VINAYAKA MISSIONS SIKKIM UNIVERSITY
(Estd. by Sikkim Legislative Act vide VMSU Act No. 11 of 2008)
DIRECTORATE OF DISTANCE EDUCATION
NH 10-A, Tadong, East Sikkim-737102

Programme: Master of Computer Application   **Session:**2015-16   **Full Marks:** 10

Course/Subject Name: Database Management System   **Course/Subject Code:** CS 4204

Assignment No: 1   **Last Date of Submission:** 31ˢᵗ March2016

SECTION –A

Answer the following questions.   **[0.5x10=5]**

1. _____ key uniquely identifies the elements in the relation:

   a) Foreign key   b) Composite key   c) Primary Key   d) Candidate key

2. The type of integrity constraint that relates two relations and maintains consistency across the relation is called:

   a) Entity Integrity Constraints

   b) Referential Integrity Constraints

   c) Domain Integrity Constraints

   d) Domain Constraints

3. A unit of storage that can store one or more records in a hash file organization is known as:

   a) Buckets   b) Blocks   c) Nodes   d) Disk pages

4. The file organization which allows us to read records that would satisfy the join condition by using one block read is:

   a) Sequential file organization

   b) Hash file organization

   c) Clustering file organization

   d) Heap file organization

5. The information about a data in a database is called:

   a) Meta data   b) records   c) Hyper data   d) None

6. The approach in which an index entry appears for every search key values is known as:

   a) Sparse   b) Dense   c) Straight   d) Continuous

7. In B+ tree the node which points to another node is called:

   a) Leaf node

   b) External node

c) Internal node

d) Final node

8. A technique for direct search is:

    a) Binary search

    b) Linear search

    c) Tree search

    d) Hashing

9. The searching technique that takes 0(1) time to find a data is.

    a) Linear search   b) Binary search   c) Tree search   d) Hashing

10. B+ tree are preferred to binary tree in Database because :

    a) Disk capacity are greater than memory capacities

    b) Disk access is much slower than memory access

    c) Disk data transfer rates are much less than memory data transfer rates

    d) Disk are more reliable than memory

SECTION –B

Answer any Five questions from the following within 50 words   **[1x5=5]**

1. What is the need of Database Management System?

2. Differentiate between Heap file and Sequential file organization.

3. Define file.

4. What do you mean sparse index?

5. Why B+ tree index structure is used for file organization?

6. Define Domain and relation.

7. What is static hashing?

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Programme: Master of Computer Application   **Session:** 2015-16   **Full Marks:** 10

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Assignment No: 2   **Last Date of Submission:** 15th April 2016

SECTION –A

Answer the following questions.   **[0.5x10=5]**

1 A _____ data model represents data by records organized in form of trees and the relationship among the data are represented by links.

     a) Network   b) Hierarchical   c) Relational   d) None

2 _____ extracts the column from a relation.

     a) Projection   b) Selection   c) Union   d) Set difference

3 In SQL, which of the following is not a data definition language command?

     b) Rename   b) Revoke   c) Update   d) grant

4 In a relational schema , each tuples is divided into fields called:

     a) Relations   b) Domains   c) Queries   d) None

     b) Assignment operator

5 Which normal form is considered adequate for relational database design?

     e) 2NF   b) 3NF   c) 4NF   d) BCNF

6 TRUNCATE statement in SQL is a::

     a) DML statement

     b) DCL statement

     c) DDL statement

     d) DSL statement

7 Relational Algebra is a _____ query language that takes two relations as input and produces another relation as output of the query.

     b) Procedural   b) Relational   c) Structural   d) Fundamental

8 Which of the following can be a multivalued attribute?

     a) Phone-number   b) Name   c) Date-of-birth   d) All of the above

9 The disadvantage of replication is:

a) Reduced network traffic

b) If database fails at one site, a copy can be located at another site

c) Each site must have the same storage capacity

d) Each transaction may proceed without coordination across the network

10 The process which allows the modification of a schema definition without affecting other schema definitions is called:

a) Normalization

b) Functional dependency

c) schema processing

d) Data independence

SECTION –B

Answer any <u>Five questions</u> from the following within 50 words   **[1x5=5]**

1. Write down the syntax of alter table with example.

2. Define entity and attributes.

3. What do you mean by fully functional dependency?

4. How network model is different from hierarchical model?

5. What are views? How are they useful?

6. How does the Cartesian product operation works?

7. Define heterogeneous database.

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Programme: Master of Computer Application   **Session:** 2015-16   **Full Marks:** 05

Course/Subject Name: Database Management System   **Course/Subject Code:** CS 4204

Assignment No: 3   **Last Date of Submission:** 15ᵗʰ April 2016

Answer the following questions.   [0.5x10=5]

1. The referential integrity concept is directly based on:

   a) Primary key   b) Foreign key   c) Super key   d) Composite key

2. The large collection of files are called:

   a) Fields   b) Records   c) Database   d) Sector

3. In _____ approach we organize the search key with their associated pointer into a hash file structure.

   a) Hash file organization

   b) Hash node organization

   c) Static hashing

   d) Hash index organization

4. In a _____ clustering index, the index record contains the search key value and a pointer to the first data record and the rest of the records will be in the sequential pointers.

   a) Dense   b) Sparse   c) Straight   d) Continuous

5. Insertion of a large number of entries at a time into an index is referred to as:

   a) Loading

   b) Bulk insertion

   c) Bulk loading

   d) Increase insertion

6. The third normal form is based on the concept of:

   a) Transitive dependency

   b) Closure dependency

   c) Functional dependency

   d) Normal dependency

7. In SQL which command is used to add new row to a table?

   a) Add row   b) Insert   c) Alter table   d) Append

8. _____ finds tuples that are common to the two operand relations.

   a) Set difference   b) union   c) Cartesian product   d) Set intersection

9. The set of possible data values is called:

   a) Domain

   b) Attribute

   c) Tuple

   d) Degree

10. A distributed database has which of the following advantages over a centralized database?

   a) Software cost

   b) Software complexity

   c) Slow response

   d) Modular growth

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