BCA (Repeat)
SECOND SEMESTER
DISCRETE MATHEMATICS
BCA- 204

Duration: 2 Hrs. 40 Mins.   Marks: 50

$\left\{ \begin{array}{l} \text{Part : A (Objective)} = 20 \\ \text{Part : B (Descriptive)} = 50 \end{array} \right\}$

[PART-B : Descriptive]

[Answer question no. One (1) & any four (4) from the rest]

1. What is the significance of using an ER Diagram in a database? Write down the symbols used in ER Diagram. Draw an ER Diagram for Hostel Management System   `2+4+4 = 10`

2. What do you mean by hashing? Explain the hash functions and collision resolution techniques with examples.   `2+6+2 = 10`

3. What are the types of statements used in SQL. Explain all the types along with examples.   `3+7= 10`

4. Why constraints are necessary to use in DBMS. Explain the different constraints of DBMS.   `2+8=10`

5. Why normalization is used? Explain all types of normal forms along with the examples.   `4+6= 10`

6. What is a view? Define the types of view along with its restrictions.   `3+7= 10`

7. What is the use of concurrency control in DBMS? Write the syntax to lock a table. Give example. How a lock can be released?   `3+3+2+ 2= 10`

8. Explain the relational operators along with example.   `10`

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BCA (Repeat)
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Duration: 20Mins.   Marks: 20

[PART-A : Objective]

<u>Choose the correct answer from the following:</u>   1×20=20

1. The _____ is an ordered file with fixed length records with two fields-first field is the primary key & the second is the pointer to a disk block.
   a. Clustering index
   b. Secondary index
   c. Primary index
   d. All of them

2. In a hash function, where the modification takes the form of a function from the set K of keys into the set L of memory addresses can be expressed as:-
   a. K:H ⟶ L
   b. L:K ⟶ L
   c. H:L ⟶ K
   d. H:K ⟶ L

3. The database administrator is the focus of the _____ control.
   a. Distributed
   b. Decentralized
   c. Centralized
   d. DBMS

4. The 'like' predicate is used for pattern _____.
   a. Duplication
   b. Matching
   c. Differentiation
   d. Colliding

5. The_____ is a desirable property of transaction.
   a. Isolation
   b. Atomicity
   c. Durability
   d. All of the above

6. An entity that does not have a key attribute is called _____.
   a. Weak entity types
   b. Entity types
   c. Null attribute
   d. Derived attribute

7. In SQL, _____ function has a special meaning in that it counts the number of rows of a relation.
   a. Count(fieldname)
   b. Count(*)
   c. Both a & b
   d. None of them

8. _____ is a unique identifier created by the DBMS to identify a translation.
   a. Locking
   b. Timestamp
   c. Two phase locking
   d. All of these

9. A view is a _____ table that is one which actually does not exist.
   a. Physical
   b. virtual
   c. distinct
   d. log

10. The _____ key is the one which must be unique within the domain and must always have a value.
    a. Candidate
    b. Foreign
    c. Unique
    d. primary

11. The RDBMS minimizes the _____ of data.
    a. Consistency
    b. Redundancy
    c. Sharing
    d. cardinality

12. In _____, database is used for keeping records of calls made, generating monthly bills, maintaining balances on prepaid calling cards & storing information about the communication networks
    a. Telecommunications
    b. Airlines
    c. Reservations
    d. Transportation

13. Address is an example for _____ attribute.
    a. Composite
    b. Unique
    c. Not null
    d. Primary

14. Database System supports one physical schema, one conceptual schema and several _____.
    - [ ] a. Logical
    - b. Subsystem
    - c. Storage manager
    - d. Recovery manager

15. The acronym ACID is sometimes used to refer to the _____ of transaction.
    - [ ] a. Begin
    - b. End
    - c. Four properties
    - d. Commit/abort

16. SQL commands can be roughly divided into _____ major categories with regard to their functionality.
    - [ ] a. One
    - b. Two
    - c. Three
    - d. Four

17. A _____ is an association among several entities.
    - [ ] a. Relationship
    - b. Key
    - c. Partial key
    - d. Entity

18. The E-R data model based on a perception of the real world that consists of a set of basic objects called _____.
    - [ ] a. Entities
    - b. Relations
    - c. Attributes
    - d. Primary key

19. A _____ DBMS is the system if many users can use the system.
    - [ ] a. Single user
    - b. Multi user
    - c. Anyone of a and b
    - d. Both a & b

20. Color of the car & degrees of students are examples of the _____attribute.
    - [ ] a. Null
    - b. Derived
    - c. Single valued
    - d. Multi valued

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Question Paper CUM Answer Sheet

[PART (A) : OBJECTIVE]

Serial no. of the main Answer sheet

Course : ....

Semester : .... Roll No : ....

Enrollment No : .... Course code : ....

Course Title : ....

Session : .... 2016-17 .... Date : ....

....

Instructions / Guidelines

- ➢ The paper contains twenty (20) / ten (10) questions.
- ➢ The student shall write the answer in the box where it is provided.
- ➢ The student shall not overwrite / erase any answer and no mark shall be given for such act.
- ➢ Hand over the question paper cum answer sheet (Objective) within the allotted time (20 minutes / 10 minutes) to the invigilator.

Full Marks	Marks Obtained	Remarks
20		

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Scrutinizer's Signature   *Examiner's Signature*   *Invigilator's Signature*