME   : 2 HOURS & 40 MINUTES   MAX. MARKS : 80

SECTION – B   **(8X5=40)**
ANSWER ANY EIGHT OF THE FOLLOWING

1. Write short notes on system structure.
2. Write short notes on different data models.
3. Explain briefly about entity sets.
4. Explain with example different DML and DDL statements.
5. Explain briefly about tuple relational calculus.
6. Write notes on assertions.
7. What are the properties that will lead database to a bad design? Explain.
8. Explain about third normal form with example.
9. Write short note on atomicity.
10. Explain briefly about two phase commit protocol.

SECTION – C   **(4X10=40)**
ANSWER ANY FOUR OF THE FOLLOWING

11. Write short notes on
    (a) Data Abstraction
    (b) Instances and Schemes
    (c) Data Independence
12. Create a table named "employee" with the following attributes
    (empno, name, deptid, basic, HRA, Deduction, Tax)
        empno is the primary key
    (a) insert into the table atleast 5 values.
    (b) Get the number of rows in the employee table.
    (c) Get the number of employees in the department 'D1' and basic pay less than 6000.
    (d) Find the average pay of an employees in the department "d1" whose HRA is greater than 1000.
    (e) Draw the E-R diagram.
13. Explain briefly about mapping cardinalities with example.
14. Write short notes on relational algebra.
15. Explain briefly about BCNF.
16. What are the properties that the database maintains during the transactions?

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